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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AR3	US-20090137521-A1	05-28-2009	Hamilton et al.	
	AS3	US-20090176732-A1	07-09-2009	Beigelman et al.	
	AT3	US-20090233879-A1	09-17-2009	REDDY et al.	
	AU3	US-20090280084-A1	11-12-2009	Schinazi et al.	
	AV3	US-20090306007-A1	12-10-2009	Wagner	
	AW3	US-20100029008-A1	02-04-2010	Rojas Stutz et al.	
	AX3	US-20100035835-A1	02-11-2010	Narjes et al.	
	AY3	US-20100081628-A1	04-01-2010	DU et al.	
	AZ3	US-20100137576-A1	06-03-2010	Stec et al.	
	AA4	US-20100152128-A1	06-17-2010	Attenni et al.	
	AB4	US-20100173863-A1	07-08-2010	Schinazi et al.	
	AC4	US-20100227801-A1	09-09-2010	HOPKINS	
	AD4	US-20100279973-A1	11-04-2010	CHUN et al.	
	AE4	US-20100286083-A1	11-11-2010	BAO et al.	
	AF4	US-20100298257-A1	11-25-2010	ROSS et al.	
	AG4	US-20100316594-A1	12-16-2010	Sommadossi et al.	
	AH4	US-20110015146-A1	01-20-2011	SOFIA et al.	
	AI4	US-20110124592-A1	05-26-2011	McGuigan et al.	
	AJ4	US-20110245484-A1	10-06-2011	ROSS et al.	

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Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BE1**	WO-1989/002733-A1	04-06-1989	UNIV CALIFORNIA, et al.		
	BF1**	WO-1990/000555-A1	01-25-1990	VICAL INC, et al.		
	BG1**	WO-1991/016920-A1	11-14-1991	VICAL INC, et al.		
	BH1**	WO-1991/018914-A1	12-12-1991	VICAL INC, et al.		
	BI1**	WO-1991019721-A1	12-26-1991	Glazier Arnold		
	BJ1**	WO-1993/000910-A1	01-21-1993	VICAL INC, et al.		

Examiner Signature		Date Considered	

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	AK4	US-20110251152-A1	10-13-2011	Ross et al.	
	AL4	US-20120107278-A1	05-03-2012	BERREY et al.	
	AM4	US-20120245335-A1	09-27-2012	Clark	
	AN4	US-20130029929-A1	01-31-2013	Sofia et al.	
	AO4	US-20130109647-A1	05-02-2013	Berrey et al.	
	AP4	US-20130136776-A1	05-30-2013	Cleary et al.	
	AQ4	US-20130137654-A1	05-30-2013	Ross et al.	
	AR4	US-20130165401-A1	06-27-2013	Ross et al.	
	AS4	US-20130165644-A1	06-27-2013	Ross et al.	
	AT4	US-3,798,209-A	03-19-1974	WITKOWSKI ET AL.	
	AU4	US-3,852,267-A	12-03-1974	Meyer, Jr. et al.	
	AV4	US-4,814,477-A	03-21-1989	Wijnberg et al.	
	AW4	US-4,957,924-A	09-18-1990	Beauchamp	
	AX4	US-5,026,687-A	06-25-1991	Yarchoan et al.	
	AY4	US-5,118,820-A	06-02-1992	Hertel	
	AZ4	US-5,149,794-A	09-22-1992	Yatvin et al.	
	AA5	US-5,157,027-A	10-20-1992	Biller et al.	
	AB5	US-5,192,549-A	03-09-1993	Barenolz et al.	
	AC5	US-5,194,654-A	03-16-1993	Hostetler et al.	

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	BK1**	WO-1994/026273-A1	11-24-1994	HOSTETLER KARL Y, et al.		
	BL1**	WO-1995/013090-A1	05-18-1995	ENZON INC, et al.		
	BM1**	WO-1995/024185-A1	09-14-1995	ISIS PHARMACEUTICALS INC, et al.		
	BN1**	WO-1996/015132-A1	05-23-1996	UNIV CALIFORNIA, et al.		
	BO1**	WO-1996/032403-A2	10-17-1996	SCHERING AG, et al.		
	BP1**	WO-1997/012033-A1	04-03-1997	UNIV EMORY		

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	AD5	US-5,223,263-A	06-29-1993	Hostetler et al.	
	AE5	US-5,256,641-A	10-26-1993	Yatvin et al.	
	AF5	US-5,256,798-A	10-26-1993	Chou et al.	
	AG5	US-5,372,808-A	12-13-1994	Blatt et al.	
	AH5	US-5,376,380-A	12-27-1994	Kikuchi et al.	
	AI5	US-5,405,598-A	04-11-1995	Schinazi et al.	
	AJ5	US-5,411,947-A	05-02-1995	Hostetler et al.	
	AK5	US-5,420,266-A	05-30-1995	Britton et al.	
	AL5	US-5,426,183-A	06-20-1995	Kjell	
	AM5	US-5,453,499-A	09-26-1995	Chou et al.	
	AN5	US-5,462,724-A	10-31-1995	Schinazi et al.	
	AO5	US-5,463,092-A	10-31-1995	Hostetler et al.	
	AP5	US-5,496,546-A	03-05-1996	Wang et al.	
	AQ5	US-5,538,865-A	07-23-1996	Reyes et al.	
	AR5	US-5,543,389-A	08-06-1996	Yatvin et al.	
	AS5	US-5,543,390-A	08-06-1996	Yatvin et al.	
	AT5	US-5,543,391-A	08-06-1996	Yatvin et al.	
	AU5	US-5,554,728-A	09-10-1996	Basava et al.	
	AV5	US-5,610,054-A	03-11-1997	Draper	

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	BQ1**	WO-1997/036554-A1	10-09-1997	VIROPHARMA INC, et al.		
	BR1**	WO-1998/016184-A2	04-23-1998	ICN PHARMACEUTICALS, et al.		
	BS1**	WO-1998/017679	04-30-1998	Vertex Pharmaceutical Incorporated		
	BT1**	WO-1998/022496	05-28-1998	F. Hoffman-La Roche AG		
	BU1**	WO-1999/007734	02-18-1999	Boehringer Ingelheim (Canada) Ltd		
	BV1**	WO-1999/015194-A1	04-01-1999	SCHERING CORP, et al.		

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Attorney Docket Number	PH3080.PC4C

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	AW5	US-5,633,358-A	05-27-1997	Gruetzke et al.	
	AX5	US-5,633,388-A	05-27-1997	Diana et al.	
	AY5	US-5,676,942-A	10-14-1997	Testa et al.	
	AZ5	US-5,703,058-A	12-30-1997	Schinazi et al.	
	AA6	US-5,711,944-A	01-27-1998	Gilbert et al.	
	AB6	US-5,725,859-A	03-10-1998	Omer	
	AC6	US-5,738,845-A	04-14-1998	Imakawa	
	AD6	US-5,738,846-A	04-14-1998	Greenwald et al.	
	AE6	US-5,747,646-A	05-05-1998	Hakimi et al.	
	AF6	US-5,767,097-A	06-16-1998	Tam	
	AG6	US-5,792,834-A	08-11-1998	Hakimi et al.	
	AH6	US-5,830,455-A	11-03-1998	Valtuena et al.	
	AI6	US-5,830,905-A	11-03-1998	Diana et al.	
	AJ6	US-5,834,594-A	11-10-1998	Hakimi et al.	
	AK6	US-5,837,257-A	11-17-1998	Tsai et al.	
	AL6	US-5,846,964-A	12-08-1998	Ozeki	
	AM6	US-5,849,696-A	12-15-1998	Chretien et al.	
	AN6	US-5,869,253-A	02-09-1999	Draper	
	AO6	US-5,891,874-A	04-06-1999	Colacino et al.	

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	BW1**	WO-1999/032139-A1	07-01-1999	ENZON INC, et al.		
	BX1**	WO-1999/032140-A1	07-01-1999	ENZON INC, et al.		
	BY1**	WO-1999/043691-A1	09-02-1999	UNIV EMORY, et al.		
	BZ1**	WO-1999/059621-A1	11-25-1999	SCHERING CORP, et al.		
	BA2**	WO-1999/064016-A1	12-16-1999	HOFFMANN LA ROCHE, et al.		
	BB2**	WO-2000/006529	02-10-2000	Istituto di Ricerche di Biologia Molecolaria P Angeletti S.P.A.		

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	AP6	US-5,905,070-A	05-18-1999	Schinazi et al.	
	AQ6	US-5,908,621-A	06-01-1999	Glue et al.	
	AR6	US-5,922,757-A	07-13-1999	Chojkier	
	AS6	US-5,928,636-A	07-27-1999	Alber et al.	
	AT6	US-5,942,223-A	08-24-1999	Bazer et al.	
	AU6	US-5,980,884-A	11-09-1999	Blatt et al.	
	AV6	US-5,990,276-A	11-23-1999	Zhang et al.	
	AW6	US-6,004,933-A	12-21-1999	Spruce et al.	
	AX6	US-6,034,134-A	03-07-2000	Gold et al.	
	AY6	US-6,043,077-A	03-28-2000	Barber et al.	
	AZ6	US-6,056,961-A	05-02-2000	Lavie et al.	
	AA7	US-6,060,080-A	05-09-2000	Kikuchi et al.	
	AB7	US-6,090,932-A	07-18-2000	McGee et al.	
	AC7	US-6,130,326-A	10-10-2000	Ramasamy et al.	
	AD7	US-6,132,763-A	10-17-2000	Fisher	
	AE7	US-6,156,501-A	12-05-2000	McGall et al.	
	AF7	US-6,180,134-B1	01-30-2001	Zalipsky et al.	
	AG7	US-6,232,300-B1	05-15-2001	Schinazi et al.	
	AH7	US-6,239,159-B1	05-29-2001	Brown et al.	

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	BC2**	WO-2000/009531	02-24-2000	NOVIRIO PHARMACEUTICALS LIMITE, et al.		
	BD2**	WO-2000/037110	06-29-2000	SCHERING CORP, et al.		
	BE2**	WO-2001/032153	05-10-2001	Shire Biochem Inc.		
	BF2**	WO-2001/060315	08-23-2001	IAF BIOCHEM INT, et al.		
	BG2**	WO-2001/079246	10-25-2001	PHARMASSET LTD, et al.		
	BH2**	WO-2001/081359	11-01-2001	SCHERING CORP, et al.		

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	AI7	US-6,348,587-B1	02-19-2002	Schinazi et al.	
	AJ7	US-6,372,883-B1	04-16-2002	Attwood et al.	
	AK7	US-6,391,859-B1	05-21-2002	Schinazi et al.	
	AL7	US-6,410,531-B1	06-25-2002	Llinas-Brunet et al.	
	AM7	US-6,420,380-B2	07-16-2002	Llinas-Brunet et al.	
	AN7	US-6,455,513-B1	09-24-2002	McGuigan et al.	
	AO7	US-6,455,690-B1	09-24-2002	Tam et al.	
	AP7	US-6,475,985-B1	11-05-2002	Wagner et al.	
	AQ7	US-6,479,463-B1	11-12-2002	Wang et al.	
	AR7	US-6,495,677-B1	12-17-2002	Ramasamy et al.	
	AS7	US-6,509,320-B1	01-21-2003	Wang et al.	
	AT7	US-6,534,523-B1	03-18-2003	Llinas-Brunet et al.	
	AU7	US-6,552,183-B1	04-22-2003	Ramasamy et al.	
	AV7	US-6,555,677-B2	04-29-2003	Petrillo et al.	
	AW7	US-6,573,248-B2	06-03-2003	Ramasamy et al.	
	AX7	US-6,642,206-B2	11-04-2003	Ramasamy et al.	
	AY7	US-6,660,721-B2	12-09-2003	Devos et al.	
	AZ7	US-6,677,314-B2	01-13-2004	Klecker et al.	
	AA8	US-6,677,315-B2	01-13-2004	Klecker et al.	

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	BI2**	WO-2001/090121	11-29-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BJ2**	WO-2001/091737	12-06-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BK2**	WO-2001/092282	12-06-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BL2**	WO-2001/096353	12-20-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BM2**	WO-2002/008187	01-31-2002	SCHERING CORP, et al.		
	BN2**	WO-2002/008198	01-31-2002	SCHERING CORP, et al.		

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	AB8	US-6,680,303-B2	01-20-2004	Schinazi et al.	
	AC8	US-6,682,715-B2	01-27-2004	Klecker et al.	
	AD8	US-6,683,045-B2	01-27-2004	Klecker et al.	
	AE8	US-6,703,374-B1	03-09-2004	Klecker et al.	
	AF8	US-6,753,309-B2	06-22-2004	Klecker et al.	
	AG8	US-6,777,395-B2	08-17-2004	Bhat et al.	
	AH8	US-6,784,166-B2	08-31-2004	Devos et al.	
	AI8	US-6,787,305-B1	09-07-2004	Li et al.	
	AJ8	US-6,787,526-B1	09-07-2004	Bryant et al.	
	AK8	US-6,815,542-B2	11-09-2004	Hong et al.	
	AL8	US-6,846,810-B2	01-25-2005	Martin et al.	
	AM8	US-6,897,201-B2	05-24-2005	Boyer et al.	
	AN8	US-6,908,924-B2	06-21-2005	Watanabe et al.	
	AO8	US-6,911,424-B2	06-28-2005	Schinazi et al.	
	AP8	US-6,914,054-B2	07-05-2005	Sommadossi et al.	
	AQ8	US-6,962,991-B2	11-08-2005	Dempcy et al.	
	AR8	US-7,018,985-B1	03-28-2006	Boyer et al.	
	AS8	US-7,018,989-B2	03-28-2006	McGuigan et al.	
	AT8	US-7,081,449-B2	07-25-2006	Pietrzkowski et al.	

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	BO2**	WO-2002/008241	01-31-2002	GILEAD SCIENCES, INC.		
	BP2**	WO-2002/008251	01-31-2002	CORVAS INT INC, et al.		
	BQ2**	WO-2002/008256	01-31-2002	SCHERING CORP, et al.		
	BR2**	WO-2002/018404	03-07-2002	HOFFMANN LA ROCHE, et al.		
	BS2**	WO-2002/032414	04-25-2002	SCHERING CORP, et al.		
	BT2**	WO-2002/032920-A2	04-25-2002	Pharmasset Ltd et al.		

Examiner Signature		Date Considered	

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Complete if Known	
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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	AU8	US-7,105,499-B2	09-12-2006	Carroll et al.	
	AV8	US-7,148,206-B2	12-12-2006	Sommadossi et al.	
	AW8	US-7,163,929-B2	01-16-2007	Sommadossi et al.	
	AX8	US-7,202,224-B2	04-10-2007	Eldrup et al.	
	AY8	US-7,217,523-B2	05-15-2007	Wagner	
	AZ8	US-7,268,119-B2	09-11-2007	Cook et al.	
	AA9	US-7,307,065-B2	12-11-2007	Schinazi et al.	
	AB9	US-7,365,057-B2	04-29-2008	LaColla et al.	
	AC9	US-7,390,791-B2	06-24-2008	Becker et al.	
	AD9	US-7,429,572-B2	09-30-2008	Clark	
	AE9	US-7,601,820-B2	10-13-2009	Wang et al.	
	AF9	US-7,754,699-B2	07-13-2010	Chun et al.	
	AG9	US-7,879,815-B2	02-01-2011	MacCoss et al.	
	AH9	US-7,964,580-B2	06-21-2011	Sofia et al.	
	AI9	US-8,148,349-B2	04-03-2012	Meppen et al.	
	AJ9	US-8,173,621-B2	05-08-2012	Du et al.	
	AK9	US-8,334,270-B2	12-18-2012	Sofia et al.	
	AL9	US-8,415,322-B2	04-09-2013	Clark	
	AM9	US-8,551,973-B2	10-08-2013	Bao et al.	

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	BU2**	WO-2002/048116	06-20-2002	BRISTOL MYERS SQUIBB PHARMA CO, et al.		
	BV2**	WO-2002/048157	06-20-2002	BRISTOL MYERS SQUIBB PHARMA CO, et al.		
	BW2**	WO-2002/048165	06-20-2002	PHARMASSET LTD, et al.		
	BX2**	WO-2002/048172	06-20-2002	SCHERING CORP, et al.		
	BY2**	WO-2002/057287	07-25-2002	MERCK & CO INC, et al.		
	BZ2**	WO-2002/057425-A2	07-25-2002	Merck & Co Inc et al.		

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	AN9	US-8,580,765-B2	11-12-2013	Sofia et al.	
	AO9	US-RE29835-A	11-14-1978	Witkowski et al.	
	AP9	US-20010034440	10-25-2001	Shepard et al.	
	AQ9	US-20020058635-A1	05-16-2002	Averett	
	AR9	US-20020198173-A1	12-26-2002	Schinazi et al.	
	AS9	US-20030050229-A1	03-13-2003	Sommadossi et al.	
	AT9	US-20030060400-A1	03-27-2003	LaColla et al.	
	AU9	US-20030120071-A1	06-26-2003	McGuigan et al.	
	AV9	US-20030144502-A1	07-31-2003	Pietrzkowski et al.	
	AW9	US-20030153744-A1	08-14-2003	Mekouar et al.	
	AX9	US-20030187018	10-02-2003	Llinas-Brunet et al.	
	AY9	US-20040006007-A1	01-08-2004	Gosselin et al.	
	AZ9	US-20040014108-A1	01-22-2004	Eldrup et al.	
	AAA	US-20040023240-A1	02-05-2004	Marliere et al.	
	ABA	US-20040023901-A1	02-05-2004	Cook et al.	
	ACA	US-20040059104	03-25-2004	Cook et al.	
	ADA	US-20040063622-A1	04-01-2004	Sommadossi et al.	
	AEA	US-20040067901-A1	04-08-2004	Bhat et al.	
	AFA	US-20040072788-A1	04-15-2004	Bhat et al.	

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	BA3**	WO-2002/060926	08-08-2002	Bristol-Myers Squibb Company		
	BB3**	WO-2002/100415-A2	12-19-2002	Hoffmann La Roche		
	BC3**	WO-2003/068244	08-21-2003	MERCK & CO INC, et al.		
	BD3**	WO-2003/101993	12-11-2003	NEOGENESIS PHARMACEUTICALS INC, et al.		
	BE3**	WO-2003/105770	12-24-2003	MERCK & CO INC, et al.		
	BF3**	WO-2004/000858-A2	12-31-2003	MERCK & CO INC, et al.		

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Attorney Docket Number	PH3080.PC4C

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	AGA	US-20040097461-A1	05-20-2004	Sommadossi et al.	
	AHA	US-20040097462-A1	05-20-2004	Sommadossi et al.	
	AIA	US-20040101535-A1	05-27-2004	Sommadossi et al.	
	AJA	US-20040102414-A1	05-27-2004	Sommadossi et al.	
	AKA	US-20040110717-A1	06-10-2004	Carroll et al.	
	ALA	US-20040167140-A1	08-26-2004	Schinazi et al.	
	AMA	US-20040191824-A1	09-30-2004	Dempcy et al.	
	ANA	US-20040214844-A1	10-28-2004	Otto et al.	
	AOA	US-20040229839-A1	11-18-2004	Babu et al.	
	APA	US-20040229840-A1	11-18-2004	Bhat et al.	
	AQA	US-20040248892-A1	12-09-2004	Wang	
	ARA	US-20040254141-A1	12-16-2004	Schinazi et al.	
	ASA	US-20040259934-A1	12-23-2004	Olsen et al.	
	ATA	US-20040265969-A1	12-30-2004	Li et al.	
	AUA	US-20040266996-A1	12-30-2004	Rabi	
	AVA	US-20050009737-A1	01-13-2005	Clark	
	AWA	US-20050020825-A1	01-27-2005	Storer et al.	
	AXA	US-20050026853-A1	02-03-2005	Mekouar et al.	
	AYA	US-20050031588-A1	02-10-2005	Sommadossi et al.	

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	BG3**	WO-2004/002422-A2	01-08-2004	IDENIX CAYMAN LTD, et al.		
	BH3**	WO-2004/002940-A1	01-08-2004	PHARMACIA & UPJOHN CO.		
	BI3**	WO-2004/002944-A1	01-08-2004	PHARMACIA & UPJOHN CO.		
	BJ3**	WO-2004/002977-A1	01-08-2004	PHARMACIA & UPJOHN CO.		
	BK3**	WO-2004/002999-A2	01-08-2004	IDENIX CAYMAN LTD, et al.		
	BL3**	WO-2004/003000-A2	01-08-2004	IDENIX CAYMAN LTD, CENTRE NAT RECH SCIENT, et al.		

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Attorney Docket Number	PH3080.PC4C

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	AZA	US-20050075309-A1	04-07-2005	Storer et al.	
	AAB	US-20050080034-A1	04-14-2005	Standring et al.	
	ABB	US-20050090660-A1	04-28-2005	Watanabe et al.	
	ACB	US-20050124532-A1	06-09-2005	Sommadossi et al.	
	ADB	US-20050130931-A1	06-16-2005	Boyer et al.	
	AEB	US-20050137161-A1	06-23-2005	Sommadossi et al.	
	AFB	US-20050148534-A1	07-07-2005	Castellino et al.	
	AGB	US-20050154056-A1	07-14-2005	Yang et al.	
	AHB	US-20050164960-A1	07-28-2005	Olsen et al.	
	AIB	US-20050215513	09-29-2005	Boojamra et al.	
	AJB	US-20050227947-A1	10-13-2005	Chen et al.	
	AKB	US-20050261237-A1	11-24-2005	Boojamra et al.	
	ALB	US-20050267018-A1	12-01-2005	Blatt et al.	
	AMB	US-20060003951-A1	01-05-2006	Mekouar et al.	
	ANB	US-20060014943-A1	01-19-2006	Dempcy et al.	
	AOB	US-20060035866-A1	02-16-2006	Cannizzaro et al.	
	APB	US-20060040890-A1	02-23-2006	Martin et al.	
	AQB	US-20060040927-A1	02-23-2006	Blake et al.	
	ARB	US-20060040944-A1	02-23-2006	Gosselin et al.	

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	BM3**	WO-2004/003138-A2	01-08-2004	MERCK & CO INC, et al.		
	BN3**	WO-2004/007512-A2	01-22-2004	MERCK & CO INC, et al.		
	BO3**	WO-2004/009020-A2	01-29-2004	MERCK & CO INC, et al.		
	BP3**	WO-2004/009610-A2	01-29-2004	PTC THERAPEUTICS INC, et al.		
	BQ3**	WO-2004/011478-A2	02-05-2004	MICROLOGIX BIOTECH INC, et al.		
	BR3**	WO-2004/014313-A2	02-19-2004	SQUIBB BRISTOL MYERS CO, et al.		

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	ASB	US-2006/0079478	04-13-2006	Boojamra et al.	
	ATB	US-20060110727-A9	05-25-2006	McGall et al.	
	AUB	US-20060122146-A1	06-08-2006	Chun et al.	
	AVB	US-20060122154-A1	06-08-2006	Olsen et al.	
	AWB	US-20060142238-A1	06-29-2006	McGuigan	
	AXB	US-20060194749-A1	08-31-2006	Keicher et al.	
	AYB	US-20060199783-A1	09-07-2006	Wang et al.	
	AZB	US-20060241064-A1	10-26-2006	Roberts et al.	
	AAC	US-20060276511-A1	12-07-2006	Serrano-Wu et al.	
	ABC	US-20060293306-A1	12-28-2006	Beaulieu et al.	
	ACC	US-20070015905-A1	01-18-2007	LaColla et al.	
	ADC	US-20070037735-A1	02-15-2007	Gosselin et al.	
	AEC	US-20070037773-A1	02-15-2007	Sommadossi et al.	
	AFC	US-20070042939-A1	02-22-2007	LaColla et al.	
	AGC	US-20070042988-A1	02-22-2007	Klumpp et al.	
	AHC	US-20070042990-A1	02-22-2007	Gosselin et al.	
	AIC	US-2007/0049754	03-01-2007	Boojamra et al.	
	AJC	US-20070060498-A1	03-15-2007	Gosselin et al.	
	AKC	US-20070060541-A1	03-15-2007	Gosselin et al.	

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	BS3**	WO-2004/014852-A2	02-19-2004	SQUIBB BRISTOL MYERS CO, et al.		
	BT3**	WO-2004/035571-A1	04-29-2004	RIGEL PHARMACEUTICALS INC, et al.		
	BU3**	WO-2004/041201-A2	05-21-2004	VIROPHARMA INC [US] WYETH CORP.		
	BV3**	WO-2004/046331-A2	06-03-2004	Idenix Cayman Ltd et al.		
	BW3**	WO-2004/065367-A1	08-05-2004	BOEHRINGER INGELHEIM INT		
	BX3**	WO-2004/080466-A1	09-23-2004	RIBAPHARM INC, et al.		

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	ALC	US-20070087960-A1	04-19-2007	Storer et al.	
	AMC	US-20070197463-A1	08-23-2007	Chun et al.	
	ANC	US-2007/0225249	09-27-2007	Shi	
	AOC	US-20070265222-A1	11-15-2007	MacCoss et al.	
	APC	US-20070275912-A1	11-29-2007	Bhat et al.	
	AQC	US-20070275947-A1	11-29-2007	Bergstrom	
	ARC	US-20090137521-A1	05-28-2009	Hamilton et al.	
	ASC	US-20090176732-A1	07-09-2009	Beigelman et al.	
	ATC	US-20090233879-A1	09-17-2009	REDDY et al.	
	AUC	US-20090280084-A1	11-12-2009	Schinazi et al.	
	AVC	US-20090306007-A1	12-10-2009	Wagner	
	AWC	US-20100029008-A1	02-04-2010	Rojas Stutz et al.	
	AXC	US-20100035835-A1	02-11-2010	Narjes et al.	
	AYC	US-20100081628-A1	04-01-2010	DU et al.	
	AZC	US-20100137576-A1	06-03-2010	Stec et al.	
	AAD	US-20100152128-A1	06-17-2010	Attenni et al.	
	ABD	US-20100173863-A1	07-08-2010	Schinazi et al.	
	ACD	US-20100227801-A1	09-09-2010	HOPKINS	
	ADD	US-20100279973-A1	11-04-2010	CHUN et al.	

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Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BY3**	WO-2004/094452	04-16-2004	Bristol-Myers Squibb Company		
	BZ3**	WO-2004/096210-A1	11-11-2004	GLAXO GROUP LTD.		
	BA4**	WO-2004/096234-A2	11-11-2004	Gilead Sciences, Inc		
	BB4**	WO-2004/096235	11-11-2004	Gilead Sciences Inc et al.		
	BC4**	WO-2004/096286	11-11-2004	Gilead Sciences, Inc.		
	BD4**	WO-2004/106356-A1	12-09-2004	UNIV SYDDANSK, et al.		

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

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	AED	US-20100286083-A1	11-11-2010	BAO et al.	
	AFD	US-20100298257	11-25-2010	ROSS et al.	
	AGD	US-20100316594-A1	12-16-2010	Sommadossi et al.	
	AHD	US-20110015146-A1	01-20-2011	SOFIA et al.	
	AID	US-20110124592-A1	05-26-2011	McGuigan et al.	
	AJD	US-20110245484-A1	10-06-2011	ROSS et al.	
	AKD	US-20110251152-A1	10-13-2011	Ross et al.	
	ALD	US-20120107278-A1	05-03-2012	BERREY et al.	
	AMD	US-20120245335-A1	09-27-2012	Clark	
	AND	US-20130029929-A1	01-31-2013	Sofia et al.	
	AOD	US-20130109647-A1	05-02-2013	Berrey et al.	
	APD	US-20130136776-A1	05-30-2013	Cleary et al.	
	AQD	US-20130137654-A1	05-30-2013	Ross et al.	
	ARD	US-20130165401-A1	06-27-2013	Ross et al.	
	ASD	US-20130165644-A1	06-27-2013	Ross et al.	
	ATD	US-3,798,209	03-19-1974	WITKOWSKI ET AL.	
	AUD	US-3,852,267	12-03-1974	Meyer, Jr. et al.	
	AVD	US-4,814,477	03-21-1989	Wijnberg et al.	
	AWD	US-4,957,924	09-18-1990	Beauchamp	

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	BE4**	WO-2005/002626-A2	01-13-2005	GILEAD SCIENCES INC, et al.		
	BF4**	WO-2005/003147-A2	01-13-2005	PHARMASSET LTD, et al.		
	BG4**	WO-2005/007810-A2	01-27-2005	GRINSTAFF MARK W, et al.		
	BH4**	WO-2005/009418-A2	02-03-2005	IDENIX CAYMAN LTD, et al.		
	BI4**	WO-2005/012327-A2	02-10-2005	UNIV CARDIFF, et al.		
	BJ4**	WO-2005/020884-A2	03-10-2005	IDENIX CAYMAN LTD, et al.		

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	AXD	US-5,026,687	06-25-1991	Yarchoan et al.	
	AYD	US-5,118,820	06-02-1992	Hertel	
	AZD	US-5,149,794	09-22-1992	Yatvin et al.	
	AAE	US-5,157,027	10-20-1992	Biller et al.	
	ABE	US-5,192,549	03-09-1993	Barenolz et al.	
	ACE	US-5,194,654	03-16-1993	Hostetler et al.	
	ADE	US-5,223,263	06-29-1993	Hostetler et al.	
	AEE	US-5,256,641	10-26-1993	Yatvin et al.	
	AFE	US-5,256,798	10-26-1993	Chou et al.	
	AGE	US-5,372,808	12-13-1994	Blatt et al.	
	AHE	US-5,376,380	12-27-1994	Kikuchi et al.	
	AIE	US-5,405,598	04-11-1995	Schinazi et al.	
	AJE	US-5,411,947	05-02-1995	Hostetler et al.	
	AKE	US-5,420,266	05-30-1995	Britton et al.	
	ALE	US-5,426,183	06-20-1995	Kjell	
	AME	US-5,453,499	09-26-1995	Chou et al.	
	ANE	US-5,462,724	10-31-1995	Schinazi et al.	
	AOE	US-5,463,092	10-31-1995	Hostetler et al.	
	APE	US-5,496,546	03-05-1996	Wang et al.	

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	BK4**	WO-2005021568-A2	03-10-2005	Biota, Inc,		
	BL4**	WO-2005/028502-A1	03-31-2005	VERTEX PHARMA INC.		
	BM4**	WO-2005/030891-A1	04-07-2005	E.I. DUPONT DE NEMOURS AND COMPANY		
	BN4**	WO-2005/037214	04-28-2005	Intermune, Inc.		
	BO4**	WO-2005/067900-A2	07-28-2005	ACHILLION PHARMACEUTICALS INC, et al.		
	BP4**	WO-2005/072361-A2	08-11-2005	MERCK & CO INC, et al.		

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Attorney Docket Number	PH3080.PC4C

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	AQE	US-5,538,865	07-23-1996	Reyes et al.	
	ARE	US-5,543,389	08-06-1996	Yatvin et al.	
	ASE	US-5,543,390	08-06-1996	Yatvin et al.	
	ATE	US-5,543,391	08-06-1996	Yatvin et al.	
	AUE	US-5,554,728	09-10-1996	Basava et al.	
	AVE	US-5,610,054	03-11-1997	Draper	
	AWE	US-5,633,358	05-27-1997	Gruetzke et al.	
	AXE	US-5,633,388	05-27-1997	Diana et al.	
	AYE	US-5,676,942	10-14-1997	Testa et al.	
	AZE	US-5,703,058	12-30-1997	Schinazi et al.	
	AAF	US-5,711,944	01-27-1998	Gilbert et al.	
	ABF	US-5,725,859	03-10-1998	Omer	
	ACF	US-5,738,845	04-14-1998	Imakawa	
	ADF	US-5,738,846	04-14-1998	Greenwald et al.	
	AEF	US-5,747,646	05-05-1998	Hakimi et al.	
	AFF	US-5,767,097	06-16-1998	Tam	
	AGF	US-5,792,834	08-11-1998	Hakimi et al.	
	AHF	US-5,830,455	11-03-1998	Valtuena et al.	
	AIF	US-5,830,905	11-03-1998	Diana et al.	

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	BQ4**	WO-2005/082144-A1	09-09-2005	US GOV HEALTH & HUMAN SERV		
	BR4**	WO-2005/087788-A2	09-22-2005	UNIV CALIFORNIA, et al.		
	BS4**	WO-2005/095403	10-13-2005	Intermune, Inc.		
	BT4**	WO-2005/103045-A1	11-03-2005	GLAXO GROUP LTD.		
	BU4**	WO-2005/123,087-A2	12-29-2005	Merck & Co Inc et al.		
	BV4**	WO-2006000922-A2	01-05-2006	Idenix (cayman) Limited,		

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	AJF	US-5,834,594	11-10-1998	Hakimi et al.	
	AKF	US-5,837,257	11-17-1998	Tsai et al.	
	ALF	US-5,846,964	12-08-1998	Ozeki	
	AMF	US-5,849,696	12-15-1998	Chretien et al.	
	ANF	US-5,869,253	02-09-1999	Draper	
	AOF	US-5,891,874	04-06-1999	Colacino et al.	
	APF	US-5,905,070	05-18-1999	Schinazi et al.	
	AQF	US-5,908,621	06-01-1999	Glue et al.	
	ARF	US-5,922,757	07-13-1999	Chojkier	
	ASF	US-5,928,636	07-27-1999	Alber et al.	
	ATF	US-5,942,223	08-24-1999	Bazer et al.	
	AUF	US-5,980,884	11-09-1999	Blatt et al.	
	AVF	US-5,990,276	11-23-1999	Zhang et al.	
	AWF	US-6,004,933	12-21-1999	Spruce et al.	
	AXF	US-6,034,134	03-07-2000	Gold et al.	
	AYF	US-6,043,077	03-28-2000	Barber et al.	
	AZF	US-6,056,961	05-02-2000	Lavie et al.	
	AAG	US-6,060,080	05-09-2000	Kikuchi et al.	
	ABG	US-6,090,932	07-18-2000	McGee et al.	

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	BW4**	WO-2006/012078-A2	02-02-2006	MERCK & CO INC, et al.		
	BX4**	WO-2006/012440-A2	02-02-2006	PHARMASSET INC, et al.		
	BY4**	WO-2006/020082-A1	02-23-2006	SQUIBB BRISTOL MYERS CO.		
	BZ4**	WO-2006/029081-A2	03-16-2006	NEOPHARM INC, et al.		
	BA5**	WO-2006/031725-A2	03-23-2006	Pharmasset Inc et al.		
	BB5**	WO-2006/037028-A2	04-06-2006	IDENIX CAYMAN LTD, et al.		

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	ACG	US-6,130,326	10-10-2000	Ramasamy et al.	
	ADG	US-6,132,763	10-17-2000	Fisher	
	AEG	US-6,156,501	12-05-2000	McGall et al.	
	AFG	US-6180134	01-30-2001	Zalipsky et al.	
	AGG	US-6232300	05-15-2001	Schinazi et al.	
	AHG	US-6239159	05-29-2001	Brown et al.	
	AIG	US-6348587	02-19-2002	Schinazi et al.	
	AJG	US-6372883	04-16-2002	Attwood et al.	
	AKG	US-6391859	05-21-2002	Schinazi et al.	
	ALG	US-6,410,531	06-25-2002	Llinas-Brunet et al.	
	AMG	US-6,420,380	07-16-2002	Llinas-Brunet et al.	
	ANG	US-6455513	09-24-2002	McGuigan et al.	
	AOG	US-6455690	09-24-2002	Tam et al.	
	APG	US-6475985	11-05-2002	Wagner et al.	
	AQG	US-6479463	11-12-2002	Wang et al.	
	ARG	US-6495677	12-17-2002	Ramasamy et al.	
	ASG	US-6509320	01-21-2003	Wang et al.	
	ATG	US-6,534,523	03-18-2003	Llinas-Brunet et al.	
	AUG	US-6552183	04-22-2003	Ramasamy et al.	

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	BC5**	WO-2006/050,161-A2	05-11-2006	Biocryst Pharm Inc et al.		
	BD5**	WO-2006/063149-A1	06-15-2006	UNIV. MINNESOTA		
	BE5**	WO-2006/063717-A2	06-22-2006	UNIV. KARLSRUHE		
	BF5**	WO-2006/065335-A2	06-22-2006	Merck & Co Inc et al.		
	BG5**	WO-2006/065590-A2	06-22-2006	XTL BIOPHARMACEUTICALS INC.		
	BH5**	WO-2006/067606-A1	06-29-2006	INSERM, CNRS		

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	AVG	US-6555677	04-29-2003	Petrillo et al.	
	AWG	US-6573248	06-03-2003	Ramasamy et al.	
	AXG	US-6642206	11-04-2003	Ramasamy et al.	
	AYG	US-6660721	12-09-2003	Devos et al.	
	AZG	US-6677314	01-13-2004	Klecker et al.	
	AAH	US-6677315	01-13-2004	Klecker et al.	
	ABH	US-6680303	01-20-2004	Schinazi et al.	
	ACH	US-6682715	01-27-2004	Klecker et al.	
	ADH	US-6683045	01-27-2004	Klecker et al.	
	AEH	US-6703374	03-09-2004	Klecker et al.	
	AFH	US-6753309	06-22-2004	Klecker et al.	
	AGH	US-6777395	08-17-2004	Bhat et al.	
	AHH	US-6784166	08-31-2004	Devos et al.	
	AIH	US-6787305	09-07-2004	Li et al.	
	AJH	US-6787526	09-07-2004	Bryant et al.	
	AKH	US-6815542	11-09-2004	Hong et al.	
	ALH	US-6846810	01-25-2005	Martin et al.	
	AMH	US-6897201	05-24-2005	Boyer et al.	
	ANH	US-6908924	06-21-2005	Watanabe et al.	

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	BI5**	WO-2006/093801-A1	09-08-2006	ABBOTT LAB		
	BJ5**	WO-2006/100310-A1	09-28-2006	TIBOTEC PHARM LTD, et al.		
	BK5**	WO-2006/116557-A1	11-02-2006	GENELABS TECHNOLOGIES, INC.		
	BL5**	WO-2006/120251-A1	11-16-2006	TIBOTEC PHARM LTD, et al.		
	BM5**	WO-2006/120252-A2	11-16-2006	TIBOTEC PHARM LTD, et al.		
	BN5**	WO-2006121820-A1	11-16-2006	Valeant Res & Dev et al.		

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Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AOH	US-6911424	06-28-2005	Schinazi et al.	
	APH	US-6914054	07-05-2005	Sommadossi et al.	
	AQH	US-6962991	11-08-2005	Dempcy et al.	
	ARH	US-7018985	03-28-2006	Boyer et al.	
	ASH	US-7018989	03-28-2006	McGuigan et al.	
	ATH	US-7081449	07-25-2006	Pietrzkowski et al.	
	AUH	US-7105499	09-12-2006	Carroll et al.	
	AVH	US-7148206	12-12-2006	Sommadossi et al.	
	AWH	US-7163929	01-16-2007	Sommadossi et al.	
	AXH	US-7202224	04-10-2007	Eldrup et al.	
	AYH	US-7217523	05-15-2007	Wagner	
	AZH	US-7268119	09-11-2007	Cook et al.	
	AAI	US-7307065	12-11-2007	Schinazi et al.	
	ABI	US-7365057	04-29-2008	LaColla et al.	
	ACI	US-7,390,791	06-24-2008	Becker et al.	
	ADI	US-7429572	09-30-2008	Clark	
	AEI	US-7601820	10-13-2009	Wang et al.	
	AFI	US-7754699	07-13-2010	Chun et al.	
	AGI	US-7879815	02-01-2011	MacCoss et al.	

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	BO5**	WO-2007/002602-A2	01-04-2007	DEPUY SPINE INC.		
	BP5**	WO-2007/014920-A1	02-08-2007	Tibotec Pharm Ltd et al.		
	BQ5**	WO-2007/014921-A1	02-08-2007	Tibotec Pharm Ltd et al.		
	BR5**	WO-2007/014922	02-08-2007	Tibotec Pharm Ltd et al.		
	BS5**	WO-2007/014925-A1	02-08-2007	Tibotec Pharm Ltd et al.		
	BT5**	WO-2007/014926-A1	02-08-2007	Tibotec Pharm Ltd et al.		

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	AHI	US-7964580	06-21-2011	Sofia et al.	
	AII	US-8148349	04-03-2012	Meppen et al.	
	AJI	US-8173621	05-08-2012	Du et al.	
	AKI	US-8334270	12-18-2012	Sofia et al.	
	ALI	US-8415322	04-09-2013	Clark	
	AMI	US-8551973	10-08-2013	Bao et al.	
	ANI	US-8580765	11-12-2013	Sofia et al.	
	AOI	US-RE29835	11-14-1978	Witkowski et al.	
	API	US-20060166964-A1	07-27-2006	Hudyma et al.	

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	BU5**	WO-2007/015824	07-17-2006	Intermune, Inc.		
	BV5**	WO-2007/020193-A2	02-22-2007	F. HOFFMANN-LA ROCHEAG		
	BW5**	WO-2007027248-A2	03-08-2007	Valeant Res & Dev et al.		
	BX5**	WO-2007/039142-A1	04-12-2007	GLAXO GROUP L TO.		
	BY5**	WO-2007/039145-A1	04-12-2007	GLAXO GROUP L TO.		
	BZ5**	WO-2007/065829-A1	06-14-2007	F. HOFFMANN-LA ROCHE AG		

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	BA6**	WO-2007/070556-A2	06-21-2007	GENELABS TECH INC.		
	BB6**	WO-2007/076034-A2	07-05-2007	ABBOTT LA		
	BC6**	WO-2007/088148-A1	08-09-2007	SMITHKLINE BEECHAM CORP.		
	BD6**	WO-2007/092000-A1	08-16-2007	SQUIBB BRISTOL MYERS CO.		
	BE6**	WO-2007/093901-A1	08-23-2007	Pfizer Ltd et al.		
	BF6**	WO-2007/095269-A2	08-23-2007	MERCK & CO., INC.		

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	BG6**	WO-2008010921-A2	01-24-2008	Gilead Sciences, Inc		
	BH6**	WO-2008/045419-A1	04-17-2008	PHARMASSET INC.		
	BI6**	WO-2008/048128-A1	04-24-2008	CT BADAN MOLEKULAR I MAKRO		
	BJ6**	WO-2008/062206-A2	05-29-2008	UNIV. COLLEGE CARDIFF CONSULTANTS LTD.		
	BK6**	WO-2008/079206-A1	07-03-2008	MERCK & CO., INC.		
	BL6**	WO-2008082601-A2	07-10-2008	Idenix Pharmaceuticals Inc et al.		

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	BM6**	WO-2008085508-A2	07-17-2008	Merck & Co Inc et al.		
	BN6**	WO-2008/142055-A2	11-27-2008	ANGELETTI P IST RICHERCHE B10		
	BO6**	WO-2009/052287-A1	04-23-2009	EISAL CORP OF NORTH AMERICA		
	BP6**	WO-2009/115893-A2	09-24-2009	HETERO RESEARCH FOUNDATION		
	BQ6**	WO-2009/120878-A2	10-01-2009	ALNYLAM PHARMACEUTICALS INC.		
	BR6**	WO-2009/129120-A2	10-22-2009	RFS PHARMA LLC		

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	BS6**	WO-2009/152095-A2	12-17-2009	PHARMASSET INC.		
	BT6**	WO-2010/042834-A1	04-15-2010	ANADYS PHARMACEUICALS INC.		
	BU6**	WO-2010/075554-A1	07-01-2010	PHARMASSET INC, et al.		
	BV6**	WO-2010/080878-A1	07-15-2010	SCYNEXIS INC.		
	BW6**	EP-0350287-A2	01-10-1990	VICAL INC, et al.		
	BX6**	WO-109121-A2	01-21-2010	University Of Florida Research Foundation, Inc.		

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	BY6**	WO-2003/106477-A1	12-24-2003	ISIS PHARMACEUTICALS INC, et al.		
	BZ6**	WO-208198	01-31-2002			
	BA7**	WO-208251	01-31-2002			
	BB7**	RE-29835-A	11-14-1978	WITKOWSKI ET AL.		

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CA**	Claims of U.S. Patent Application No. 13/956,195 as amended Oct. 21, 2013.	
	CB**	CLARK et al., "Synthesis and antiviral activity of 2'-deoxy-2'-fluro-2'-C-methyl purine nucelosides as inhibitors of hepatitis C virus RNA replication", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, PERGAMON, AMSTERDAM, NL, vol. 16, no. 6, 15 March 2006 (2006-03-15), pages 1712-1715, XP027966449, ISSN: 0960-894X	
	CC**	CODINGTON, et al., "NucleosiDE-s. XVIII. Synthesis of 2'-Fluorothymidine, 2'-FluoroDE-oxyuridine, and Other 2'-Halogeno-2'-DE-oxy NucleosiDE-s 1'2", The Division of Nucleoprotein Chemistry, Sloan-Kettering Institute for Cancer Research, Sloan-Kettering Division of Cornell University Medical Colleg, New York 21, New York, Vol. 29, pages 558-564, (1963).	
	CD**	GUDMUNDSSON, Kristjan S., et al., "Phosphoramidate ProtiDE-s of 2',3'-DiDE-oxy-3'-fluoroaDE-nosine and Related NucleosiDE-s with Potent Activity Against HIV and HBV," NucleosiDE-s, NucleotiDE-s & Nucleic Acids (2003) 22 (10):1953-1961.	
	CE**	HREBABECKY, et al ," 1-(3,5-0-alkyliDE-ne-2-DE-oxy-4-C-hydroxymethyl-alpha-L-threo-pentofuranosyl)	
	CF**	uracils," Collect. Czhech. Chem. Commun., Vol. 62, pages 957-970, (1997).	
	CG**	HREBABECKY, et al., "Synthesis of 1-(3-azido-2,3-diDE-oxy-4-C-hydroxymethyl-alpha-L-threo-pentofuranosyl)thymine, 1-(2, 3-d id eoxy-4-C-hyd roxy-methyl-alpha-L-glycero-pentofuranosyl)thymine and 1-(2,3-diDE-oxy-4-C-hydroxymethyl-alpha-L -glycero-pent -2-enofuranosyl)thymine," Collect Czech. Chem. Commun., Vol. 58, pages 409-420, (1992).	
	CH**	HREBABECKY, et al., "Synthesis of 1-(3-azido-2,3-diDE-oxy-β-D-allofuranosyl)thymine, 1-(2,3-diDE-oxy-β-D-allofuranosyl)thymine, and 1-(2,3-diDE-oxy-~-D-erythro-hex-2-enofuranosyl)thymine," Carbohydrate Research, Vol. 216, pages 179-186, (1991).	
	CI**	HREBABECKY, et al., "Synthesis of 1-(3-azido-2,3-diDE-oxy-β-d-ribo-hexofuranosyl)-, 1-(2,3-	
	CJ**	did eoxy-β-d-erythro-hexofu ranosyl)- and 1-(2,3-d iDE-oxy-β-d-erythro-hex-2-enofuranosyl)pyrimidine nucleosiDE-s," Collect. Czhech. Chem. Commun., Vol. 59, pages 412-420, (1993)	

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	CK**	Written Opinion of PCT/US2010/035641 mailed September 28, 2010	
	CL**	Written Opinion of PCT/EP2006/069060 mailed January 30,2007	
	CM**	Written Opinion of PCT/US2005/025916 mailed June 15, 2006	
	CN**	Written Opinion of PCT/US2005/032406 mailed May 8, 2008	
	CO**	International Search Report issued in International PCT application No. PCT/US2008/058183 mailed March 31, 2010 (7 pages)	
	CP**	LIN, et al., "A stereospecific synthesis of 2',3'-diDE-oxy-β-L-cytidine (β-L-ddC), a potent inhibitor against human hepatitis B virus (HBV) and human immunoDE-ficiency virus (HIV)," Tetrahedron Letters, Vol. 35, No. 21, pages 3477-3480, (1994).	
	CQ**	MCGUIGAN et al., "Synthesis, anti-human immunoDE-ficiency virus activity and esterase lability of some novel carboxylic ester-modified phosphoramidate DE-rivatives of stavudine (d4T)," Antiviral Chemistry & Chemotherapy, Vol. 9, pages 473-479 (1998)	
	CR**	MOURIER, et al., "Enantioselective synthesis and biological evaluation of 5-o-carboranyl-pyrimidine-nucleosides," Bioorganic & Medicinal Chemistry, Vol 7, pages 2759-2766, (1999).	
	CS**	Response filed October 25, 2010 at the EPO for European patent application No. EP08732818.3	
	CT**	Response to non-final Office Action dated October 1, 2009 for U.S. Application No. 12/142,554	

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Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	CU**	ROBINS, et al., "Nucleic acid related compounds. 91. Biomimetic reactions are in harmony with loss of 2'-substituents as free radicals (not anions) during mechanism-based inactivation of ribonucleotiDE- reductases. differential interactions of aziDE-, halogen, and alkylthio groups with tributylstannane and triphenylsilane," Journal of the American Chemical Society, Vol. 118, No. 46, pages 11341-11348, (1996).	
	CV**	SANEYOSHI, "Facile synthesis of 2'-O-cyanoethyluridine by ring-opening reaction of 2,2'-anhydrouridine with cyanoethyl trimethylsilyl ether in the presence of BF3 Et2O," Tetrahedron Letters, Vol. 48, pages 8554-8557, (2007).	
	CW**	Selected Prosecution documents from US 10/828,753 (1) Februrary 26, 2007 Amendment; (2) March 30, 2007 Office Action; (3) June 9, 2007 Interview Summary; (4) September 12, 2007 Amendment; (5) September 12, 2007 Declaration; (6) September 24, 2007 Declaration; (7) November 28, 2007 Amendment; (8) February 26, 2008 Office Action; (9) March 11, 2008 Amendment; and (10) May 29, 2008 Notice of Allowance)	
	CX**	Selected Proscution Documents from US 11/854,218: (1) September 12, 2007 Amendment; (2) October 1, 2008 Office Action; (3) March 31, 2010 Response; (4) March 31, 2011 Declaration; (5) July 22, 2010 Office Action; (6) October 11, 2010 Amendment; (7) October 11, 2010 Declaration; (8) December 23, 2010 Office Action; (9) June 28, 2011 Amendment.	
	CY**	U.S. Application No. 12/142,554, Pending claims filed on 12/17/2009	
	CZ**	U.S. Patent Application No. 13/956,195, as filed July 31, 2013	
	CA1**	VAN ROMPAEY, et al., "*Mycobacterium* tuberculosis thymidine monophosphate kinase inhibitors; biological evaluation and conformational analysis of 2'-and 3'-modified thymidine analogues," Eur. J. Org. Chem., pages 2911-2918, (2003).	
	CB1**	VANHEUSDE-N, et al., "Discovery of bicyclic thymidine analogues as selective and high-affinity inhibitors of mycobacterium tuberculosis thymidine monophosphate kinase," J. Med. Chem., Vol. 47, pages 6187-6194, (2004).	
	CC1**	VANHEUSDE-N, et al., "Synthesis and evaluation of thymidine-5'-O-monophosphate analogues as inhibitors of mycobacterium tuberculosis thymidylate kinase," Bioorganic & Medicinal Chemistry Letters, Vol. 12, pages 2695-2698, (2002).	
	CD1**	WU et al., "Targeting NS5B RNA-DE-penDE-nt RNA Polymerase For Anti-HCV Chemotherapy," Current Drug Targets- Infectious DisorDE-rs, Vol. 3, No.3, pages 207- 219 (2003)	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	CE1**	U.S. Application No. 11/225,724 pending claims filed 10/02/2009	
	CF1**	Selected Prosecution documents from US 12/053,015: (1) June 15, 2010 Resitriction Requirements; (2) October 28, 2010 Amendment ; (3) January 5, 2011 Notice of Alloance; and (4) April 1, 2011 Amendment.	
	CG1**	US 12/783,680 filed May 20, 210 - Originally filed claims	
	CH1**	US 13/076,552, filed March 31, 2011 - Originally filed claims.	
	CI1**	US 12/645,710 filed December 23, 2009 - Originally filed claims.	
	CJ1**	US 12/878,262 - Pending Claims as of September 1, 2011.	
	CK1**	Selected Proscution Documents for US 12/878,262: (1) September 9, 2010 Amendment; (2) June 8, 2011 Office Action; and (3) September 1, 2011 Amendment	
	CL1**	Office Action dated 04/08/2014 for Australian Application No. 2012241173	
	CM1**	Office Action dated 06/25/2014 for Colombian Application No. 09-120.744A	
	CN1**	Extended Search Report dated 09/18/2014 for European Application No. 14151876.1	

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	CO1**	Communication pursuant to Rules 70(2) and 70a(2) EPC and reference to Rule 39(1) EPC for European Application No. 14179593.0 dated 01/19/2015.	
	CP1**	English Translation of Office Action for Korean Application No. 10-2009-7022652 dated 12/19/2013.	
	CQ1**	Office Action dated 10/29/2014 for Korean Application No. 10-2012-7004146	
	CR1**	Office Action dated 01/04/2015 for Israeli Application No. 222810	
	CS1**	Office Action dated 01/22/2015 for Mexican Application No. MX/A/2012/000289	
	CT1**	Office Action dated 10/30/201 for Mexican Application No. MX/A/2012/000289	
	CU1**	Office Action dated 10/31/2014 for Chinese Application No. 200880018024.2	
	CV1**	Office Action dated 01/13/2015 for Japanese Application No. 2014-093905	
	CW1**	Subsequent Substantive Examination Report for Phillipines Application No. 1/2009/501847 dated 11/10/2014.	
	CX1**	Opposition by the Initiative for Medicines, Access & Knowledge (I-Mak) to Indian Application No. 3658/KOLNP/2009 N	

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	CY1**	Opposition by NATCO Pharma Limited to Indian Application No. 3658/KOLNP/2009 dated 03/03/2014.	
	CZ1**	Opposition by SANKLAP Rehabilitation Trust to Indian Application No. 3658/KOLNP/2009 dated 09/10/2014.	
	CA2**	Opposition by Indian Pharmaceutical Alliance to Indian Application No. 3658/KOLNP/2009 dated 02/17/2015.	
	CB2**	Opposition by Actavis Group PTC ehf to European Application No. 08732818.3 dated 02/23/2015.	
	CC2**	Opposition by Teva Pharmaceutical Industries to European Application No. 08732818.3 dated 02/10/2015.	
	CD2**	Opposition by Medecins Du Monde to European Application No. 08732818.3 dated 02/10/2015.	
	CE2**	Opposition by Ellis IP Ltd. to European Application No. 08732818.3 dated 02/10/2015.	
	CF2**	Opposition by Mr. Holm Herbert Fleisher to European Application No. 08732818.3 dated 02/19/2015.	
	CG2**	Opposition by Generics [UK] Ltd (trading as Mylan) to European Application No. 08732818.3 dated 02/19/2015.	
	CH2**	Opposition by IPS to European Application No. 08732818.3 dated 02/23/2015.	

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	CI2**	Opposition by Pharmaceutical Works Polpharma S.A. to European Application No. 08732818.3 dated 02/19/2015.	
	CJ2**	Opposition by Stada Arzneimittel AG to European Application No. 08732818.3 dated 02/19/2015.	
	CK2**	Opposition by ZBM Patents= Zea, Barlocci & Markvardsen to European Application No. 08732818.3 dated 02/23/2015.	
	CL2**	Furman et al., "The Anti-Hepatitis B Virus Activities, Cytoxicities, and Anabolic Profiles of the (-) and (+) Enantiomers of *cis*-5-Fluoro-1-[2-(Hydroxymenthyl)-1,3-Ozathiolan-5-yl]Cytosine," Antimicrobial Agents and Chemotherapy, (1992), 36(2):2686-2692.	
	CM2**	Chang et al., "Deoxyctidine-resistant Stereoisomer Is the Active Form of (+)-2',3'-Dideoxy-3'-thiacytidine in the Inhibition of Hepatitis B Virsu Replication," J. Bio. Chem, (1992), 267(20):13938-13942.	
	CN2**	Trousdale. et al.,"Activity of 1-(2'-Fluoro-2'-Deoxy-β-D-Arabinofuranosyl)Thymine Against Herpes Simplex Virsu in Cell Cultires and Rabbit Eyes," Antimicrobial Agents and Chemotherapy, (1983), 23(6):808-813.	
	CO2**	Klumpp, et al., "The Novel Nucleoside Analog R1479(4'-Azidocytidine) Is a Potent Inhibitorof NS5B-dependent RCA Synthesis and Hepatitis C Virus Replication in Cell Culture," J. Bio. Chem., (2006), 281:3793-3799.	
	CP2**	Landowski et al, "Targeted delivery to PEPT1-overexpressing cells: Acidic, basic, and secondary floxurdine amino acid ester prodrugs," MCT, (2005), 4(4):659-667.	
	CQ2**	McGuigan, "Phosphoramidate derivatives of stavudine as inhibitors of HIV: unnatural amino acids may substitute for alanine," Antiviral Chemistry & Chemotherapy, (2000), 11:111-116.	
	CR2**	Perrone, Thesis entitled "Design Synthesis an dBiological Evaluation of Novel Nucleotide Prodrugs as Potential Anti-Hepatitis C Virus Agents," (2007).	

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	CS2**	Zemlicka, "Lipophilic phosporamidates as antiviral pornucleotides, Biochem Biophys Acta, (2002), 276-286.	
	CT2**	Sofia, " Discovery of a beta-D-2'-Deoxy-2'-alpha-fluoro-2'-beta-C-methyluridine Nucleotide Prodrug (PSI-7977) for the Treament of Hepatitis C Virus," J. Med. Chem., (2010), 53	
	CU2**	Abstract, 100, presented at the 19th International Conference of Antiviral Research, May 7-11, 2006	
	CV2**	Guinic, et al., " Cyclic monophosphate prodrugs of base=modified 2'-C-methyl ribonucleosides as potent inhibitors of hepatitis C virus RNA replicaion," Bioorg Med Chem Lett., (2007), 17(9):2456-2458.	
	CW2**	ABRAHAM et al., "Synthesis and Biological Activity of Aromatic Amino Acid Phosphoramidates of 5-fluoro-2'deoxyuridine and 1-beta-Arabinofuranosylcytosine: Evidence of Phosphoramidase Activity," J. Med. Chem., vol. 39, No. 23, pp. 4569-4575, (1996).	
	CX2**	ABRAHAM et al., "Synthesis, Biological Activity and Decomposition Studies of Amino Acid Phosphomonoester Amidates of Acyclovir," Nucleosides, Nucleotides and Nucleic Acids, vol. 16, No. 10, pp. 2079-2092 (1997).	
	CY2**	AQUARO et al., "Activities of Masked 2',3'-Dideoxynucleoside Monophosphate Derivaties Against Human Immunodeficiency Virus in Resting Macrophages," Antimicrobial Agents and Chemotherapy, vol. 44, No. 1, pp. 173-177 (2000).	
	CZ2**	ASIF et al., "Pharmacokinetics of the Antiviral Agent B-D-2'-Deoxy-2'-Fluoro-2'-C-Methylcytidine in Rhesus Monkeys," Antimicrobial Agents and Chemotherapy, vol. 51, No. 8, pp. 2877-2882 (2007).	
	CA3**	BALZARINI et al., "Mechanism of anti-HIV action of masked alaninyl d4t-MP derivatives," Proc. Natl. Acad. Sci., vol. 93, pp. 7295-7299 (1996).	
	CB3**	BANKER et al., "Prodrugs," Modern Pharmaceutics, Third Edition, Revised and Expanded, pp. 451 and 596 (1996).	

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	CC3**	BARTENSCHLAGER et al., "Kinetic and Structural Analyses of Hepatitis C Virus Polyprotein Processing," J. Virol., vol. 68, No. 8, pp. 5045-5055 (1994).	
	CD3**	BARTENSCHLAGER et al., "Nonstructural Protein 3 of the Hepatitis C Virus Encodes a Serine-Type Proteinase Required for Cleavage at the NS3/4 and NS4/5 Junctions," J. Virol., vol. 67, No. 7, pp. 3835-3844 (1993).	
	CE3**	BASCHANG et al., "Neue Derivate von Thymidin-3',5'-cyclophosphat," Angew. Chem., vol. 85, No. 1, pp. 44-45 (1973).	
	CF3**	BATTAGLIA et al., "Combination Therapy with Interferon and Ribavirin in the Treatment of Chronic Hepatitis C Infection," The Annals of Pharmacotherapy, vol. 34, No. 4, pp. 487-494 (2000).	
	CG3**	BAZAN et al., "Detection of a Trypsin-like Serine Protease Domain in Flaviviruses and Pestiviruses," Virology, vol. 171, pp. 637-639 (1989).	
	CH3**	BEAULIEU et al., "Inhibitors of the HCV NS5B polymerase: New hope for the treatment of hepatitis C infections," Current Opinion in Investigational Drugs, vol. 5, No. 8, pp. 838-850 (2004).	
	CI3**	BEHRENS et al., "Identification and properties of the RNA-dependent RNA polymerase of hepatitis C virus," The EMBO Journal, vol. 15, No. 1, pp. 12-22 (1996).	
	CJ3**	BERENGUER, M., "Hepatitis C virus in the transplant setting," Antiviral Therapy, vol. 3, Supplement 3, pp. 125-136 (1998).	
	CK3**	BHAT et al., "Synthesis and Pharmacokinetic Properties of Nucleoside Analogues as Possible Inhibitors of HCV RNA Replication," (Oral Session V: Hepatitis C Virus, Flaviviruses), 16th International Conference on Antiviral Research, Abstract No. 120, p. A75 (Apr. 27-May 1, 2003).	
	CL3**	BROEDERS et al., "A 400-and 600-Mhz 'H NMR Confromational Study on Nucleoside Cyclic 3', 5' PV-TBP Systems. Conformational Transmission Induces Diequatorial Orientation of the 3', 5'-Dioxaphosphorinane Ring in a Nonchair Confirmation," J. Am. Chem. Soc., vol. 112, No. 21, pp. 7475-7482 (1990).	

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	CM3**	CAHARD, DOMINIQUE, et al., Aryloxy Phosphoramidate Triesters as Pro-Tides, Mini-Reviews in Medicinal Chemistry (2004), 4, 371-381.	
	CN3**	CALISHER et al., "Antigenic Relationships between Flaviviruses as Determined by Cross-neutralization Tests with Polyclonal Antisera," J. Gen. Virol., vol. 70, pp. 37-43 (1989).	
	CO3**	CARROLL et al., "Nucleoside Analog Inhibitors of Hepatitis C Virus Replication," Infectious Disorders-Drug Targets, vol. 6, No. 1, pp. 17-29 (2006).	
	CP3**	CHANG et al., "Amino Acid Phosphoramidate Monoesters of 3'-Azido-3'-deoxythymidine: Relationship between Antiviral Potency and Intracellular Metabolism," J. Med. Chem., vol. 44, No. 2, pp. 223-231 (2001).	
	CQ3**	CHAPMAN et al., "Practical Synthesis, Separation, and Stereochemical Assignment of the PMPA Pro-Drug GS-7340," Nucleosides, Nucleotides & Nucleic Acids, vol. 20, No. 4-7, pp. 621-628 (2001).	
	CR3**	CHAPMAN et al., "Purification of PMPA Amidate Prodrugs by SMB Chromatography and X-Ray Crystallography of the Diastereomerically Pure GS-7340," Nucleosides, Nucleotides & Nucleic Acids, vol. 20, No. 4-7, pp. 1085-1090 (2001).	
	CS3**	CHEN et al., "In Vivo Pharmacokinetics and Metabolism of Anti-Human Immunodeficiency Virus Agent D4t-5'-[P-Bromophenyl Methoxyalaninyl Phosphate] (Sampidine) in Mice," Drug Metabolism and Disposition, vol. 29, No. 7, pp. 1035-1041 (2001).	
	CT3**	CHEN et al., "Metabolism of Stavudine-5'-[P-Bromophenyl Methoxyalaninyl Phosphate], Stampidine, in Mice, Dogs, and Cats," Drug Metabolism and Disposition, vol. 30, No. 12, pp. 1523-1531 (2002).	
	CU3**	CHOU et al., "Evidence that Human Histidine Triad Nucleotide Binding Protein 3 (Hint3) is a Distinct Branch of the Histidine Triad (HIT) Superfamily," J. Mol. Biol., vol. 373, pp. 978-989 (2007).	
	CV3**	CHOU et al., "Phosphoramidate Pronucleotides: A Comparison of the Phosphoramidase Substrate Specificity of Human and Escherichia coli Histidine Triad Nucleotide Binding Proteins," Molecular Pharmaceutics, vol. 4, No. 2, pp. 208-217 (2006).	

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	CW3**	CHU et al., "Isolation and Structure of SCH 351633: A Novel Hepatitis C Virus (HCV) NS3 Protease Inhibitor from the Fungus Penicillium griseofulvum," Bioorg. & Med. Chem. Lett., vol. 9, pp. 1949-1952 (1999).	
	CX3**	CHU et al., "Structure of Sch 68631: A New Hepatitis C Virue Proteinase Inhibitor from Streptomyces sp." Tet. Lett., vol. 37, No. 40, pp. 7229-7232 (1996).	
	CY3**	CIHLAR et al. "Design and Profiling of GS-9148, a Novel Nucleotide Analog Active against Nucleoside-Resistant Variants of Human Immunodeficiency Virus Type 1, and Its Orally Bioavailable Phosphonoamidate Prodrug, GS-9131," Antimicrobial Agents and Chemotherapy, vol. 52, No. 2, pp. 655-665 (2008).	
	CZ3**	CLARK et al., "Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-C-methylcytidine, a Potent Inhibitor of Hepatitis C Virus Replication," J. Med. Chem., vol. 48, No. 17, pp. 5504-5508 (2005).	
	CA4**	CONGIATU et al. "Molecular Modeling Studies on the Binding of Some Protides to the Putative Human Phosphoramidase Hint1," Nucleosides, Nucleotides and Nucleic Acids, vol. 26, pp. 1121-1124 (2007).	
	CB4**	CONGIATU et al., "Naphthyl Phosphoramidate Derivatives of BVdU as Potential Anticancer Agents: Design, Synthesis and Biological Evaluation," Nucleosides, Nucleotides, and Nucleic Acids, vol. 24, No. 5-7, pp. 485-489 (2005).	
	CC4**	CURLEY et al., "Synthesis and anti-HIV evaluation of some phosphoramidate derivatives of AZT: studies on the effect of chain elongation on biological activity," Antiviral Research, vol. 14, pp. 345-356 (1990).	
	CD4**	DAVIS, G. L., "Current Therapy for Chronic Hepatitis C," Gastroenterology, vol. 118, No. 2, pp. S104-S114 (2000).	
	CE4**	D'CRUZ et al., "Stampidine: a selective oculo-genital microbicide," Journal of Antimicrobial Chemotherapy, vol. 56, pp. 10-19 (2005).	
	CF4**	DE LOMBAERT et al., "N-Phosphonomethyl Dipeptides and Their Phosphonate Prodrugs, a New Generation of Neutral Endopeptidase (NEP, EC 3.4.24.11) Inhibitors," J. Med. Chem., vol. 37, No. 4, pp. 498-511 (1994).	

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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
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	CG4**	DRONTLE et al., "Designing a Pronucleotide Stratagem: Lessons from Amino Acid Phosphoramidates of Anticancer and Antiviral Pyrimidines," MiniReviews in Medicinal Chemistry, vol. 4, No. 4, pp. 409-419 (2004).	
	CH4**	DUMEZ, DARIN, et al., "Large-Scale Synthesis and Formulation of GMP-Grade Stampidine, a New Anti-HIV Agent," Arzneim.-Forsch./Drug Res. (2006) 56(2a):136-151.	
	CI4**	ECKART et al., "The Hepatitis C Virus Encodes a Serine Protease Involved in Processing of the Putative Nonstructural Proteins from the Viral Polyprotein Precursor," Biochemical and Biophysical Research Communications, vol. 192, No. 2, pp. 399-406 (1993).	
	CJ4**	EDMUNDSON et al., "Cyclic Organophosphorus Compounds. Part 23. Configurational Assignments in the 4-Phenyl-1,3,2-dioxaphosphorinane Series. X-Ray Molecular Structure of cis-2-Benzylamino-4-phenyl-1,3,2-dioxaphosphorinane 2-oxide," J. Chem. Research (S), pp. 122-123 (1989).	
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	CL4**	EISENBERG et al., "Metabolism of GS-7340, a Novel Phenyl Monophosphoramidate Intracellular Prodrug of PMPA, in Blood," Nucleosides, Nucleotides & Nucleic Acids, vol. 20, No. 4-7, pp. 1091-1098 (2001).	
	CM4**	ELDRUP et al., "Oral Session V: Hepatitis C Virus, Flaviviruses," Program and Abstracts, The Sixteenth International Conference on Antiviral Research, p. A75, Abstract 119 (Apr. 27 to May 1, 2003).	
	CN4**	ELDRUP et al., "Structure-Activity Relationship of Purine Ribonucleosides for Inhibition of Hepatitis C Virus RNA-Dependent RNA Polymerase," J. Med. Chem., vol. 47, No. 9, pp. 2283-2295 (2004).	
	CO4**	ENGELS et al., "Ctclophosphate, III. Synthese and Eignschaften von Uridin-3',5'-cyclophosphat-estern," Chemische Berichte, vol. 110, No. 6, pp. 2019-2027 (1977).	
	CP4**	FAILLA et al., "Both NS3 and NS4A are Required for Proteolytic Processing of Hepatitis C Virus Nonstructural Proteins," J. Virol., vol. 68, No. 6, pp. 3753-3760 (1994).	

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	CQ4**	FARQUHAR et al., "Synthesis and Biological Evaluation of Neutral Derivatives of 5-Fluoro-2'-deoxyuridine 5'-Phosphate," J. Med. Chem., vol. 26, No. 8, pp. 1153-1158 (1983).	
	CR4**	FARQUHAR et al., "Synthesis of Biological Evaluation of 9[5'-(2-Oxo-1,3,2-oxazaphosphorinan-2-yl)-beta-D-arabinosyl] adenine and 9[5'-(2-Oxo-1,3,2-dioxaphosphorinan-2-yl)-beta-D-arabinosyl]adenine: Potential Neutral Precursors of 9-[beta-D-Arabinofuranosyl]adenine 5'-Monophosphate," J. Med. Chem., vol. 28, No. 9, pp. 1358-1361 (1985).	
	CS4**	FREED et al., "Evidence for acyloxymethyl esters of pyrimidine 5'-deoxyribonucleotides as extracellular sources of active 5'-deoxyribonucleotides in cultured cells," Biochemical Pharmacology, vol. 38, No. 19, pp. 3193-3198 (1989).	
	CT4**	GILLESPIE, S., et al., "Stereoselective Inhibition of Cholesterol Esterase by Enantiomeric Phosphonates," Phosphorous, Sulfur and Silicon, 1997, 122: 205-208.	
	CU4**	GOEKJIAN et al., "Synthesis of Fluorinated Marcocyclic Bis(indolyl)maleimides as Potential 19F NMR Probes for Protein Kinase C," J. Org. Chem. vol., 64., No. 12, pp. 4238-4246 (1999).	
	CV4**	GORBALENYA et al., "A conserved NTP-motif in putative helicases," Nature, vol. 333, p. 22 (1988).	
	CW4**	GORBALENYA et al., "N-terminal domains of putative helicases of flavi-and pestiviruses may be serine proteases," Nucleic Acids Research, vol. 17, No. 10, pp. 3889-3897 (1989).	
	CX4**	GRAKOUI et al., "A second hepatitis C virus-encoded proteinase," Proc. Natl. Acad. Sci., vol. 90, pp. 10583-10587 (1993).	
	CY4**	GRAKOUI et al., "Characterization of the Hepatitis C Virus-Encoded Serine Proteinase: Determination of Proteinase-Dependent Polyprotein Clevage Sites," J. Virol., vol. 67, No. 5, pp. 2832-2843 (1993).	
	CZ4**	GRIFFITH et al., "HCV Anti-viral Agents," Annual Reports in Medicinal Chemistry, vol. 39, pp. 223-237 (2004).	

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	CA5**	GROMOVA et al., "Optical Rotatory Dispersion and Circular Dichroism of Mono- and Oligonucleotide-Amino Acids (Amidates),"Biochim. Biophys. Acta., vol. 240, No. 1, pp. 1-11 (1971).	
	CB5**	GUDMUNDSSON, KRISTJAN S., et al., "Phosphoramidate Protides of 2',3'-Dideoxy-3'-fluoroadenosine and Related Nucleosides with Potent Activity Against HIV and HBV," Nucleosides, Nucleotides & Nucleic Acids (2003) 22 (10):1953-1961.	
	CC5**	GUDMUNDSSON, KRISTJAN S., et al., "Phosphoramidate Protides of Carbocyclic 2',3'-Dideoxy-2',3'-Didehydro-7-Deazaadenosine with Potent Activity Against HIV and HBV," Nucleosides, Nucleotides & Nucleic Acids (2004) 23(12): 1929-1937.	
	CD5**	GUNIC et al., "6-Hydrazinopurine 2'-methyl ribonucleosides and their 5'-monophosphate prodrugs as potent hepatitis C virus inhibitors," Bioorg. & Med. Chem. Lett., vol. 17, pp. 2456-2458 (2007).	
	CE5**	HALSTEAD, S. B., "Pathogenesis of Dengue: Challenges to Molecular Biology," Science, vol. 239, pp. 476-481 (1988).	
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	CH5**	HERNANDEZ et al., "Synthesis of Highly Functionalized Chiral Nitriles by Radical Fragmentation of beta-Hydroxy Azides. Convenient Transformation of Aldononitriles into 1,4- and 1,5-Iminoalditols," J. Org. Chem., vol. 69. No. 24, pp. 8437-8444 (2004).	
	CI5**	HERTEL et al., "Synthesis of 2-Deoxy-2,2-difluoro-D-ribose and 2-Deoxy-2,2-difluoro-D-ribofuranosyl Nucleosides," J. Org. Chem., vol. 53, No. 11, pp. 2406-2409 (1988).	
	CJ5**	HIJIKATA et al., "Two Distinct Proteinase Activities required for the Processing of a Putative Nonstructural Precursor Protein of Hepatitis C Virus," J. Virol., vol. 67, No. 8, pp. 4665-4675 (1993).	

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	CK5**	HOSTETLER et al., "Greatly Enhanced Inhibition of Human Immunodeficiency Virus Type 1 Replication in CEM and HT4-6C Cells by 3'-Deoxythymidine Diphosphate Dimyristoylglycerol, a Lipid Prodrug of 3'-Deoxythymidine," Antimicrobial Agents and Chemotherapy, vol. 36, No. 9, pp. 2025-2029 (1992).	
	CL5**	HOSTETLER et al., "Synthesis and Antiretroviral Activity of Phospholipid Analogs of Azidothymidine and Other Antiviral Nucleosides," J. Biol. Chem., vol. 265, No. 11, pp. 6112-6117 (1990).	
	CM5**	HOWES et al., "The Regiospecific One-Pot Phosphorylation of Either the 5'-or 2'-Hydroxyl in 3'-Deoxycytidines Without Protection: Critical Role of the Base," Nucleosides, Nucleotides, and Nucleic Acids, vol. 22, No. 5-8, pp. 687-689 (2003).	
	CN5**	HUNSTON et al., "Synthesis and Biological Properties of Some Cyclic Phosphotriesters Derived from 2'-Deoxy-5-fluorouridine," J. Med. Chem., vol. 27, No. 4, pp. 440-444 (1984).	
	CO5**	International Preliminary Examination Report along with Written Opinion of the International Searching Authority issued in International PCT application No. PCT/US2008/058183 issued Apr. 7, 2010 (17 pages).	
	CP5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/EP2006/069060 (13 pages).	
	CQ5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/EP2006/069060 (7 pages) (Nov. 5, 2008).	
	CR5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2004/012472 (8 pages) (Dec. 1, 2005).	
	CS5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/025916 (4 pages)	
	CT5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/025916 (5 pages) (Jan. 23, 2007)	

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	CU5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/032406 (4 pages) (Mar. 10, 2009).	
	CV5**	International Search Report and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2009/069475 (21 pages)	
	CW5**	International Search Report and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2009/069475 (21 pages) (May 10, 2010)	
	CX5**	International Search Report and Written Opinion of the International Searching Authority issued in PCT/US2010/035641 (23 pages)	
	CY5**	International Search Report and Written Opinion of the International Searching Authority issued in PCT/US2010/035641 (23 pages) (Nov. 20, 2011)	
	CZ5**	International Search Report issued in International Application No. PCT/EP2006/069060 mailed Jan. 30, 2007 (4 pages).	
	CA6**	International Search Report issued in International Application No. PCT/US2004/012472 mailed Dec. 30, 2004 (4 pages).	
	CB6**	International Search Report issued in International Application No. PCT/US2005/025916 mailed Jun. 15, 2006 (2 pages).	
	CC6**	International Search Report issued in International Application No. PCT/US2005/025916 mailed Jun. 15, 2006.	
	CD6**	International Search Report issued in International Application No. PCT/US2005/032406 mailed May 8, 2008 (3 pages).	

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	CG6**	International Search Report issued in International PCT application No. PCT/US2008/058183 mailed Mar. 31, 2010 (7 pages).	
	CH6**	Invitation to Pay Additional Fees & Partial International Search Report issued in International Application No. PCT/US2010/035641 (10 pages)	
	CI6**	Invitation to Pay Additional Fees & Partial International Search Report issued in International Application No. PCT/US2010/035641 (10 pages) (July 23, 2010)	
	CJ6**	IYER et al., "Synthesis, in Vitro Anti-Breast Cancer Activity, and Intracellular Decomposition of Amino Acid Methyl Ester and Alkyl Amide Phosphoramidate Monoesters of 3'-Azido-3'-deoxythymidine (AZT)," J. Med. Chem., vol. 43, No. 11, pp. 2266-2274 (2000).	
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	CL6**	JONES et al., "Minireview: Nucleotide Prodrugs," Antiviral Research, vol. 27, No. 1-2pp. 1-17 (1995).	
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	CN6**	JUODKA et al., "Oligonucleotides and Nucleotide-Peptides. XXXV. Some Properties of Nucleotidyl-(5'-N)-Amino Acid Esters Differing in Amino Acid and Nucleotide Components," J. Carbohydrates Nucleosides Nucleotides, vol. 8, No. 1, pp. 19-39 (1981).	

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	CT6**	KOTRA et al., "Structure-Activity Relationships of 2'-Deoxy-2',2'-difluoro-L-erythro-pentofuranosyl Nucleosides," J. Med. Chem., vol. 40, No. 22, pp. 3635-3644 (1997).	
	CU6**	KRYUCHKOV et al., "Influence of Solvent on the Strength of Cyclic Oxygen-Containing Phosphorus Acids," Bulletin of the Academy of Sciences of the USSR. Division of Chemical Science, vol. 36, No. 6, Part 1, pp. 1145-1148 (1987) Translated from Russian.	
	CV6**	KUCERA et al., "Novel Membrane-Interactive Ether Lipid Analogs That Inhibit Infectious HIV-1 Production and Induce Defective Virus Formation," Aids Research and Human Retroviruses, vol. 6, No. 4, pp. 491-501 (1990).	
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	CX6**	LEE et al., "Selective Intracellular Activation of a Novel Prodrug of the Human Immunodeficiency Virus reverse Transcriptase Inhibitor Tenofovir Leads to Preferential Distribution and Accumulation in Lymphatic Tissue," Antimicrobial Agents and Chemotherapy, vol. 49, No. 5, pp. 1898-1906 (2005).	

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	CZ6**	LI et al., "Synthesis of the Phosphoramidite Derivative of 2'-Deoxy-2'-C-beta-methylcytidine", J. Org. Chem., vol. 68, No. 17, pp. 6799-6802 (2003).	
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Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	CV7**	NAKAYAMA, KENSAKU, et al., "A Highly Enantioselective Synthesis of Phosphate Triesters," J. Am. Chem. Soc. (1990) 112:6936-6942.	
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	CA9**	SOFIA et al., "beta-D-2'-Deoxy-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", Poster #P-259, 14th International Symposium on Hepatitis C Virus and Related Viruses, Glasgow, Scotland, UK (Sep. 9 to 13, 2007).	
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	CO9**	U.S. Appl. No. 10/828,753, Final Office Action Rejection, mailed Feb. 26, 2008.	
	CP9**	U.S. Appl. No. 11/225,425, Final Office Action Rejection, mailed Feb. 18, 2010.	

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	CR9**	U.S. Appl. No. 11/225,425, Non-Final Office Action Rejection, mailed Nov. 13, 2008.	
	CS9**	U.S. Appl. No. 11/353,597, Final Office Action Rejection, mailed Dec. 2, 2008.	
	CT9**	U.S. Appl. No. 11/353,597, Non-Final Office Action Rejection, mailed Oct. 2, 2007.	
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	CV9**	U.S. Appl. No. 11/854,218, Non-Final Office Action Rejection, mailed Oct. 1, 2009.	
	CW9**	U.S. Appl. No. 12/142,536, Non-Final Office Action Rejection, mailed Oct. 2, 2009.	
	CX9**	U.S. Appl. No. 12/142,554, Non-Final Office Action Rejection, mailed Oct. 1, 2009.	
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	CAA**	U.S. Appl. No. 13/956,195, filed Jul. 31, 2013.	
	CBA**	U.S. Application No. 11/854,218, Pending claims filed 09/12/2007	
	CCA**	U.S. Application No. 12/142,536, Pending claims filed on 06/19/2008	
	CDA**	U.S. Application No. 12/479,075, filed on 06/05/2009, Group Art Unit 1614	
	CEA**	U.S. Application No. 12/645,765, filed on 12/23/2009, Group Art Unit 1614	
	CFA**	U.S. Application No. 12/645,821, filed on 12/23/2009, Group Art Unit 1636	
	CGA**	U.S. Patent Application No. 13/936,448, as filed July 08, 2013	
	CHA**	U.S. Patent Application No. 14/057,675, as filed October 18, 2013	
	CIA**	U.S. Patent Application No. 14/152,243, as filed January 10, 2014	
	CJA**	U.S. Provisional Patent Application No. 60/392,350, filed Jun. 28, 2002.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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NON PATENT LITERATURE DOCUMENTS

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	CKA**	U.S. Provisional Patent Application No. 60/392,351, filed Jun. 28, 2002.	
	CLA**	UCHIYAMA, MAMORU, et al., "O-Selective Phosphorylation of Nucleosides without N-Protection," J. Org. Chem. (1993) 58:373-379.	
	CMA**	UCKUN et al., "In Vivo Pharmacokinetics and Toxicity Profile of the Anti-HIV Agent Stampidine in Dogs and Feline Immunodeficiency Virus-infected Cats," Arzneim.-Forsch./Drug Res., vol. 56, No. 2a, pp. 176-192 (2006).	
	CAN**	VALETTE et al., "Decomposition Pathways and in Vitro HIV Inhibitory Effects of IsoddA Pronucleotides: Toward a Rational Approach for Intracellular Delivery of Nucleoside 5?-Monophosphates," J. Med. Chem., vol. 39, No. 10, pp. 1981-1990 (1996).	
	COA**	VENKATACHALAM et al., "Rational Drug Design of Multifunctional Phosphoramidate Substituted Nucleoside Analogs," Current Pharmaceutical Design, vol. 10, No. 15, pp. 1713-1726 (2004).	
	CPA**	VENKATACHALAM et al., "Synthesis and metabolism of naphthyl substituted phosphoramidate derivatives of stavudine," Bioorg. and Med. Chem., vol. 14, pp. 5161-5177 (2006).	
	CQA**	UCHIYAMA, MAMORU, et al., "O-Selective Phosphorylation of Nucleosides without N-Protection," J. Org. Chem. (1993) 58:373-379.	
	CRA**	UCKUN et al., "In Vivo Pharmacokinetics and Toxicity Profile of the Anti-HIV Agent Stampidine in Dogs and Feline Immunodeficiency Virus-infected Cats," Arzneim.-Forsch./Drug Res., vol. 56, No. 2a, pp. 176-192 (2006).	
	CSA**	VALETTE et al., "Decomposition Pathways and in Vitro HIV Inhibitory Effects of IsoddA Pronucleotides: Toward a Rational Approach for Intracellular Delivery of Nucleoside 5'-Monophosphates," J. Med. Chem., vol. 39, No. 10, pp. 1981-1990 (1996).	
	CTA**	VENKATACHALAM et al., "Rational Drug Design of Multifunctional Phosphoramidate Substituted Nucleoside Analogs," Current Pharmaceutical Design, vol. 10, No. 15, pp. 1713-1726 (2004).	

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	CUA**	VENKATACHALAM et al., "Synthesis and metabolism of naphthyl substituted phosphoramidate derivatives of stavudine," Bioorg. and Med. Chem., vol. 14, pp. 5161-5177 (2006).	
	CVA**	WAGNER et al., "Antiviral Nucleoside Drug Delivery via Amino Acid Phosphoramidates," Nucleosides, Nucleotides and Nucleic Acids, vol. 18, No. 4 & 5, pp. 913-919 (1999).	
	CWA**	WALKER et al., "Promising candidates for the treatment of chronic hepatitis C," Expert Opin. Investig. Drugs, vol. 12, No. 8, pp. 1269-1280 (2003).	
	CXA**	WARRENER et al., "Pestivirus NS3 (p80) Protein Possesses RNA Helicase Activity," J. Virol., vol. 69, No. 3, pp. 1720-1726 (1995).	
	CYA**	WU et al., "Synthesis and Biological Activity of a Gemcitabine Phosphoramidate Prodrug," J. Med. Chem., vol. 50, No. 15, pp. 3743-3746 (2007).	
	CZA**	WOLFF, M.E., "Burger's Medicinal Chemistry and Drug Discovery," Fifth Edition, vol. 1, pp. 975-977 (1995).	
	CAB**	WOZNIAK, LUCYNA A., et al., "The stereospecific synthesis of P-chiral biophosphates and their analogues by the Stec reaction," Chem. Soc. Rev. (2003) 32:158-169.	
	CBB**	XIAO-LING et al., "The Synthesis of (2S,3R)-Sphingosine from D-Mannitol", Acta Chimica Sinica, vol. 54, pp. 826-832 (1996).	
	CCB**	XU et al., "Bovine Viral Diarrhea Virus NS3 Serine Proteinase: Polyprotein Cleavage Sites, Cofactor Requirements, and Molecular Model of an Enzyme Essential for Pestivirus Replication," J. Virol., vol. 71, No. 7, pp. 5312-5322 (1997).	
	CDB**	YUAN et al., "Expression, Purification, and Partial Characterization of HCV RNA Polymerase," Biochemical and Biophysical Research Communications, vol. 232, No. 1, pp. 231-235 (1997).	

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	CFB**	WU et al., "Targeting NS5B RNA-Dependent RNA Polymerase for Anti-HCV Chemotherapy," Current Drug Targets-Infectious Disorders, vol. 3, No. 3, pp. 207-219 (2003).	
	CGB**	XIAO-LING et al., "Study on the Chirality of Sulfur in Ethyl (2S, 3R,4R)-4,5-O-Isopropylidene-2,3-sulfinyl;-2,3,4,5-tetrahydroxy-pentanoate", Acta Chimica Sinica, vol. 55, pp. 600-604 (1997).	
	CHB**	XIAO-LING et al., "The Synthesis of (2S,3R)-Sphingosine from D-Mannitol", Acta Chimica Sinica, vol. 54, pp. 826-832 (1996).	
	CIB**	ABRAHAM et al. J. Med. Chem. (1996), Vol. 39, pages 4569-4575.	
	CJB**	AQUARO, et al. Antimicrobial Agents and Chemotherapy, 2000, 1, 173-177	
	CKB**	BARTENSCHLAGER, J. Viral., 1993, 67, 3835-3844	
	CLB**	BARTENSCHLAGER, J. Viral., 1994, 68, 5045-5055	
	CMB**	BASCHANG et al., Angewandte Chemie, 85:1,44-45, 1973	
	CNB**	BAZAN and FLETTERICK ,Virology, 1989, 171, 637-639	

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	COB**	BEAULIEU, P. L., Current Opinion in Investigational Drugs, 2004, 5, 838-850	
	CPB**	BEHRENS, EMBO, 1996, 15, 12-22	
	CQB**	BHAT B., "Synthesis and Pharmacokinetic Properties of Nucleoside Analogues as Possible Inhibitors of HCV RNA Replication," (Oral Session V: Hepatitis C Virus, Flaviviruses), 16th International Conference on Antiviral Research, Abstract No. 120, p. A75 (April. 27-May 1, 2003, Savannah, GA).	
	CRB**	BROEDERS et al., J. Am. Chem. Soc., 112:21,7475-7482, 1990	
	CSB**	CALISHER, J. Gen. Viral, 1989, 70, 37-43	
	CTB**	CARROL, S., Infectious Disorders-Drug Targets, 2006, 6, 17-29	
	CUB**	CHAPMAN, et al. Nucleotides, Nucleosides and Nucleic Acids, 2001, 20 (4-7), 1085-1090	
	CVB**	CHAPMAN, et al. Nuecleotides, Nucleosides and Nucleic Acids, 2001, 20 (4-7), 621-628	
	CWB**	CHU, M., Bioorganic & Medicinal Chemistry Letters, Vol. 9, 1949-1952, 1999	
	CXB**	CHU, M., Tetrahedron Letters, Vol. 37, No. 40,7229-7232, 1996	

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	CYB**	DE LOMBAERT, S., J. Med. Chem., Vol. 37, No.4, 498-511, 1994	
	CZB**	ECKART, Biochem. Biophys. Res. Comm. 1993, 192, 399-406	
	CAC**	EDMUNDSON, J. Chem. Res. Synop., 1989,5:122-123	
	CBC**	EISENBERG, et al. Nucleosides, Nucleotides & Nucleic Acids, 2001, 20(4-7), 1091-1098	
	CCC**	ELDRUP, A., "Structure Activity Relationship of 2' Modified Nucleosides for Inhibition of Hepatitis C Virus," (Oral Session V: Hepatitis C Virus, Flavaviruses), 16th International Conference on Antiviral Research, Abstract No. 119, p. A75 (April27-May I, 2003, Savannah, GA)	
	CDC**	ENGELS et al., Chem. Ber., 110:6, 2019-2027, 1977	
	CEC**	FAILLA, J. Viral., 1994, 68, 3753-3760	
	CFC**	Fields Virology, Editors: Fields, B. N., Knipe, D. M., and Howley, P.M., Lippincott- Raven Publishers, Philadelphia, PA, 1996, Chapter 31,931-959	
	CGC**	Final International Report and Written Opinion ofPCT/US2009/069475 mailed May 10, 2010	
	CHC**	GOEKJIAN, Journal of Organic Chemistry, 1999, 64 (12) 4238-4246	

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	CIC**	GORBALENYA, Nature, 1988, 333, 22	
	CJC**	GORBALENYA, Nucleic Acid Res.,1989, 17, 3889-3897	
	CKC**	GRAKOUI, J. Viral. 1993, 67, 2832-2843	
	CLC**	GRAKOUI, Proc. Natl. Acad Sci. USA 1993, 90, 10583-10587	
	CMC**	GRIFFITH, R.C., Annual Reports in Medicinal Chemistry, 2004, 39,223-237	
	CNC**	GROMOVA et al., Biochem. Biophys. Acta, 1971,240, 1-11	
	COC**	HALSTEAD, S. B., Rev. Infect. Dis., 1984,6,251-264	
	CPC**	HALSTEAD, S. B., Science, 1988, 239, 476-481	
	CQC**	HARRIS et al., Antiviral Chemistry & Chemotherapy, 2002, 12, 293-300	
	CRC**	HERNANDEZ, Journal of Organic Chemistry, 2004, 69 (24), 8437-8444	

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	CSC**	HIJIKATA, J. Viral. 1993, 67, 4665-4675	
	CTC**	HOSTETLER, K., Antimicrob. Agents Chemother., Vol. 36, No.9, 2025-2029, 1992	
	CUC**	International Preliminary Examination Report of International PCT application no. PCT/US2008/058183 issued April 7, 2010	
	CVC**	International Preliminary Examination Report of PCT/EP2006/069060 mailed November 5, 2008	
	CWC**	International Preliminary Examination Report of PCT/US2004/012472 issued December 1, 2005	
	CXC**	International Preliminary Examination Report of PCT/US2005/025916 issued January 23, 2007	
	CYC**	International Preliminary Examination Report of PCT/US2005/032406 issued March 10, 2009	
	CZC**	International Search Report for International Application No. PCT/EP2006/069060 (W02007/065829) mailed January 30, 2007	
	CAD**	International Search Report for International Application No. PCT/US2004/0124 72 (W02005/003147) mailed December 30, 2004	
	CBD**	International Search Report for International Application No. PCT/US2005/025916 (W02006/012440) mailed June 15, 2006	

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	CCD**	International Search Report for International Application No. PCT/US2005/032406 (W02006/031725) mailed May 8, 2008	
	CDD**	International Search Report of International Application No. PCT/US05/25916 mailed June 15, 2006	
	CED**	International Search Report of International PCT application no. PCT/US2008/058183 mailed March 31, 2010	
	CFD**	International Search Report of PCT/US2009/046619 (W0/2009/152095) mailed September 23, 2010	
	CGD**	International Search Report of PCT/US2010/035641 mailed September 28, 2010	
	CHD**	Invitation to Pay Additional Fees & Partial International Search Report of PCT/US2010/035641 mailed July 23, 2010	
	CID**	JIN and PETERSON, Arch. Biochem. Biophys., 1995, 323, 47-53	
	CJD**	JUODKA et al., J. Carbohydrates, Nucleosides, Nucleotides, 1979, 6(4), 333-357	
	CKD**	JUODKA et al., J. Carbohydrates, Nucleosides, Nucleotides, 1981, 8(1), 19-39	
	CLD**	JUODKA et al., J. Carbohydrates, Nucleosides, Nucleotides, 1981, 8(6), 519-535	

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	CMD**	KIM et al., Biochem. Biophys. Res. Comm., 1995, 215, 160-166	
	CND**	KOONIN, E.V. and Dolja, V.V., Crir. Rev. Biochem. Malec. Biol. 1993, 28, 375-430	
	COD**	KRYUCHKOV et al., "Influence of Solvent on the Strength of Cyclic Oxygen-Containing Phosphorus Acids," Bulletin of the Academy of Sciences of the USSR. Division of Chemical Science, vol. 36, No. 6, Part 1, pp. 1145-1148 (1987)	
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	CQD**	LACKEY et al., Biochemical Pharmacology, 2001, 61, 179-189	
	CRD**	LEE, et al Antimicrobial Agents and Chemotherapy, 2005, 49(5), 1898-1906	
	CSD**	LOCHMANN, J. Viral., 1997, 71, 8416-8428	
	CTD**	LOPEZ APARICIO et al., "Branched-Chain Sugars, Part VII, Synthesis of Saccharinic Acid Derivatives" Carbohydrate Research, 129, 99-109, 1984	
	CUD**	MCGUIGAN, et al. Antiviral Chemistry and Chemotherapy 1998, 9, 473-479	
	CVD**	MCINTEE et al., Biorg. & Med. Chem. Lett., 2001, 11, 2803-2805	

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	CXD**	MEYERS, G. and Thiel, H.J., Advances in Virus Research, 1996, 47, 53-118	
	CYD**	MOENING V., Adv. Vir. Res. 1992,41, 53-98	
	CZD**	MONATH, T. P., New Eng. J. Med, 1988, 319, 641-643	
	CAE**	MURAKAMI et al. Antimicrobial Agents and Chemotherapy (Feb. 2008), 52 (2), 458-464	
	CBE**	MURAKAMI, et al. Antiviral Chemistry & Chemotherapy, 2007, 51(2), 503-509	
	CCE**	NEIDLEIN, R., Heterocycles, Vol. 35, No.2, 1185-1203, 1993	
	CDE**	NELSON et al., J. Am. Chem. Soc., 109:13, 4058-4064, 1987	
	CEE**	NI, Z-J., Current Opinion in Drug Discovery and Development, 2004, 7, 446-459	
	CFE**	NIFANTYEV, E., Phosphorus, Sulfur, and Silicon and the Related Elements, Vol. 113, 1-13, 1996	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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NON PATENT LITERATURE DOCUMENTS

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	CGE**	NOVAK J.J.K., Collection of Czechoslovak Chemical Communications, Vol. 36, 3670-3677, 1971	
	CHE**	NOVAK, J.J .K., Collection of Czechoslovak Chemical Communications, Vol. 39, 869-882, 197 4	
	CIE**	OISHI, Tetrahedron Letters, 1993, 34 (22), 3573-3576	
	CJE**	OLSEN et al., "2'-Modified Nucleoside Analogs as Inhibitors of Hepatitis C RNA Replication," Program and Abstracts, 16th International Conference on Antiviral Research, Abstract No. 121, p. A76 (Apr. 27-May 1, 2003, Savannah, GA))	
	CKE**	Partial International Search Report ofPCT/US2009/069475 (W0/2010/075554) mailed March 5, 2010	
	CLE**	RAY, et al. Antimicrobial Agents and Chemotherapy, 2008, 52(2), 648-654	
	CME**	REMY et al., J. Org. Chem., 1962, 27, 2491-2500	
	CNE**	SHIH, Y., Bull. Inst. Chem., Academia Sinica, 41:9-16, 1994	
	COE**	SMIMOV et al., FEBS Letters, 1975, 51(1), 211-214	
	CPE**	SOFIA et al., "β-D-2'-Deoxy-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", Poster #P-259, 14th International Symposium on Hepatitis C Virus and Related Viruses, Glasgow, Scotland, UK (Sep. 9 to 13, 2007).	

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	CQE**	SOFIA et al., "β-D-2'-Deoxy-2'-fluoro-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", 2nd International Workshop on HCV, Poster #7 (Oct. 31, 2007).	
	CRE**	SOFIA, M.J., "β-D-2'-Deoxy-2'-fluoro-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", 2nd International Workshop on HCV-Resistance and New Compounds (Oct. 31, 2007).	
	CSE**	STELLA, "Prodrugs as Therapeutics", Expert Opinion Ther. Patents, 2004, 14:3,277-280	
	CTE**	STUYVER, L.J. et al. Antiviral Chemistry & Chemotherapy, 2004, 48(2), 651-654	
	CUE**	Sun XIAO-LING and and Wu YU-LIN, "Study on the Chirality of Sulfur in Ethyl (2S, 3R,4R)-4,5-O-Isopropylidene-2,3-sulfinyl;-2,3,4,5-tetrahydroxy-pentanoate", Acta Chimica Sinica, vol. 55, pp. 600-604	
	CVE**	Sun XIAO-LING and and Wu YU-LIN., "The Synthesis of (2S,3R)-Sphingosine from D-Mannitol", Acta Chimica Sinica, vol. 54, pp. 826-832	
	CWE**	Supplemental European Search Report of European patent appln no. EP 05775359.2 dated September 15, 2010	
	CXE**	TAN, S.-L., Nature Rev. Drug Discov., 2002, 1, 867-881	
	CYE**	TOME, J. Viral., 1993, 67, 4017-4026	
	CZE**	U.S. application no. 10/828,753 Final Rejection mailed 02-26-2008	

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	CAF**	U.S. application no. 10/828,753 Non-Final Rejection mailed 03-30-2007	
	CBF**	U.S. application no. 11/225,425 Final Rejection mailed 02-18-2010	
	CCF**	U.S. application no. 11/225,425 Non-Final Rejection mailed 07-07-2009	
	CDF**	U.S. application no. 11/225,425 Non-Final Rejection mailed 11-13-2008	
	CEF**	U.S. application no. 11/225,425 pending claims filed 10-02-2009	
	CFF**	U.S. application no. 11/353,597 Final Rejection mailed 12-02-2008	
	CGF**	U.S. application no. 11/353,597 Non-Final Rejection mailed 07-17-2008	
	CHF**	U.S. application no. 11/353,597 Non-Final Rejection mailed 10-02-2007	
	CIF**	U.S. application no. 11/635,898 Non-Final Rejection mailed 07-28-2009	
	CJF**	U.S. application no. 11/635,898 pending claims filed 12-24-2009	

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	CKF**	U.S. application no. 11/854,218 Non-Final Rejection mailed 10-01-2009	
	CLF**	U.S. application no. 11/854,218 pending claims filed 09-12-2007	
	CMF**	U.S. application no. 12/142,536 Non-Final Rejection mailed 10-02-2009	
	CNF**	U.S. application no. 12/142,536 pending claims filed 06-19-2008	
	COF**	U.S. application no. 12/142,554 Non-Final Rejection mailed 10-01-2009	
	CPF**	U.S. application no. 12/142,554 pending claims filed 12-17-2009	
	CQF**	U.S. application no. 12/240,342 Non-Final Rejection mailed 10-01-2009	
	CRF**	U.S. application no. 12/240,342 pending claims filed 09-29-2008	
	CSF**	U.S. application no. 12/479,075 filed 06-05-2009	
	CTF**	U.S. application no. 12/553,483 Non-Final Rejection mailed 12-17-2009	

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	CUF**	U.S. application no. 12/553,483 pending claims filed 02-22-2010	
	CVF**	U.S. application no. 12/645,710 filed 12-23-2009	
	CWF**	U.S. application no. 12/645,765 filed 12-23-2009	
	CXF**	U.S. application no. 12/645,821 filed 12-23-2009	
	CYF**	WALKER, M.P., Exp. Opin. Investigational Drugs, 2003, 12, 1269-1280	
	CZF**	WARRENER and COLLETT, J. Viral. 1995, 69, 1720-1726	
	CAG**	WISKERCHEN and COLLETT, Virology, 1991, 184, 341-350	
	CBG**	Written Opinion of PCT/EP2006/069060 mailed January 30, 2007	
	CCG**	Written Opinion of PCT/US2004/012472 mailed December 30, 2004	
	CDG**	Written Opinion of PCT/US2008/058183 mailed March 31,2010	

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	CEG**	WU, J., Current Drug Targets-Infectious Disorders, 2003, 3, 207-219	
	CFG**	XU et al., J. Viral., 1997, 71:5312-5322	
	CGG**	YUAN, Biochem. Biophys. Res. Comm. 1997,232,231-235	
	CHG***	YUODKA et al., translated from Bioorganicheskaya Khimiya, 1976, 2(11), 1513-1519	
	CIG**	ZHONG, J. Viral., 1998, 72, 9365-9369	
	CJG**	ZON, G., "4 Cyclophosphoamide Analogues," Progress in Medicinal Chemistry, vol. 19, pp. 205-246 (1982).	
	CKG**	AQUARO et al., Antimicrobial Agents and Chemotherapy (2000) 1: 173-177.	
	CLG**	CHAPMAN et al., Nucleotides, Nucleosides and Nucleic Acids (2001) 20(4-7): 1085-1090.	
	CMG**	CHAPMAN et al., Nucleotides, Nucleosides and Nucleic Acids (2001) 20(4-7): 621-628.	
	CNG**	EISENBERG et al., Nucleosides, Nucleotides & Nucleic Acids (2001) 20(4-7): 1091-1098.	

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	COG**	LEE et al., Antimicrobial Agents and Chemotherapy (2005) 49(5): 1898-1906.	
	CPG**	MA et al., J. Biol. Chem. (2007) 282(41): 29812-29820.	
	CQG**	MCGUIGAN et al., Antiviral Chemistry and Chemotherapy (1998) 9: 473-479.	
	CRG**	MURAKAMI et al., Antimicrobial Agents and Chemotherapy (2008) 52(2): 458-464.	
	CSG**	MURAKAMI et al., Antiviral Chemistry & Chemotherapy (2007) 51(2): 503-509.	
	CTG**	PERRONE et al., J. Med. Chem. (2007) 50(8): 1840-1849.	
	CUG**	RAY et al., Antimicrobial Agents and Chemotherapy (2008) 52(2): 648-654.	
	CVG**	Selected Prosecution Documents for US 11/854,218: (1) September 12, 2007 Amendment; (2) October 1, 2009 Office Action; (3) March 31, 2010 Response; (4) March 31, 2011 Declaration; (5) July 22, 2010 Office Action; (6) October 11, 2010 Amendment; (7) October 11, 2010 Declaration; (8) December 23, 2010 Office Action; (9) June 28, 2011 Amendment.	
	CWG**	Selected Prosecution Documents for US 12/878,262: (1) September 9, 2010 Amendment; (2) June 8, 2011 Office Action; and (3) September 1, 2011 Amendment.	
	CXG**	Selected Prosecution Documents from US 10/828,753: (1) February 26, 2007 Amendment; (2) March 30, 2007 Office Action; (3) June 19,2007 Interview Summary; (4) September 12,2007 Amendment; (5) September 12, 2007 Declaration; (6) September 24, 2007 Declaration; (7) November 28, 2007 Amendment; (8) February 26, 2008 Office Action; (9) March 11,2008 Amendment; and (10) May 29, 2008 Notice of Allowance	

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	CYG**	Selected Prosecution Documents from US 12/053,015: (1) June 15, 2010 Restriction Requirement; (2) October 28, 2010 Amendment; (3) January 5, 2011 Notice of Allowance; and (4) Aprill, 2011 Amendment.	
	CZG**	STUYVER et al., Antiviral Chemistry & Chemotherapy (2004) 48(2): 651-654.	
	CAH**	US 11/854,218- Pending Claims as of June 28, 2011	
	CBH**	US 12/645,710, filed December 23, 2009 -Originally filed claims.	
	CCH**	US 12/783,680, filed May 20, 2010- Originally filed claims.	
	CDH**	US 12/878,262- Pending Claims as of September 1, 2011	
	CEH**	US 13/076,552, filed March 31,2011- Originally filed claims.	
	CFH**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2004/012472 (8 pages)	
	CGH**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/032406 (4 pages)	
	CHH**	International Search Report and Written Opinion of the International Searching Authority issued in PCT/US2010/035641 (10 pages)	

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	CJH**	The Extended search report includes the supplementary European search report issued in European Application No. 05775359.2 dated September 15, 2010 (9 pages).	
	CKH**	U.S Application No. 11/635,898, Pending claims filed on 12/24/2009	
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	COH**	U.S. Application No. 12/553,483, Pending claims filed on 02/22/2010	
	CPH**	U.S. Application No. 12/645,710, filed on 12/23/2009, Group Art Unit 1614	
	CQH**	U.S. Application No. 13/099,671, claims filed September4, 2012	
	CRH**	WISKERCHEN et al., Pestivirus Gene Expression: Protein p80 of Bovine Viral Diarrhea Virus Is a Proteinase Involved in Polyprotein Processing, Virology, vol. 184, pp. 341-350 (1991).	

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	CUH**	Written Opinion of the International Searching Authority issued in the International Application No. PCT/US/2008/058183 (12 pages)	
	CVH**	Written Opinion of the International Searching Authority issued in the International Application No. PCT/US/2008/058183 (16 pages) (Apr. 1, 2010)	
	CWH**	YUODKA et al., "Oligonucleotides and Polynucleotides. XXVI. Synthesis of Esters of Nucleotidyl- and Oligonucleotidyl-(5'-N)-(Amino Acid)S and -Peptides," Soviet Journal of Bioorganic Chemistry, vol. 2, No. 11 pp. 1089-1094(1976) Translated from Russian.	
	CXH**	ZHONG et al., "Identification and characterization of an RNA-Dependent RNA Polymerase Activity within the Nonstructural Protein 5B Region of Bovine Viral Diarrhea Virus," J. Virol., vol. 72, No. 11, pp. 9365-9369 (1998).	
	CYH	Ma et al., "Characterization of the Intracellular Metabolism of ?-d-2?-Deoxy-2?-Fluoro-2?-C-Methyl-Cytidine and the Inhibition of HCV Polymerase NS5B by its 5?-Triphosphate Species," Antiviral Research, (2007), 74(3): A36; Abstract 23.	
	CZH	McGuigan et al., " Sub Micromolar Inhibitors of HCV Generated from Inactive Nucleosides by Application of ProTide Technology," Antiviral Research, (2007), 74(3): A36; Abstract 24.	
	CAI	Kim et al., "Direct Measurement of Nucleoside Monophosphate Delivery from a Phosphoramidate Pronucleotide by Stable Isotope Labeling and LC-ESI--MS/MS," Molecular Pharmaceutics, 2004, 1 (2), pp 102-111.	
	CBI	Office Action dated 2016-02-24 for European Appl. No. 14179358.8	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

659920.1

PTO/SB/08b (07-09)
Approved for use through 07/31/2016, OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

Sheet	80	of	80

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CCI	Office Action dated 2016-03-02 for Argentina Appl. No. 20080101286	
	CDI	Office Action dated 2016-03-04 For Chinese Appl. No. 201410569402.3	
	CEI	Office Action dated 2016-04-06 For Taiwan Appl. No. 097111505	
	CFI	Office Action dated 2016-07-05 for Japanese Appl. No. 2015-139458	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

659920.1

Electronic Patent Application Fee Transmittal

Application Number:	14656546
Filing Date:	12-Mar-2015
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Filer:	Lawrence F. Rozsnyai/Sylvia Brennnan
Attorney Docket Number:	PH3080.PC4C-TRK1

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	26997709
Application Number:	14656546
International Application Number:	
Confirmation Number:	4415
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Customer Number:	124963
Filer:	Lawrence F. Rozsnyai/Sylvia Brennnan
Filer Authorized By:	Lawrence F. Rozsnyai
Attorney Docket Number:	PH3080.PC4C-TRK1
Receipt Date:	21-SEP-2016
Filing Date:	12-MAR-2015
Time Stamp:	19:05:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$180
RAM confirmation Number	092216INTEFSW00005993506480
Deposit Account	506480
Authorized User	Sylvia Brennan
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	PH3080PC4C_2016-09-21_IDS_Statement_asFiled.pdf	84243 c4eefee80d3fbffef4b9dc4852e58d92ded9020f	no	2
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	PH3080PC4C2016-09-21_SB08 AsFiled.pdf	744552 [illegible]	no	80
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Non Patent Literature	Kim_2004.pdf	150374 [illegible]	no	10
Warnings:					
Information:					
4	Non Patent Literature	Ma_2007_Abstract.pdf	148169 193b78b96f97fd1482e5605093ef2230d5f6cf30	no	2
Warnings:					
Information:					
5	Non Patent Literature	McGuigan_2007_Abstract.pdf	148169 193b78b96f97fd1482e5605093ef2230d5f6cf30	no	2
Warnings:					
Information:					
6	Non Patent Literature	OfficeAction_AR.pdf	248383 2244ded2c05d043322d81a3ba3cc0132b6ac1b6	no	6
Warnings:					

Information:					
7	Non Patent Literature	OfficeAction_CND.pdf	504146 [illegible]	no	12
Warnings:					
Information:					
8	Non Patent Literature	OfficeAction_EPD4.pdf	691089 [illegible]	no	4
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
9	Non Patent Literature	OfficeAction_JPD4.pdf	135689 [illegible]	no	4
Warnings:					
Information:					
10	Non Patent Literature	OfficeAction_TWSOF.pdf	116084 [illegible]	no	2
Warnings:					
Information:					
11	Fee Worksheet (SB06)	fee-info.pdf	30731 [illegible]	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	3001629		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: September 21, 2016 Signature: / Sylvia Brennan/
(Electronic Signature for Sylvia Brennan)

Docket No.: PH3080.PC4C
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jinfa Du et al.

Application No.: 14/656,546

Confirmation No.: 4415

Filed: March 12, 2015

Art Unit: 1672

For: NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

Examiner: P. T. Lewis

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, 1.97 and 1.98, the attention of the United States Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of the above-identified application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the filing date of this application, OR more than three months after the date of entry of the national stage in the international application, AND after the mailing date of a first Office Action on the merits, but before the mailing date of any of a Final Action under 37 C.F.R.§ 1.113, a Notice of Allowance under 37 C.F.R. § 1.311 or an action that otherwise closes prosecution in this application (37 C.F.R. § 1.97(c)).

In accordance with 37 C.F.R. § 1.98(a)(2)(ii), copies of U.S. patents and U.S. patent application publications are not submitted. Submitted herewith are copies of foreign patents and non-patent literature in accordance with 37 C.F.R. § 1.98(a)(2).

659921.1

In accordance with 37 C.F.R. § 1.98(d)(1) and as noted by a double-asterisk next to the Cite No. on the attached PTO/SB/08, the following references are not supplied because they were previously cited by or submitted to the Office in prior application numbers 14/013,237 filed August 29, 2013 and relied on in the above-identified application for an earlier effective filing date under 35 U.S.C. § 120:

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made. In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in this Information Disclosure Statement is, or is considered to be, material to the patentability as defined in 37 C.F.R. § 1.56(b).

It is submitted that the Information Disclosure Statement is in compliance with 37 C.F.R. § 1.98, and the Examiner is respectfully requested to consider the listed references.

Please charge our Deposit Account No. 50-6480 in the amount of $180.00 covering the fee set forth in 37 C.F.R. § 1.17(p). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-6480, under Order No. PH3080.PC4C.

Dated: September 21, 2016

Respectfully submitted,

By: /Lawrence F. Rozsnyai/

Lawrence F. Rozsnyai
Registration No.: 58,427
GILEAD SCIENCES, INC.
Correspondence Customer Number: 124963
(650) 577-6841
Attorney For Applicant

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

124963 7590 10/24/2016
Gilead Pharmasset LLC
c/o Gilead Sciences, Inc.
333 Lakeside Drive
Foster City, CA 94404

EXAMINER
LEWIS, PATRICK T

ART UNIT	PAPER NUMBER
1672	

DATE MAILED: 10/24/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/656,546	03/12/2015	Jinfa Du	PH3080.PC4C-TRK1	4415

TITLE OF INVENTION: NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	01/24/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

124963 7590 10/24/2016
Gilead Pharmasset LLC
c/o Gilead Sciences, Inc.
333 Lakeside Drive
Foster City, CA 94404

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/656,546	03/12/2015	Jinfa Du	PH3080.PC4C-TRK1	4415

TITLE OF INVENTION: NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	01/24/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEWIS, PATRICK T	1672	514-051000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/656,546	03/12/2015	Jinfa Du	PH3080.PC4C-TRK1	4415

124963 7590 10/24/2016
Gilead Pharmasset LLC
c/o Gilead Sciences, Inc.
333 Lakeside Drive
Foster City, CA 94404

EXAMINER
LEWIS, PATRICK T

ART UNIT	PAPER NUMBER
1672	

DATE MAILED: 10/24/2016

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 14/656,546	Applicant(s) DU ET AL.	
	Examiner PATRICK LEWIS	Art Unit 1672	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Terminal Disclaimer dated 8/10/2016*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *13-22*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____.
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 9/21/2016
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PATRICK LEWIS/
Primary Examiner, Art Unit 1672

Gilead Exhibit 2019
PGR2023-00046 - Page 00959

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14656546	DU ET AL.
	Examiner	Art Unit
	PATRICK LEWIS	1672

CPC- SEARCHED

Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner

SEARCH NOTES

Search Notes	Date	Examiner
Inventor, REGISTRY, CAPLUS, MEDLINE (see attached)	6/21/2015	/PL/
Updated Inventor, REGISTRY, CAPLUS, MEDLINE searches	10/20/2015	/PL/
Updated Inventor, REGISTRY, CAPLUS, MEDLINE searches	4/11/2016	/PL/
Updated Inventor, REGISTRY, CAPLUS, MEDLINE searches	10/18/2016	/PL/

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
514	42, 43, 49, 50, 51	10/18/2016	/PL/
C07H	19/04, 19/06, 19/073	10/18/2016	/PL/
A61K	31/706, 31/7064, 31/7068, 31/7072	10/18/2016	/PL/

PTO/SB/08a (07-09)
Approved for use through 07/31/2016. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-20100022468-A1	01-28-2010	Meppen et al.	
	AB	US-20130288997-A1	10-31-2013	Ross et al.	
	AC	US-20130310551-A1	11-21-2013	Ross et al.	
	AD	US-6,812,219	11-02-2004	LaColla et al.	
	AE	US-7,105,493	09-12-2006	Sommadossi et al.	
	AF	US-7,125,855	10-24-2006	Bhat et al.	
	AG	US-7,323,453	01-29-2008	Olsen et al.	
	AH	US-7,608,597	10-27-2009	Sommadossi et al.	
	AI	US-7,608,600	10-27-2009	Storer et al.	
	AJ	US-7,635,689	12-22-2009	LaColla et al.	
	AK	US-8,735,372	05-27-2014	Du et al.	
	AL	US-8,906,880	12-09-2014	Du et al.	
	AM	US-20030109697-A1	06-12-2003	Shepard et al.	
	AN	US-6,589,941	07-08-2003	Fahrig et al.	
	AO	US-20010034440-A1	10-25-2001	Shepard et al.	
	AP	US-20020058635-A1	05-16-2002	Averett	
	AQ	US-20020198173-A1	12-26-2002	Schinazi et al.	
	AR	US-20030050229-A1	03-13-2003	Sommadossi et al.	
	AS	US-20030060400-A1	03-27-2003	LaColla et al.	

FOREIGN PATENT DOCUMENTS

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	BA**	WO-2006/035061-A1	04-06-2006	TIBOTEC PHARM LTD, et al.		
	BB**	WO-2011/123645-A2	10-06-2011	PHARMASSET, INC.		
	BC**	WO-199629336	09-26-1996	Medical Res Council et al.		
	BD**	WO-1999/037753-A1	07-29-1999	NEWBIOTICS, INC.		
	BE**	WO-2001/07454	02-01-2011	NEWBIOTICS, INC.		
	BF**	WO-2008/121634-A2	10-09-2008	PHARMASSET, INC.		

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: September 21, 2016 Signature: /Lawrence F. Rozsnyai/ (Electronic Signature for Lawrence F. Rozsnyai)

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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	AT	US-20030120071-A1	06-26-2003	McGuigan et al.	
	AU	US-20030144502-A1	07-31-2003	Pietrzkowski et al.	
	AV	US-20030153744-A1	08-14-2003	Mekouar et al.	
	AW	US-20030187018-A1	10-02-2003	Llinas-Brunet et al.	
	AX	US-20040006007-A1	01-08-2004	Gosselin et al.	
	AY	US-20040014108-A1	01-22-2004	Eldrup et al.	
	AZ	US-20040023240-A1	02-05-2004	Marliere et al.	
	AA1	US-20040023901-A1	02-05-2004	Cook et al.	
	AB1	US-20040059104-A1	03-25-2004	Cook et al.	
	AC1	US-20040063622-A1	04-01-2004	Sommadossi et al.	
	AD1	US-20040067901-A1	04-08-2004	Bhat et al.	
	AE1	US-20040072788-A1	04-15-2004	Bhat et al.	
	AF1	US-20040097461-A1	05-20-2004	Sommadossi et al.	
	AG1	US-20040097462-A1	05-20-2004	Sommadossi et al.	
	AH1	US-20040101535-A1	05-27-2004	Sommadossi et al.	
	AI1	US-20040102414-A1	05-27-2004	Sommadossi et al.	
	AJ1	US-20040110717-A1	06-10-2004	Carroll et al.	
	AK1	US-20040167140-A1	08-26-2004	Schinazi et al.	
	AL1	US-20040191824-A1	09-30-2004	Dempcy et al.	

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	BG*	RE-29835	11-14-1978	WITKOWSKI ET AL.		
	BH**	CN-101108870-A	01-23-2008	YIXIN LENG		
	BI**	DE-19914474-A1	10-07-1999	HOFFMANN LA ROCHE		
	BJ**	EP-0180276-A1	05-07-1986	OCE ANDENO BV, et al.		
	BK**	EP-1828217-A2	09-05-2007	FEBIT BIOTECH GMBH		
	BL**	EP-1881001-A1	01-23-2008	TIBOTEC PHARM, LTD.		

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Attorney Docket Number	PH3080.PC4C

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	AM1	US-20040214844-A1	10-28-2004	Otto et al.	
	AN1	US-20040229839-A1	11-18-2004	Babu et al.	
	AO1	US-20040229840-A1	11-18-2004	Bhat et al.	
	AP1	US-20040248892-A1	12-09-2004	Wang	
	AQ1	US-20040254141-A1	12-16-2004	Schinazi et al.	
	AR1	US-20040259934-A1	12-23-2004	Olsen et al.	
	AS1	US-20040265969-A1	12-30-2004	Li et al.	
	AT1	US-20040266996-A1	12-30-2004	Rabi	
	AU1	US-20050009737-A1	01-13-2005	Clark	
	AV1	US-20050020825-A1	01-27-2005	Storer et al.	
	AW1	US-20050026853-A1	02-03-2005	Mekouar et al.	
	AX1	US-20050031588-A1	02-10-2005	Sommadossi et al.	
	AY1	US-20050075309-A1	04-07-2005	Storer et al.	
	AZ1	US-20050080034-A1	04-14-2005	Standring et al.	
	AA2	US-20050090660-A1	04-28-2005	Watanabe et al.	
	AB2	US-20050124532-A1	06-09-2005	Sommadossi et al.	
	AC2	US-20050130931-A1	06-16-2005	Boyer et al.	
	AD2	US-20050137161-A1	06-23-2005	Sommadossi et al.	
	AE2	US-20050148534-A1	07-07-2005	Castellino et al.	

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	BM**	EP-2097430-A1	09-09-2009	CT BADAN MOLEKULAR I MAKRO		
	BN**	EP-2124555-A2	12-02-2009	MERCK & CO. INC.		
	BO**	EP-2207786-A1	07-21-2010	EISAI, INC.		
	BP**	JP-2007-505742-A	03-15-2007	E.I. DUPONT DE NEMOURS AND COMPANY		
	BQ**	JP-5238939-B2	07-17-2013	NODA SANGYO KAGAKU KENKYUSHO KIKKOMAN CORP		
	BR**	WO-02/32414-A2	04-25-2002	SCHERRING CORPORATION		

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First Named Inventor	Jinfa Du
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	AF2	US-20050154056-A1	07-14-2005	Yang et al.	
	AG2	US-20050164960-A1	07-28-2005	Olsen et al.	
	AH2	US-20050215513-A1	09-29-2005	Boojamra et al.	
	AI2	US-20050227947-A1	10-13-2005	Chen et al.	
	AJ2	US-20050261237-A1	11-24-2005	Boojamra et al.	
	AK2	US-20050267018-A1	12-01-2005	Blatt et al.	
	AL2	US-20060003951-A1	01-05-2006	Mekouar et al.	
	AM2	US-20060014943-A1	01-19-2006	Dempcy et al.	
	AN2	US-20060035866-A1	02-16-2006	Cannizzaro et al.	
	AO2	US-20060040890-A1	02-23-2006	Martin et al.	
	AP2	US-20060040927-A1	02-23-2006	Blake et al.	
	AQ2	US-20060040944-A1	02-23-2006	Gosselin et al.	
	AR2	US-20060079478-A1	04-13-2006	Boojamra et al.	
	AS2	US-20060110727-A9	05-25-2006	McGall et al.	
	AT2	US-20060122146-A1	06-08-2006	Chun et al.	
	AU2	US-20060122154-A1	06-08-2006	Olsen et al.	
	AV2	US-20060142238-A1	06-29-2006	McGuigan	
	AW2	US-20060166964-A1	07-27-2006	Hudyma et al.	
	AX2	US-20060194749-A1	08-31-2006	Keicher et al.	

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	BS**	WO-03/000713-A1	01-03-2003	GLAXO GROUP LTD.		
	BT**	WO-03/006490-A1	01-23-2003	VERTEX PHARMA., INC.		
	BU**	WO-03/010141-A2	02-06-2003	BOEHRINGER INGELHEIM CALT O.		
	BV**	WO-03/024461-A1	03-27-2003	SCHERING CORP.		
	BW**	WO-03/026589	04-03-2003	Idenix Cayman Ltd et al.		
	BX**	WO-03/037895-A1	05-08-2003	GLAXO GROUP L TO.		

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	AY2	US-20060199783-A1	09-07-2006	Wang et al.	
	AZ2	US-20060241064-A1	10-26-2006	Roberts et al.	
	AA3	US-20060276511-A1	12-07-2006	Serrano-Wu et al.	
	AB3	US-20060293306-A1	12-28-2006	Beaulieu et al.	
	AC3	US-20070015905-A1	01-18-2007	LaColla et al.	
	AD3	US-20070037735-A1	02-15-2007	Gosselin et al.	
	AE3	US-20070037773-A1	02-15-2007	Sommadossi et al.	
	AF3	US-20070042939-A1	02-22-2007	LaColla et al.	
	AG3	US-20070042988-A1	02-22-2007	Klumpp et al.	
	AH3	US-20070042990-A1	02-22-2007	Gosselin et al.	
	AI3	US-20070049754-A1	03-01-2007	Boojamra et al.	
	AJ3	US-20070060498-A1	03-15-2007	Gosselin et al.	
	AK3	US-20070060541-A1	03-15-2007	Gosselin et al.	
	AL3	US-20070087960-A1	04-19-2007	Storer et al.	
	AM3	US-20070197463-A1	08-23-2007	Chun et al.	
	AN3	US-20070225249-A1	09-27-2007	Shi	
	AO3	US-20070265222-A1	11-15-2007	MacCoss et al.	
	AP3	US-20070275912-A1	11-29-2007	Bhat et al.	
	AQ3	US-20070275947-A1	11-29-2007	Bergstrom	

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	BY**	WO-03/051899	06-26-2003	Ribapharm, Inc.		
	BZ**	WO-03/053989-A1	07-03-2003	MRC TECHNOLOGY LTD.		
	BA1**	WO-03/061576-A2	07-31-2003	RIBAPHARM INC.		
	BB1**	WO-03/062256-A1	07-31-2003	RIBAPHARM INC.		
	BC1**	WO-03/064456	08-07-2003	Boehringer Ingelheim Int et al.		√
	BD1**	WO-03/104250-A1	12-18-2003	KYLIX B V		

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	AR3	US-20090137521-A1	05-28-2009	Hamilton et al.	
	AS3	US-20090176732-A1	07-09-2009	Beigelman et al.	
	AT3	US-20090233879-A1	09-17-2009	REDDY et al.	
	AU3	US-20090280084-A1	11-12-2009	Schinazi et al.	
	AV3	US-20090306007-A1	12-10-2009	Wagner	
	AW3	US-20100029008-A1	02-04-2010	Rojas Stutz et al.	
	AX3	US-20100035835-A1	02-11-2010	Narjes et al.	
	AY3	US-20100081628-A1	04-01-2010	DU et al.	
	AZ3	US-20100137576-A1	06-03-2010	Stec et al.	
	AA4	US-20100152128-A1	06-17-2010	Attenni et al.	
	AB4	US-20100173863-A1	07-08-2010	Schinazi et al.	
	AC4	US-20100227801-A1	09-09-2010	HOPKINS	
	AD4	US-20100279973-A1	11-04-2010	CHUN et al.	
	AE4	US-20100286083-A1	11-11-2010	BAO et al.	
	AF4	US-20100298257-A1	11-25-2010	ROSS et al.	
	AG4	US-20100316594-A1	12-16-2010	Sommadossi et al.	
	AH4	US-20110015146-A1	01-20-2011	SOFIA et al.	
	AI4	US-20110124592-A1	05-26-2011	McGuigan et al.	
	AJ4	US-20110245484-A1	10-06-2011	ROSS et al.	

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Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BE1**	WO-1989/002733-A1	04-06-1989	UNIV CALIFORNIA, et al.		
	BF1**	WO-1990/000555-A1	01-25-1990	VICAL INC, et al.		
	BG1**	WO-1991/016920-A1	11-14-1991	VICAL INC, et al.		
	BH1**	WO-1991/018914-A1	12-12-1991	VICAL INC, et al.		
	BI1**	WO-1991019721-A1	12-26-1991	Glazier Arnold		
	BJ1**	WO-1993/000910-A1	01-21-1993	VICAL INC, et al.		

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	AK4	US-20110251152-A1	10-13-2011	Ross et al.	
	AL4	US-20120107278-A1	05-03-2012	BERREY et al.	
	AM4	US-20120245335-A1	09-27-2012	Clark	
	AN4	US-20130029929-A1	01-31-2013	Sofia et al.	
	AO4	US-20130109647-A1	05-02-2013	Berrey et al.	
	AP4	US-20130136776-A1	05-30-2013	Cleary et al.	
	AQ4	US-20130137654-A1	05-30-2013	Ross et al.	
	AR4	US-20130165401-A1	06-27-2013	Ross et al.	
	AS4	US-20130165644-A1	06-27-2013	Ross et al.	
	AT4	US-3,798,209-A	03-19-1974	WITKOWSKI ET AL.	
	AU4	US-3,852,267-A	12-03-1974	Meyer, Jr. et al.	
	AV4	US-4,814,477-A	03-21-1989	Wijnberg et al.	
	AW4	US-4,957,924-A	09-18-1990	Beauchamp	
	AX4	US-5,026,687-A	06-25-1991	Yarchoan et al.	
	AY4	US-5,118,820-A	06-02-1992	Hertel	
	AZ4	US-5,149,794-A	09-22-1992	Yatvin et al.	
	AA5	US-5,157,027-A	10-20-1992	Biller et al.	
	AB5	US-5,192,549-A	03-09-1993	Barenolz et al.	
	AC5	US-5,194,654-A	03-16-1993	Hostetler et al.	

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	BK1**	WO-1994/026273-A1	11-24-1994	HOSTETLER KARL Y, et al.		
	BL1**	WO-1995/013090-A1	05-18-1995	ENZON INC, et al.		
	BM1**	WO-1995/024185-A1	09-14-1995	ISIS PHARMACEUTICALS INC, et al.		
	BN1**	WO-1996/015132-A1	05-23-1996	UNIV CALIFORNIA, et al.		
	BO1**	WO-1996/032403-A2	10-17-1996	SCHERING AG, et al.		
	BP1**	WO-1997/012033-A1	04-03-1997	UNIV EMORY		

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Attorney Docket Number	PH3080.PC4C

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	AD5	US-5,223,263-A	06-29-1993	Hostetler et al.	
	AE5	US-5,256,641-A	10-26-1993	Yatvin et al.	
	AF5	US-5,256,798-A	10-26-1993	Chou et al.	
	AG5	US-5,372,808-A	12-13-1994	Blatt et al.	
	AH5	US-5,376,380-A	12-27-1994	Kikuchi et al.	
	AI5	US-5,405,598-A	04-11-1995	Schinazi et al.	
	AJ5	US-5,411,947-A	05-02-1995	Hostetler et al.	
	AK5	US-5,420,266-A	05-30-1995	Britton et al.	
	AL5	US-5,426,183-A	06-20-1995	Kjell	
	AM5	US-5,453,499-A	09-26-1995	Chou et al.	
	AN5	US-5,462,724-A	10-31-1995	Schinazi et al.	
	AO5	US-5,463,092-A	10-31-1995	Hostetler et al.	
	AP5	US-5,496,546-A	03-05-1996	Wang et al.	
	AQ5	US-5,538,865-A	07-23-1996	Reyes et al.	
	AR5	US-5,543,389-A	08-06-1996	Yatvin et al.	
	AS5	US-5,543,390-A	08-06-1996	Yatvin et al.	
	AT5	US-5,543,391-A	08-06-1996	Yatvin et al.	
	AU5	US-5,554,728-A	09-10-1996	Basava et al.	
	AV5	US-5,610,054-A	03-11-1997	Draper	

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	BQ1**	WO-1997/036554-A1	10-09-1997	VIROPHARMA INC, et al.		
	BR1**	WO-1998/016184-A2	04-23-1998	ICN PHARMACEUTICALS, et al.		
	BS1**	WO-1998/017679	04-30-1998	Vertex Pharmaceutical Incorporated		
	BT1**	WO-1998/022496	05-28-1998	F. Hoffman-La Roche AG		
	BU1**	WO-1999/007734	02-18-1999	Boehringer Ingelheim (Canada) Ltd		
	BV1**	WO-1999/015194-A1	04-01-1999	SCHERING CORP, et al.		

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	AW5	US-5,633,358-A	05-27-1997	Gruetzke et al.	
	AX5	US-5,633,388-A	05-27-1997	Diana et al.	
	AY5	US-5,676,942-A	10-14-1997	Testa et al.	
	AZ5	US-5,703,058-A	12-30-1997	Schinazi et al.	
	AA6	US-5,711,944-A	01-27-1998	Gilbert et al.	
	AB6	US-5,725,859-A	03-10-1998	Omer	
	AC6	US-5,738,845-A	04-14-1998	Imakawa	
	AD6	US-5,738,846-A	04-14-1998	Greenwald et al.	
	AE6	US-5,747,646-A	05-05-1998	Hakimi et al.	
	AF6	US-5,767,097-A	06-16-1998	Tam	
	AG6	US-5,792,834-A	08-11-1998	Hakimi et al.	
	AH6	US-5,830,455-A	11-03-1998	Valtuena et al.	
	AI6	US-5,830,905-A	11-03-1998	Diana et al.	
	AJ6	US-5,834,594-A	11-10-1998	Hakimi et al.	
	AK6	US-5,837,257-A	11-17-1998	Tsai et al.	
	AL6	US-5,846,964-A	12-08-1998	Ozeki	
	AM6	US-5,849,696-A	12-15-1998	Chretien et al.	
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	AO6	US-5,891,874-A	04-06-1999	Colacino et al.	

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	BW1**	WO-1999/032139-A1	07-01-1999	ENZON INC, et al.		
	BX1**	WO-1999/032140-A1	07-01-1999	ENZON INC, et al.		
	BY1**	WO-1999/043691-A1	09-02-1999	UNIV EMORY, et al.		
	BZ1**	WO-1999/059621-A1	11-25-1999	SCHERING CORP, et al.		
	BA2**	WO-1999/064016-A1	12-16-1999	HOFFMANN LA ROCHE, et al.		
	BB2**	WO-2000/006529	02-10-2000	Istituto di Ricerche di Biologia Molecolaria P Angeletti S.P.A.		

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	AP6	US-5,905,070-A	05-18-1999	Schinazi et al.	
	AQ6	US-5,908,621-A	06-01-1999	Glue et al.	
	AR6	US-5,922,757-A	07-13-1999	Chojkier	
	AS6	US-5,928,636-A	07-27-1999	Alber et al.	
	AT6	US-5,942,223-A	08-24-1999	Bazer et al.	
	AU6	US-5,980,884-A	11-09-1999	Blatt et al.	
	AV6	US-5,990,276-A	11-23-1999	Zhang et al.	
	AW6	US-6,004,933-A	12-21-1999	Spruce et al.	
	AX6	US-6,034,134-A	03-07-2000	Gold et al.	
	AY6	US-6,043,077-A	03-28-2000	Barber et al.	
	AZ6	US-6,056,961-A	05-02-2000	Lavie et al.	
	AA7	US-6,060,080-A	05-09-2000	Kikuchi et al.	
	AB7	US-6,090,932-A	07-18-2000	McGee et al.	
	AC7	US-6,130,326-A	10-10-2000	Ramasamy et al.	
	AD7	US-6,132,763-A	10-17-2000	Fisher	
	AE7	US-6,156,501-A	12-05-2000	McGall et al.	
	AF7	US-6,180,134-B1	01-30-2001	Zalipsky et al.	
	AG7	US-6,232,300-B1	05-15-2001	Schinazi et al.	
	AH7	US-6,239,159-B1	05-29-2001	Brown et al.	

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	BC2**	WO-2000/009531	02-24-2000	NOVIRIO PHARMACEUTICALS LIMITE, et al.		
	BD2**	WO-2000/037110	06-29-2000	SCHERING CORP, et al.		
	BE2**	WO-2001/032153	05-10-2001	Shire Biochem Inc.		
	BF2**	WO-2001/060315	08-23-2001	IAF BIOCHEM INT, et al.		
	BG2**	WO-2001/079246	10-25-2001	PHARMASSET LTD, et al.		
	BH2**	WO-2001/081359	11-01-2001	SCHERING CORP, et al.		

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	AI7	US-6,348,587-B1	02-19-2002	Schinazi et al.	
	AJ7	US-6,372,883-B1	04-16-2002	Attwood et al.	
	AK7	US-6,391,859-B1	05-21-2002	Schinazi et al.	
	AL7	US-6,410,531-B1	06-25-2002	Llinas-Brunet et al.	
	AM7	US-6,420,380-B2	07-16-2002	Llinas-Brunet et al.	
	AN7	US-6,455,513-B1	09-24-2002	McGuigan et al.	
	AO7	US-6,455,690-B1	09-24-2002	Tam et al.	
	AP7	US-6,475,985-B1	11-05-2002	Wagner et al.	
	AQ7	US-6,479,463-B1	11-12-2002	Wang et al.	
	AR7	US-6,495,677-B1	12-17-2002	Ramasamy et al.	
	AS7	US-6,509,320-B1	01-21-2003	Wang et al.	
	AT7	US-6,534,523-B1	03-18-2003	Llinas-Brunet et al.	
	AU7	US-6,552,183-B1	04-22-2003	Ramasamy et al.	
	AV7	US-6,555,677-B2	04-29-2003	Petrillo et al.	
	AW7	US-6,573,248-B2	06-03-2003	Ramasamy et al.	
	AX7	US-6,642,206-B2	11-04-2003	Ramasamy et al.	
	AY7	US-6,660,721-B2	12-09-2003	Devos et al.	
	AZ7	US-6,677,314-B2	01-13-2004	Klecker et al.	
	AA8	US-6,677,315-B2	01-13-2004	Klecker et al.	

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	BI2**	WO-2001/090121	11-29-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BJ2**	WO-2001/091737	12-06-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BK2**	WO-2001/092282	12-06-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BL2**	WO-2001/096353	12-20-2001	NOVIRIO PHARMACEUTICALS LTD, et al.		
	BM2**	WO-2002/008187	01-31-2002	SCHERING CORP, et al.		
	BN2**	WO-2002/008198	01-31-2002	SCHERING CORP, et al.		

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	AB8	US-6,680,303-B2	01-20-2004	Schinazi et al.	
	AC8	US-6,682,715-B2	01-27-2004	Klecker et al.	
	AD8	US-6,683,045-B2	01-27-2004	Klecker et al.	
	AE8	US-6,703,374-B1	03-09-2004	Klecker et al.	
	AF8	US-6,753,309-B2	06-22-2004	Klecker et al.	
	AG8	US-6,777,395-B2	08-17-2004	Bhat et al.	
	AH8	US-6,784,166-B2	08-31-2004	Devos et al.	
	AI8	US-6,787,305-B1	09-07-2004	Li et al.	
	AJ8	US-6,787,526-B1	09-07-2004	Bryant et al.	
	AK8	US-6,815,542-B2	11-09-2004	Hong et al.	
	AL8	US-6,846,810-B2	01-25-2005	Martin et al.	
	AM8	US-6,897,201-B2	05-24-2005	Boyer et al.	
	AN8	US-6,908,924-B2	06-21-2005	Watanabe et al.	
	AO8	US-6,911,424-B2	06-28-2005	Schinazi et al.	
	AP8	US-6,914,054-B2	07-05-2005	Sommadossi et al.	
	AQ8	US-6,962,991-B2	11-08-2005	Dempcy et al.	
	AR8	US-7,018,985-B1	03-28-2006	Boyer et al.	
	AS8	US-7,018,989-B2	03-28-2006	McGuigan et al.	
	AT8	US-7,081,449-B2	07-25-2006	Pietrzkowski et al.	

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Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BO2**	WO-2002/008241	01-31-2002	GILEAD SCIENCES, INC.		
	BP2**	WO-2002/008251	01-31-2002	CORVAS INT INC, et al.		
	BQ2**	WO-2002/008256	01-31-2002	SCHERING CORP, et al.		
	BR2**	WO-2002/018404	03-07-2002	HOFFMANN LA ROCHE, et al.		
	BS2**	WO-2002/032414	04-25-2002	SCHERING CORP, et al.		
	BT2**	WO-2002/032920-A2	04-25-2002	Pharmasset Ltd et al.		

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	AU8	US-7,105,499-B2	09-12-2006	Carroll et al.	
	AV8	US-7,148,206-B2	12-12-2006	Sommadossi et al.	
	AW8	US-7,163,929-B2	01-16-2007	Sommadossi et al.	
	AX8	US-7,202,224-B2	04-10-2007	Eldrup et al.	
	AY8	US-7,217,523-B2	05-15-2007	Wagner	
	AZ8	US-7,268,119-B2	09-11-2007	Cook et al.	
	AA9	US-7,307,065-B2	12-11-2007	Schinazi et al.	
	AB9	US-7,365,057-B2	04-29-2008	LaColla et al.	
	AC9	US-7,390,791-B2	06-24-2008	Becker et al.	
	AD9	US-7,429,572-B2	09-30-2008	Clark	
	AE9	US-7,601,820-B2	10-13-2009	Wang et al.	
	AF9	US-7,754,699-B2	07-13-2010	Chun et al.	
	AG9	US-7,879,815-B2	02-01-2011	MacCoss et al.	
	AH9	US-7,964,580-B2	06-21-2011	Sofia et al.	
	AI9	US-8,148,349-B2	04-03-2012	Meppen et al.	
	AJ9	US-8,173,621-B2	05-08-2012	Du et al.	
	AK9	US-8,334,270-B2	12-18-2012	Sofia et al.	
	AL9	US-8,415,322-B2	04-09-2013	Clark	
	AM9	US-8,551,973-B2	10-08-2013	Bao et al.	

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	BU2**	WO-2002/048116	06-20-2002	BRISTOL MYERS SQUIBB PHARMA CO, et al.		
	BV2**	WO-2002/048157	06-20-2002	BRISTOL MYERS SQUIBB PHARMA CO, et al.		
	BW2**	WO-2002/048165	06-20-2002	PHARMASSET LTD, et al.		
	BX2**	WO-2002/048172	06-20-2002	SCHERING CORP, et al.		
	BY2**	WO-2002/057287	07-25-2002	MERCK & CO INC, et al.		
	BZ2**	WO-2002/057425-A2	07-25-2002	Merck & Co Inc et al.		

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	AN9	US-8,580,765-B2	11-12-2013	Sofia et al.	
	AO9	US-RE29835-A	11-14-1978	Witkowski et al.	
	AP9	US-20010034440	10-25-2001	Shepard et al.	
	AQ9	US-20020058635-A1	05-16-2002	Averett	
	AR9	US-20020198173-A1	12-26-2002	Schinazi et al.	
	AS9	US-20030050229-A1	03-13-2003	Sommadossi et al.	
	AT9	US-20030060400-A1	03-27-2003	LaColla et al.	
	AU9	US-20030120071-A1	06-26-2003	McGuigan et al.	
	AV9	US-20030144502-A1	07-31-2003	Pietrzkowski et al.	
	AW9	US-20030153744-A1	08-14-2003	Mekouar et al.	
	AX9	US-20030187018	10-02-2003	Llinas-Brunet et al.	
	AY9	US-20040006007-A1	01-08-2004	Gosselin et al.	
	AZ9	US-20040014108-A1	01-22-2004	Eldrup et al.	
	AAA	US-20040023240-A1	02-05-2004	Marliere et al.	
	ABA	US-20040023901-A1	02-05-2004	Cook et al.	
	ACA	US-20040059104	03-25-2004	Cook et al.	
	ADA	US-20040063622-A1	04-01-2004	Sommadossi et al.	
	AEA	US-20040067901-A1	04-08-2004	Bhat et al.	
	AFA	US-20040072788-A1	04-15-2004	Bhat et al.	

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	BA3**	WO-2002/060926	08-08-2002	Bristol-Myers Squibb Company		
	BB3**	WO-2002/100415-A2	12-19-2002	Hoffmann La Roche		
	BC3**	WO-2003/068244	08-21-2003	MERCK & CO INC, et al.		
	BD3**	WO-2003/101993	12-11-2003	NEOGENESIS PHARMACEUTICALS INC, et al.		
	BE3**	WO-2003/105770	12-24-2003	MERCK & CO INC, et al.		
	BF3**	WO-2004/000858-A2	12-31-2003	MERCK & CO INC, et al.		

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	AGA	US-20040097461-A1	05-20-2004	Sommadossi et al.	
	AHA	US-20040097462-A1	05-20-2004	Sommadossi et al.	
	AIA	US-20040101535-A1	05-27-2004	Sommadossi et al.	
	AJA	US-20040102414-A1	05-27-2004	Sommadossi et al.	
	AKA	US-20040110717-A1	06-10-2004	Carroll et al.	
	ALA	US-20040167140-A1	08-26-2004	Schinazi et al.	
	AMA	US-20040191824-A1	09-30-2004	Dempcy et al.	
	ANA	US-20040214844-A1	10-28-2004	Otto et al.	
	AOA	US-20040229839-A1	11-18-2004	Babu et al.	
	APA	US-20040229840-A1	11-18-2004	Bhat et al.	
	AQA	US-20040248892-A1	12-09-2004	Wang	
	ARA	US-20040254141-A1	12-16-2004	Schinazi et al.	
	ASA	US-20040259934-A1	12-23-2004	Olsen et al.	
	ATA	US-20040265969-A1	12-30-2004	Li et al.	
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	AYA	US-20050031588-A1	02-10-2005	Sommadossi et al.	

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	BG3**	WO-2004/002422-A2	01-08-2004	IDENIX CAYMAN LTD, et al.		
	BH3**	WO-2004/002940-A1	01-08-2004	PHARMACIA & UPJOHN CO.		
	BI3**	WO-2004/002944-A1	01-08-2004	PHARMACIA & UPJOHN CO.		
	BJ3**	WO-2004/002977-A1	01-08-2004	PHARMACIA & UPJOHN CO.		
	BK3**	WO-2004/002999-A2	01-08-2004	IDENIX CAYMAN LTD, et al.		
	BL3**	WO-2004/003000-A2	01-08-2004	IDENIX CAYMAN LTD, CENTRE NAT RECH SCIENT, et al.		

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	AZA	US-20050075309-A1	04-07-2005	Storer et al.	
	AAB	US-20050080034-A1	04-14-2005	Standring et al.	
	ABB	US-20050090660-A1	04-28-2005	Watanabe et al.	
	ACB	US-20050124532-A1	06-09-2005	Sommadossi et al.	
	ADB	US-20050130931-A1	06-16-2005	Boyer et al.	
	AEB	US-20050137161-A1	06-23-2005	Sommadossi et al.	
	AFB	US-20050148534-A1	07-07-2005	Castellino et al.	
	AGB	US-20050154056-A1	07-14-2005	Yang et al.	
	AHB	US-20050164960-A1	07-28-2005	Olsen et al.	
	AIB	US-20050215513	09-29-2005	Boojamra et al.	
	AJB	US-20050227947-A1	10-13-2005	Chen et al.	
	AKB	US-20050261237-A1	11-24-2005	Boojamra et al.	
	ALB	US-20050267018-A1	12-01-2005	Blatt et al.	
	AMB	US-20060003951-A1	01-05-2006	Mekouar et al.	
	ANB	US-20060014943-A1	01-19-2006	Dempcy et al.	
	AOB	US-20060035866-A1	02-16-2006	Cannizzaro et al.	
	APB	US-20060040890-A1	02-23-2006	Martin et al.	
	AQB	US-20060040927-A1	02-23-2006	Blake et al.	
	ARB	US-20060040944-A1	02-23-2006	Gosselin et al.	

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	BM3**	WO-2004/003138-A2	01-08-2004	MERCK & CO INC, et al.		
	BN3**	WO-2004/007512-A2	01-22-2004	MERCK & CO INC, et al.		
	BO3**	WO-2004/009020-A2	01-29-2004	MERCK & CO INC, et al.		
	BP3**	WO-2004/009610-A2	01-29-2004	PTC THERAPEUTICS INC, et al.		
	BQ3**	WO-2004/011478-A2	02-05-2004	MICROLOGIX BIOTECH INC, et al.		
	BR3**	WO-2004/014313-A2	02-19-2004	SQUIBB BRISTOL MYERS CO, et al.		

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	ASB	US-2006/0079478	04-13-2006	Boojamra et al.	
	ATB	US-20060110727-A9	05-25-2006	McGall et al.	
	AUB	US-20060122146-A1	06-08-2006	Chun et al.	
	AVB	US-20060122154-A1	06-08-2006	Olsen et al.	
	AWB	US-20060142238-A1	06-29-2006	McGuigan	
	AXB	US-20060194749-A1	08-31-2006	Keicher et al.	
	AYB	US-20060199783-A1	09-07-2006	Wang et al.	
	AZB	US-20060241064-A1	10-26-2006	Roberts et al.	
	AAC	US-20060276511-A1	12-07-2006	Serrano-Wu et al.	
	ABC	US-20060293306-A1	12-28-2006	Beaulieu et al.	
	ACC	US-20070015905-A1	01-18-2007	LaColla et al.	
	ADC	US-20070037735-A1	02-15-2007	Gosselin et al.	
	AEC	US-20070037773-A1	02-15-2007	Sommadossi et al.	
	AFC	US-20070042939-A1	02-22-2007	LaColla et al.	
	AGC	US-20070042988-A1	02-22-2007	Klumpp et al.	
	AHC	US-20070042990-A1	02-22-2007	Gosselin et al.	
	AIC	US-2007/0049754	03-01-2007	Boojamra et al.	
	AJC	US-20070060498-A1	03-15-2007	Gosselin et al.	
	AKC	US-20070060541-A1	03-15-2007	Gosselin et al.	

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	BS3**	WO-2004/014852-A2	02-19-2004	SQUIBB BRISTOL MYERS CO, et al.		
	BT3**	WO-2004/035571-A1	04-29-2004	RIGEL PHARMACEUTICALS INC, et al.		
	BU3**	WO-2004/041201-A2	05-21-2004	VIROPHARMA INC [US] WYETH CORP.		
	BV3**	WO-2004/046331-A2	06-03-2004	Idenix Cayman Ltd et al.		
	BW3**	WO-2004/065367-A1	08-05-2004	BOEHRINGER INGELHEIM INT		
	BX3**	WO-2004/080466-A1	09-23-2004	RIBAPHARM INC, et al.		

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	ALC	US-20070087960-A1	04-19-2007	Storer et al.	
	AMC	US-20070197463-A1	08-23-2007	Chun et al.	
	ANC	US-2007/0225249	09-27-2007	Shi	
	AOC	US-20070265222-A1	11-15-2007	MacCoss et al.	
	APC	US-20070275912-A1	11-29-2007	Bhat et al.	
	AQC	US-20070275947-A1	11-29-2007	Bergstrom	
	ARC	US-20090137521-A1	05-28-2009	Hamilton et al.	
	ASC	US-20090176732-A1	07-09-2009	Beigelman et al.	
	ATC	US-20090233879-A1	09-17-2009	REDDY et al.	
	AUC	US-20090280084-A1	11-12-2009	Schinazi et al.	
	AVC	US-20090306007-A1	12-10-2009	Wagner	
	AWC	US-20100029008-A1	02-04-2010	Rojas Stutz et al.	
	AXC	US-20100035835-A1	02-11-2010	Narjes et al.	
	AYC	US-20100081628-A1	04-01-2010	DU et al.	
	AZC	US-20100137576-A1	06-03-2010	Stec et al.	
	AAD	US-20100152128-A1	06-17-2010	Attenni et al.	
	ABD	US-20100173863-A1	07-08-2010	Schinazi et al.	
	ACD	US-20100227801-A1	09-09-2010	HOPKINS	
	ADD	US-20100279973-A1	11-04-2010	CHUN et al.	

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	BY3**	WO-2004/094452	04-16-2004	Bristol-Myers Squibb Company		
	BZ3**	WO-2004/096210-A1	11-11-2004	GLAXO GROUP LTD.		
	BA4**	WO-2004/096234-A2	11-11-2004	Gilead Sciences, Inc		
	BB4**	WO-2004/096235	11-11-2004	Gilead Sciences Inc et al.		
	BC4**	WO-2004/096286	11-11-2004	Gilead Sciences, Inc.		
	BD4**	WO-2004/106356-A1	12-09-2004	UNIV SYDDANSK, et al.		

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AED	US-20100286083-A1	11-11-2010	BAO et al.	
	AFD	US-20100298257	11-25-2010	ROSS et al.	
	AGD	US-20100316594-A1	12-16-2010	Sommadossi et al.	
	AHD	US-20110015146-A1	01-20-2011	SOFIA et al.	
	AID	US-20110124592-A1	05-26-2011	McGuigan et al.	
	AJD	US-20110245484-A1	10-06-2011	ROSS et al.	
	AKD	US-20110251152-A1	10-13-2011	Ross et al.	
	ALD	US-20120107278-A1	05-03-2012	BERREY et al.	
	AMD	US-20120245335-A1	09-27-2012	Clark	
	AND	US-20130029929-A1	01-31-2013	Sofia et al.	
	AOD	US-20130109647-A1	05-02-2013	Berrey et al.	
	APD	US-20130136776-A1	05-30-2013	Cleary et al.	
	AQD	US-20130137654-A1	05-30-2013	Ross et al.	
	ARD	US-20130165401-A1	06-27-2013	Ross et al.	
	ASD	US-20130165644-A1	06-27-2013	Ross et al.	
	ATD	US-3,798,209	03-19-1974	WITKOWSKI ET AL.	
	AUD	US-3,852,267	12-03-1974	Meyer, Jr. et al.	
	AVD	US-4,814,477	03-21-1989	Wijnberg et al.	
	AWD	US-4,957,924	09-18-1990	Beauchamp	

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	BE4**	WO-2005/002626-A2	01-13-2005	GILEAD SCIENCES INC, et al.		
	BF4**	WO-2005/003147-A2	01-13-2005	PHARMASSET LTD, et al.		
	BG4**	WO-2005/007810-A2	01-27-2005	GRINSTAFF MARK W, et al.		
	BH4**	WO-2005/009418-A2	02-03-2005	IDENIX CAYMAN LTD, et al.		
	BI4**	WO-2005/012327-A2	02-10-2005	UNIV CARDIFF, et al.		
	BJ4**	WO-2005/020884-A2	03-10-2005	IDENIX CAYMAN LTD, et al.		

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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	AXD	US-5,026,687	06-25-1991	Yarchoan et al.	
	AYD	US-5,118,820	06-02-1992	Hertel	
	AZD	US-5,149,794	09-22-1992	Yatvin et al.	
	AAE	US-5,157,027	10-20-1992	Biller et al.	
	ABE	US-5,192,549	03-09-1993	Barenolz et al.	
	ACE	US-5,194,654	03-16-1993	Hostetler et al.	
	ADE	US-5,223,263	06-29-1993	Hostetler et al.	
	AEE	US-5,256,641	10-26-1993	Yatvin et al.	
	AFE	US-5,256,798	10-26-1993	Chou et al.	
	AGE	US-5,372,808	12-13-1994	Blatt et al.	
	AHE	US-5,376,380	12-27-1994	Kikuchi et al.	
	AIE	US-5,405,598	04-11-1995	Schinazi et al.	
	AJE	US-5,411,947	05-02-1995	Hostetler et al.	
	AKE	US-5,420,266	05-30-1995	Britton et al.	
	ALE	US-5,426,183	06-20-1995	Kjell	
	AME	US-5,453,499	09-26-1995	Chou et al.	
	ANE	US-5,462,724	10-31-1995	Schinazi et al.	
	AOE	US-5,463,092	10-31-1995	Hostetler et al.	
	APE	US-5,496,546	03-05-1996	Wang et al.	

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	BK4**	WO-2005021568-A2	03-10-2005	Biota, Inc,		
	BL4**	WO-2005/028502-A1	03-31-2005	VERTEX PHARMA INC.		
	BM4**	WO-2005/030891-A1	04-07-2005	E.I. DUPONT DE NEMOURS AND COMPANY		
	BN4**	WO-2005/037214	04-28-2005	Intermune, Inc.		
	BO4**	WO-2005/067900-A2	07-28-2005	ACHILLION PHARMACEUTICALS INC, et al.		
	BP4**	WO-2005/072361-A2	08-11-2005	MERCK & CO INC, et al.		

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First Named Inventor	Jinfa Du
Art Unit	1672
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Attorney Docket Number	PH3080.PC4C

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	AQE	US-5,538,865	07-23-1996	Reyes et al.	
	ARE	US-5,543,389	08-06-1996	Yatvin et al.	
	ASE	US-5,543,390	08-06-1996	Yatvin et al.	
	ATE	US-5,543,391	08-06-1996	Yatvin et al.	
	AUE	US-5,554,728	09-10-1996	Basava et al.	
	AVE	US-5,610,054	03-11-1997	Draper	
	AWE	US-5,633,358	05-27-1997	Gruetzke et al.	
	AXE	US-5,633,388	05-27-1997	Diana et al.	
	AYE	US-5,676,942	10-14-1997	Testa et al.	
	AZE	US-5,703,058	12-30-1997	Schinazi et al.	
	AAF	US-5,711,944	01-27-1998	Gilbert et al.	
	ABF	US-5,725,859	03-10-1998	Omer	
	ACF	US-5,738,845	04-14-1998	Imakawa	
	ADF	US-5,738,846	04-14-1998	Greenwald et al.	
	AEF	US-5,747,646	05-05-1998	Hakimi et al.	
	AFF	US-5,767,097	06-16-1998	Tam	
	AGF	US-5,792,834	08-11-1998	Hakimi et al.	
	AHF	US-5,830,455	11-03-1998	Valtuena et al.	
	AIF	US-5,830,905	11-03-1998	Diana et al.	

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	BQ4**	WO-2005/082144-A1	09-09-2005	US GOV HEALTH & HUMAN SERV		
	BR4**	WO-2005/087788-A2	09-22-2005	UNIV CALIFORNIA, et al.		
	BS4**	WO-2005/095403	10-13-2005	Intermune, Inc.		
	BT4**	WO-2005/103045-A1	11-03-2005	GLAXO GROUP LTD.		
	BU4**	WO-2005/123,087-A2	12-29-2005	Merck & Co Inc et al.		
	BV4**	WO-2006000922-A2	01-05-2006	Idenix (cayman) Limited,		

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Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	AJF	US-5,834,594	11-10-1998	Hakimi et al.	
	AKF	US-5,837,257	11-17-1998	Tsai et al.	
	ALF	US-5,846,964	12-08-1998	Ozeki	
	AMF	US-5,849,696	12-15-1998	Chretien et al.	
	ANF	US-5,869,253	02-09-1999	Draper	
	AOF	US-5,891,874	04-06-1999	Colacino et al.	
	APF	US-5,905,070	05-18-1999	Schinazi et al.	
	AQF	US-5,908,621	06-01-1999	Glue et al.	
	ARF	US-5,922,757	07-13-1999	Chojkier	
	ASF	US-5,928,636	07-27-1999	Alber et al.	
	ATF	US-5,942,223	08-24-1999	Bazer et al.	
	AUF	US-5,980,884	11-09-1999	Blatt et al.	
	AVF	US-5,990,276	11-23-1999	Zhang et al.	
	AWF	US-6,004,933	12-21-1999	Spruce et al.	
	AXF	US-6,034,134	03-07-2000	Gold et al.	
	AYF	US-6,043,077	03-28-2000	Barber et al.	
	AZF	US-6,056,961	05-02-2000	Lavie et al.	
	AAG	US-6,060,080	05-09-2000	Kikuchi et al.	
	ABG	US-6,090,932	07-18-2000	McGee et al.	

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	BW4**	WO-2006/012078-A2	02-02-2006	MERCK & CO INC, et al.		
	BX4**	WO-2006/012440-A2	02-02-2006	PHARMASSET INC, et al.		
	BY4**	WO-2006/020082-A1	02-23-2006	SQUIBB BRISTOL MYERS CO.		
	BZ4**	WO-2006/029081-A2	03-16-2006	NEOPHARM INC, et al.		
	BA5**	WO-2006/031725-A2	03-23-2006	Pharmasset Inc et al.		
	BB5**	WO-2006/037028-A2	04-06-2006	IDENIX CAYMAN LTD, et al.		

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	ACG	US-6,130,326	10-10-2000	Ramasamy et al.	
	ADG	US-6,132,763	10-17-2000	Fisher	
	AEG	US-6,156,501	12-05-2000	McGall et al.	
	AFG	US-6180134	01-30-2001	Zalipsky et al.	
	AGG	US-6232300	05-15-2001	Schinazi et al.	
	AHG	US-6239159	05-29-2001	Brown et al.	
	AIG	US-6348587	02-19-2002	Schinazi et al.	
	AJG	US-6372883	04-16-2002	Attwood et al.	
	AKG	US-6391859	05-21-2002	Schinazi et al.	
	ALG	US-6,410,531	06-25-2002	Llinas-Brunet et al.	
	AMG	US-6,420,380	07-16-2002	Llinas-Brunet et al.	
	ANG	US-6455513	09-24-2002	McGuigan et al.	
	AOG	US-6455690	09-24-2002	Tam et al.	
	APG	US-6475985	11-05-2002	Wagner et al.	
	AQG	US-6479463	11-12-2002	Wang et al.	
	ARG	US-6495677	12-17-2002	Ramasamy et al.	
	ASG	US-6509320	01-21-2003	Wang et al.	
	ATG	US-6,534,523	03-18-2003	Llinas-Brunet et al.	
	AUG	US-6552183	04-22-2003	Ramasamy et al.	

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	BC5**	WO-2006/050,161-A2	05-11-2006	Biocryst Pharm Inc et al.		
	BD5**	WO-2006/063149-A1	06-15-2006	UNIV. MINNESOTA		
	BE5**	WO-2006/063717-A2	06-22-2006	UNIV. KARLSRUHE		
	BF5**	WO-2006/065335-A2	06-22-2006	Merck & Co Inc et al.		
	BG5**	WO-2006/065590-A2	06-22-2006	XTL BIOPHARMACEUTICALS INC.		
	BH5**	WO-2006/067606-A1	06-29-2006	INSERM, CNRS		

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	AVG	US-6555677	04-29-2003	Petrillo et al.	
	AWG	US-6573248	06-03-2003	Ramasamy et al.	
	AXG	US-6642206	11-04-2003	Ramasamy et al.	
	AYG	US-6660721	12-09-2003	Devos et al.	
	AZG	US-6677314	01-13-2004	Klecker et al.	
	AAH	US-6677315	01-13-2004	Klecker et al.	
	ABH	US-6680303	01-20-2004	Schinazi et al.	
	ACH	US-6682715	01-27-2004	Klecker et al.	
	ADH	US-6683045	01-27-2004	Klecker et al.	
	AEH	US-6703374	03-09-2004	Klecker et al.	
	AFH	US-6753309	06-22-2004	Klecker et al.	
	AGH	US-6777395	08-17-2004	Bhat et al.	
	AHH	US-6784166	08-31-2004	Devos et al.	
	AIH	US-6787305	09-07-2004	Li et al.	
	AJH	US-6787526	09-07-2004	Bryant et al.	
	AKH	US-6815542	11-09-2004	Hong et al.	
	ALH	US-6846810	01-25-2005	Martin et al.	
	AMH	US-6897201	05-24-2005	Boyer et al.	
	ANH	US-6908924	06-21-2005	Watanabe et al.	

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	BI5**	WO-2006/093801-A1	09-08-2006	ABBOTT LAB		
	BJ5**	WO-2006/100310-A1	09-28-2006	TIBOTEC PHARM LTD, et al.		
	BK5**	WO-2006/116557-A1	11-02-2006	GENELABS TECHNOLOGIES, INC.		
	BL5**	WO-2006/120251-A1	11-16-2006	TIBOTEC PHARM LTD, et al.		
	BM5**	WO-2006/120252-A2	11-16-2006	TIBOTEC PHARM LTD, et al.		
	BN5**	WO-2006121820-A1	11-16-2006	Valeant Res & Dev et al.		

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AOH	US-6911424	06-28-2005	Schinazi et al.	
	APH	US-6914054	07-05-2005	Sommadossi et al.	
	AQH	US-6962991	11-08-2005	Dempcy et al.	
	ARH	US-7018985	03-28-2006	Boyer et al.	
	ASH	US-7018989	03-28-2006	McGuigan et al.	
	ATH	US-7081449	07-25-2006	Pietrzkowski et al.	
	AUH	US-7105499	09-12-2006	Carroll et al.	
	AVH	US-7148206	12-12-2006	Sommadossi et al.	
	AWH	US-7163929	01-16-2007	Sommadossi et al.	
	AXH	US-7202224	04-10-2007	Eldrup et al.	
	AYH	US-7217523	05-15-2007	Wagner	
	AZH	US-7268119	09-11-2007	Cook et al.	
	AAI	US-7307065	12-11-2007	Schinazi et al.	
	ABI	US-7365057	04-29-2008	LaColla et al.	
	ACI	US-7,390,791	06-24-2008	Becker et al.	
	ADI	US-7429572	09-30-2008	Clark	
	AEI	US-7601820	10-13-2009	Wang et al.	
	AFI	US-7754699	07-13-2010	Chun et al.	
	AGI	US-7879815	02-01-2011	MacCoss et al.	

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	BO5**	WO-2007/002602-A2	01-04-2007	DEPUY SPINE INC.		
	BP5**	WO-2007/014920-A1	02-08-2007	Tibotec Pharm Ltd et al.		
	BQ5**	WO-2007/014921-A1	02-08-2007	Tibotec Pharm Ltd et al.		
	BR5**	WO-2007/014922	02-08-2007	Tibotec Pharm Ltd et al.		
	BS5**	WO-2007/014925-A1	02-08-2007	Tibotec Pharm Ltd et al.		
	BT5**	WO-2007/014926-A1	02-08-2007	Tibotec Pharm Ltd et al.		

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	AHI	US-7964580	06-21-2011	Sofia et al.	
	AII	US-8148349	04-03-2012	Meppen et al.	
	AJI	US-8173621	05-08-2012	Du et al.	
	AKI	US-8334270	12-18-2012	Sofia et al.	
	ALI	US-8415322	04-09-2013	Clark	
	AMI	US-8551973	10-08-2013	Bao et al.	
	ANI	US-8580765	11-12-2013	Sofia et al.	
	AOI	US-RE29835	11-14-1978	Witkowski et al.	
	API	US-20060166964-A1	07-27-2006	Hudyma et al.	

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	BU5**	WO-2007/015824	07-17-2006	Intermune, Inc.		
	BV5**	WO-2007/020193-A2	02-22-2007	F. HOFFMANN-LA ROCHEAG		
	BW5**	WO-2007027248-A2	03-08-2007	Valeant Res & Dev et al.		
	BX5**	WO-2007/039142-A1	04-12-2007	GLAXO GROUP L TO.		
	BY5**	WO-2007/039145-A1	04-12-2007	GLAXO GROUP L TO.		
	BZ5**	WO-2007/065829-A1	06-14-2007	F. HOFFMANN-LA ROCHE AG		

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	BA6**	WO-2007/070556-A2	06-21-2007	GENELABS TECH INC.		
	BB6**	WO-2007/076034-A2	07-05-2007	ABBOTT LA		
	BC6**	WO-2007/088148-A1	08-09-2007	SMITHKLINE BEECHAM CORP.		
	BD6**	WO-2007/092000-A1	08-16-2007	SQUIBB BRISTOL MYERS CO.		
	BE6**	WO-2007/093901-A1	08-23-2007	Pfizer Ltd et al.		
	BF6**	WO-2007/095269-A2	08-23-2007	MERCK & CO., INC.		

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	BG6**	WO-2008010921-A2	01-24-2008	Gilead Sciences, Inc		
	BH6**	WO-2008/045419-A1	04-17-2008	PHARMASSET INC.		
	BI6**	WO-2008/048128-A1	04-24-2008	CT BADAN MOLEKULAR I MAKRO		
	BJ6**	WO-2008/062206-A2	05-29-2008	UNIV. COLLEGE CARDIFF CONSULTANTS LTD.		
	BK6**	WO-2008/079206-A1	07-03-2008	MERCK & CO., INC.		
	BL6**	WO-2008082601-A2	07-10-2008	Idenix Pharmaceuticals Inc et al.		

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	BM6**	WO-2008085508-A2	07-17-2008	Merck & Co Inc et al.		
	BN6**	WO-2008/142055-A2	11-27-2008	ANGELETTI P IST RICHERCHE B10		
	BO6**	WO-2009/052287-A1	04-23-2009	EISAL CORP OF NORTH AMERICA		
	BP6**	WO-2009/115893-A2	09-24-2009	HETERO RESEARCH FOUNDATION		
	BQ6**	WO-2009/120878-A2	10-01-2009	ALNYLAM PHARMACEUTICALS INC.		
	BR6**	WO-2009/129120-A2	10-22-2009	RFS PHARMA LLC		

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	BS6**	WO-2009/152095-A2	12-17-2009	PHARMASSET INC.		
	BT6**	WO-2010/042834-A1	04-15-2010	ANADYS PHARMACEUICALS INC.		
	BU6**	WO-2010/075554-A1	07-01-2010	PHARMASSET INC, et al.		
	BV6**	WO-2010/080878-A1	07-15-2010	SCYNEXIS INC.		
	BW6**	EP-0350287-A2	01-10-1990	VICAL INC, et al.		
	BX6**	WO-109121-A2	01-21-2010	University Of Florida Research Foundation, Inc.		

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	BY6**	WO-2003/106477-A1	12-24-2003	ISIS PHARMACEUTICALS INC, et al.		
	BZ6**	WO-208198	01-31-2002			
	BA7**	WO-208251	01-31-2002			
	BB7**	RE-29835-A	11-14-1978	WITKOWSKI ET AL.		

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CA**	Claims of U.S. Patent Application No. 13/956,195 as amended Oct. 21, 2013.	
	CB**	CLARK et al., "Synthesis and antiviral activity of 2'-deoxy-2'-fluro-2'-C-methyl purine nucelosides as inhibitors of hepatitis C virus RNA replication", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, PERGAMON, AMSTERDAM, NL, vol. 16, no. 6, 15 March 2006 (2006-03-15), pages 1712-1715, XP027966449, ISSN: 0960-894X	
	CC**	CODINGTON, et al., "NucleosiDE-s. XVIII. Synthesis of 2'-Fluorothymidine, 2'-FluoroDE-oxyuridine, and Other 2'-Halogeno-2'-DE-oxy NucleosiDE-s 1'2", The Division of Nucleoprotein Chemistry, Sloan-Kettering Institute for Cancer Research, Sloan-Kettering Division of Cornell University Medical Colleg, New York 21, New York, Vol. 29, pages 558-564, (1963).	
	CD**	GUDMUNDSSON, Kristjan S., et al., "Phosphoramidate ProtiDE-s of 2',3'-DiDE-oxy-3'-fluoroaDE-nosine and Related NucleosiDE-s with Potent Activity Against HIV and HBV," NucleosiDE-s, NucleotiDE-s & Nucleic Acids (2003) 22 (10):1953-1961.	
	CE**	HREBABECKY, et al ," 1-(3,5-0-alkyliDE-ne-2-DE-oxy-4-C-hydroxymethyl-alpha-L-threo-pentofuranosyl)	
	CF**	uracils," Collect. Czhech. Chem. Commun., Vol. 62, pages 957-970, (1997).	
	CG**	HREBABECKY, et al., "Synthesis of 1-(3-azido-2,3-diDE-oxy-4-C-hydroxymethyl-alpha-L-threo-pentofuranosyl)thymine, 1-(2, 3-d id eoxy-4-C-hyd roxy-methyl-alpha-L-glycero-pentofuranosyl)thymine and 1-(2,3-diDE-oxy-4-C-hydroxymethyl-alpha-L -glycero-pent -2-enofuranosyl)thymine," Collect Czech. Chem. Commun., Vol. 58, pages 409-420, (1992).	
	CH**	HREBABECKY, et al., "Synthesis of 1-(3-azido-2,3-diDE-oxy-β-D-allofuranosyl)thymine, 1-(2,3-diDE-oxy-β-D-allofuranosyl)thymine, and 1-(2,3-diDE-oxy-~-D-erythro-hex-2-enofuranosyl)thymine," Carbohydrate Research, Vol. 216, pages 179-186, (1991).	
	CI**	HREBABECKY, et al., "Synthesis of 1-(3-azido-2,3-diDE-oxy-β-d-ribo-hexofuranosyl)-, 1-(2,3-	
	CJ**	did eoxy-β-d-erythro-hexofu ranosyl)- and 1-(2,3-d iDE-oxy-β-d-erythro-hex-2-enofuranosyl)pyrimidine nucleosiDE-s," Collect. Czhech. Chem. Commun., Vol. 59, pages 412-420, (1993)	

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	CK**	Written Opinion of PCT/US2010/035641 mailed September 28, 2010	
	CL**	Written Opinion of PCT/EP2006/069060 mailed January 30,2007	
	CM**	Written Opinion of PCT/US2005/025916 mailed June 15, 2006	
	CN**	Written Opinion of PCT/US2005/032406 mailed May 8, 2008	
	CO**	International Search Report issued in International PCT application No. PCT/US2008/058183 mailed March 31, 2010 (7 pages)	
	CP**	LIN, et al., "A stereospecific synthesis of 2',3'-diDE-oxy-β-L-cytidine (β-L-ddC), a potent inhibitor against human hepatitis B virus (HBV) and human immunoDE-ficiency virus (HIV)," Tetrahedron Letters, Vol. 35, No. 21, pages 3477-3480, (1994).	
	CQ**	MCGUIGAN et al., "Synthesis, anti-human immunoDE-ficiency virus activity and esterase lability of some novel carboxylic ester-modified phosphoramidate DE-rivatives of stavudine (d4T)," Antiviral Chemistry & Chemotherapy, Vol. 9, pages 473-479 (1998)	
	CR**	MOURIER, et al., "Enantioselective synthesis and biological evaluation of 5-o-carboranyl-pyrimidine-nucleosides," Bioorganic & Medicinal Chemistry, Vol 7, pages 2759-2766, (1999).	
	CS**	Response filed October 25, 2010 at the EPO for European patent application No. EP08732818.3	
	CT**	Response to non-final Office Action dated October 1, 2009 for U.S. Application No. 12/142,554	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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NON PATENT LITERATURE DOCUMENTS

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	CU**	ROBINS, et al., "Nucleic acid related compounds. 91. Biomimetic reactions are in harmony with loss of 2'-substituents as free radicals (not anions) during mechanism-based inactivation of ribonucleotiDE- reductases. differential interactions of aziDE-, halogen, and alkylthio groups with tributylstannane and triphenylsilane," Journal of the American Chemical Society, Vol. 118, No. 46, pages 11341-11348, (1996).	
	CV**	SANEYOSHI, "Facile synthesis of 2'-O-cyanoethyluridine by ring-opening reaction of 2,2'-anhydrouridine with cyanoethyl trimethylsilyl ether in the presence of BF3 Et2O," Tetrahedron Letters, Vol. 48, pages 8554-8557, (2007).	
	CW**	Selected Prosecution documents from US 10/828,753 (1) Februrary 26, 2007 Amendment; (2) March 30, 2007 Office Action; (3) June 9, 2007 Interview Summary; (4) September 12, 2007 Amendment; (5) September 12, 2007 Declaration; (6) September 24, 2007 Declaration; (7) November 28, 2007 Amendment; (8) February 26, 2008 Office Action; (9) March 11, 2008 Amendment; and (10) May 29, 2008 Notice of Allowance)	
	CX**	Selected Proscution Documents from US 11/854,218: (1) September 12, 2007 Amendment; (2) October 1, 2008 Office Action; (3) March 31, 2010 Response; (4) March 31, 2011 Declaration; (5) July 22, 2010 Office Action; (6) October 11, 2010 Amendment; (7) October 11, 2010 Declaration; (8) December 23, 2010 Office Action; (9) June 28, 2011 Amendment.	
	CY**	U.S. Application No. 12/142,554, Pending claims filed on 12/17/2009	
	CZ**	U.S. Patent Application No. 13/956,195, as filed July 31, 2013	
	CA1**	VAN ROMPAEY, et al., "*Mycobacterium* tuberculosis thymidine monophosphate kinase inhibitors; biological evaluation and conformational analysis of 2'-and 3'-modified thymidine analogues," Eur. J. Org. Chem., pages 2911-2918, (2003).	
	CB1**	VANHEUSDE-N, et al., "Discovery of bicyclic thymidine analogues as selective and high-affinity inhibitors of mycobacterium tuberculosis thymidine monophosphate kinase," J. Med. Chem., Vol. 47, pages 6187-6194, (2004).	
	CC1**	VANHEUSDE-N, et al., "Synthesis and evaluation of thymidine-5'-O-monophosphate analogues as inhibitors of mycobacterium tuberculosis thymidylate kinase," Bioorganic & Medicinal Chemistry Letters, Vol. 12, pages 2695-2698, (2002).	
	CD1**	WU et al., "Targeting NS5B RNA-DE-penDE-nt RNA Polymerase For Anti-HCV Chemotherapy," Current Drug Targets- Infectious DisorDE-rs, Vol. 3, No.3, pages 207- 219 (2003)	

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	CE1**	U.S. Application No. 11/225,724 pending claims filed 10/02/2009	
	CF1**	Selected Prosecution documents from US 12/053,015: (1) June 15, 2010 Resitriction Requirements; (2) October 28, 2010 Amendment ; (3) January 5, 2011 Notice of Alloance; and (4) April 1, 2011 Amendment.	
	CG1**	US 12/783,680 filed May 20, 210 - Originally filed claims	
	CH1**	US 13/076,552, filed March 31, 2011 - Originally filed claims.	
	CI1**	US 12/645,710 filed December 23, 2009 - Originally filed claims.	
	CJ1**	US 12/878,262 - Pending Claims as of September 1, 2011.	
	CK1**	Selected Proscution Documents for US 12/878,262: (1) September 9, 2010 Amendment; (2) June 8, 2011 Office Action; and (3) September 1, 2011 Amendment	
	CL1**	Office Action dated 04/08/2014 for Australian Application No. 2012241173	
	CM1**	Office Action dated 06/25/2014 for Colombian Application No. 09-120.744A	
	CN1**	Extended Search Report dated 09/18/2014 for European Application No. 14151876.1	

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	CO1**	Communication pursuant to Rules 70(2) and 70a(2) EPC and reference to Rule 39(1) EPC for European Application No. 14179593.0 dated 01/19/2015.	
	CP1**	English Translation of Office Action for Korean Application No. 10-2009-7022652 dated 12/19/2013.	
	CQ1**	Office Action dated 10/29/2014 for Korean Application No. 10-2012-7004146	
	CR1**	Office Action dated 01/04/2015 for Israeli Application No. 222810	
	CS1**	Office Action dated 01/22/2015 for Mexican Application No. MX/A/2012/000289	
	CT1**	Office Action dated 10/30/201 for Mexican Application No. MX/A/2012/000289	
	CU1**	Office Action dated 10/31/2014 for Chinese Application No. 200880018024.2	
	CV1**	Office Action dated 01/13/2015 for Japanese Application No. 2014-093905	
	CW1**	Subsequent Substantive Examination Report for Phillipines Application No. 1/2009/501847 dated 11/10/2014.	
	CX1**	Opposition by the Initiative for Medicines, Access & Knowledge (I-Mak) to Indian Application No. 3658/KOLNP/2009 N	

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	CY1**	Opposition by NATCO Pharma Limited to Indian Application No. 3658/KOLNP/2009 dated 03/03/2014.	
	CZ1**	Opposition by SANKLAP Rehabilitation Trust to Indian Application No. 3658/KOLNP/2009 dated 09/10/2014.	
	CA2**	Opposition by Indian Pharmaceutical Alliance to Indian Application No. 3658/KOLNP/2009 dated 02/17/2015.	
	CB2**	Opposition by Actavis Group PTC ehf to European Application No. 08732818.3 dated 02/23/2015.	
	CC2**	Opposition by Teva Pharmaceutical Industries to European Application No. 08732818.3 dated 02/10/2015.	
	CD2**	Opposition by Medecins Du Monde to European Application No. 08732818.3 dated 02/10/2015.	
	CE2**	Opposition by Ellis IP Ltd. to European Application No. 08732818.3 dated 02/10/2015.	
	CF2**	Opposition by Mr. Holm Herbert Fleisher to European Application No. 08732818.3 dated 02/19/2015.	
	CG2**	Opposition by Generics [UK] Ltd (trading as Mylan) to European Application No. 08732818.3 dated 02/19/2015.	
	CH2**	Opposition by IPS to European Application No. 08732818.3 dated 02/23/2015.	

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	CI2**	Opposition by Pharmaceutical Works Polpharma S.A. to European Application No. 08732818.3 dated 02/19/2015.	
	CJ2**	Opposition by Stada Arzneimittel AG to European Application No. 08732818.3 dated 02/19/2015.	
	CK2**	Opposition by ZBM Patents= Zea, Barlocci & Markvardsen to European Application No. 08732818.3 dated 02/23/2015.	
	CL2**	Furman et al., "The Anti-Hepatitis B Virus Activities, Cytoxicities, and Anabolic Profiles of the (-) and (+) Enantiomers of *cis*-5-Fluoro-1-[2-(Hydroxymenthyl)-1,3-Ozathiolan-5-yl]Cytosine," Antimicrobial Agents and Chemotherapy, (1992), 36(2):2686-2692.	
	CM2**	Chang et al., "Deoxyctidine-resistant Stereoisomer Is the Active Form of (+)-2',3'-Dideoxy-3'-thiacytidine in the Inhibition of Hepatitis B Virsu Replication," J. Bio. Chem, (1992), 267(20):13938-13942.	
	CN2**	Trousdale. et al.,"Activity of 1-(2'-Fluoro-2'-Deoxy-β-D-Arabinofuranosyl)Thymine Against Herpes Simplex Virsu in Cell Cultires and Rabbit Eyes," Antimicrobial Agents and Chemotherapy, (1983), 23(6):808-813.	
	CO2**	Klumpp, et al., "The Novel Nucleoside Analog R1479(4'-Azidocytidine) Is a Potent Inhibitorof NS5B-dependent RCA Synthesis and Hepatitis C Virus Replication in Cell Culture," J. Bio. Chem., (2006), 281:3793-3799.	
	CP2**	Landowski et al, "Targeted delivery to PEPT1-overexpressing cells: Acidic, basic, and secondary floxurdine amino acid ester prodrugs," MCT, (2005), 4(4):659-667.	
	CQ2**	McGuigan, "Phosphoramidate derivatives of stavudine as inhibitors of HIV: unnatural amino acids may substitute for alanine," Antiviral Chemistry & Chemotherapy, (2000), 11:111-116.	
	CR2**	Perrone, Thesis entitled "Design Synthesis an dBiological Evaluation of Novel Nucleotide Prodrugs as Potential Anti-Hepatitis C Virus Agents," (2007).	

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Art Unit	1672
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	CS2**	Zemlicka, "Lipophilic phosporamidates as antiviral pornucleotides, Biochem Biophys Acta, (2002), 276-286.	
	CT2**	Sofia, " Discovery of a beta-D-2'-Deoxy-2'-alpha-fluoro-2'-beta-C-methyluridine Nucleotide Prodrug (PSI-7977) for the Treament of Hepatitis C Virus," J. Med. Chem., (2010), 53	
	CU2**	Abstract, 100, presented at the 19th International Conference of Antiviral Research, May 7-11, 2006	
	CV2**	Guinic, et al., " Cyclic monophosphate prodrugs of base=modified 2'-C-methyl ribonucleosides as potent inhibitors of hepatitis C virus RNA replicaion," Bioorg Med Chem Lett., (2007), 17(9):2456-2458.	
	CW2**	ABRAHAM et al., "Synthesis and Biological Activity of Aromatic Amino Acid Phosphoramidates of 5-fluoro-2'deoxyuridine and 1-beta-Arabinofuranosylcytosine: Evidence of Phosphoramidase Activity," J. Med. Chem., vol. 39, No. 23, pp. 4569-4575, (1996).	
	CX2**	ABRAHAM et al., "Synthesis, Biological Activity and Decomposition Studies of Amino Acid Phosphomonoester Amidates of Acyclovir," Nucleosides, Nucleotides and Nucleic Acids, vol. 16, No. 10, pp. 2079-2092 (1997).	
	CY2**	AQUARO et al., "Activities of Masked 2',3'-Dideoxynucleoside Monophosphate Derivaties Against Human Immunodeficiency Virus in Resting Macrophages," Antimicrobial Agents and Chemotherapy, vol. 44, No. 1, pp. 173-177 (2000).	
	CZ2**	ASIF et al., "Pharmacokinetics of the Antiviral Agent B-D-2'-Deoxy-2'-Fluoro-2'-C-Methylcytidine in Rhesus Monkeys," Antimicrobial Agents and Chemotherapy, vol. 51, No. 8, pp. 2877-2882 (2007).	
	CA3**	BALZARINI et al., "Mechanism of anti-HIV action of masked alaninyl d4t-MP derivatives," Proc. Natl. Acad. Sci., vol. 93, pp. 7295-7299 (1996).	
	CB3**	BANKER et al., "Prodrugs," Modern Pharmaceutics, Third Edition, Revised and Expanded, pp. 451 and 596 (1996).	

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	CC3**	BARTENSCHLAGER et al., "Kinetic and Structural Analyses of Hepatitis C Virus Polyprotein Processing," J. Virol., vol. 68, No. 8, pp. 5045-5055 (1994).	
	CD3**	BARTENSCHLAGER et al., "Nonstructural Protein 3 of the Hepatitis C Virus Encodes a Serine-Type Proteinase Required for Cleavage at the NS3/4 and NS4/5 Junctions," J. Virol., vol. 67, No. 7, pp. 3835-3844 (1993).	
	CE3**	BASCHANG et al., "Neue Derivate von Thymidin-3',5'-cyclophosphat," Angew. Chem., vol. 85, No. 1, pp. 44-45 (1973).	
	CF3**	BATTAGLIA et al., "Combination Therapy with Interferon and Ribavirin in the Treatment of Chronic Hepatitis C Infection," The Annals of Pharmacotherapy, vol. 34, No. 4, pp. 487-494 (2000).	
	CG3**	BAZAN et al., "Detection of a Trypsin-like Serine Protease Domain in Flaviviruses and Pestiviruses," Virology, vol. 171, pp. 637-639 (1989).	
	CH3**	BEAULIEU et al., "Inhibitors of the HCV NS5B polymerase: New hope for the treatment of hepatitis C infections," Current Opinion in Investigational Drugs, vol. 5, No. 8, pp. 838-850 (2004).	
	CI3**	BEHRENS et al., "Identification and properties of the RNA-dependent RNA polymerase of hepatitis C virus," The EMBO Journal, vol. 15, No. 1, pp. 12-22 (1996).	
	CJ3**	BERENGUER, M., "Hepatitis C virus in the transplant setting," Antiviral Therapy, vol. 3, Supplement 3, pp. 125-136 (1998).	
	CK3**	BHAT et al., "Synthesis and Pharmacokinetic Properties of Nucleoside Analogues as Possible Inhibitors of HCV RNA Replication," (Oral Session V: Hepatitis C Virus, Flaviviruses), 16th International Conference on Antiviral Research, Abstract No. 120, p. A75 (Apr. 27-May 1, 2003).	
	CL3**	BROEDERS et al., "A 400-and 600-Mhz 'H NMR Confromational Study on Nucleoside Cyclic 3', 5' PV-TBP Systems. Conformational Transmission Induces Diequatorial Orientation of the 3', 5'-Dioxaphosphorinane Ring in a Nonchair Confirmation," J. Am. Chem. Soc., vol. 112, No. 21, pp. 7475-7482 (1990).	

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	CM3**	CAHARD, DOMINIQUE, et al., Aryloxy Phosphoramidate Triesters as Pro-Tides, Mini-Reviews in Medicinal Chemistry (2004), 4, 371-381.	
	CN3**	CALISHER et al., "Antigenic Relationships between Flaviviruses as Determined by Cross-neutralization Tests with Polyclonal Antisera," J. Gen. Virol., vol. 70, pp. 37-43 (1989).	
	CO3**	CARROLL et al., "Nucleoside Analog Inhibitors of Hepatitis C Virus Replication," Infectious Disorders-Drug Targets, vol. 6, No. 1, pp. 17-29 (2006).	
	CP3**	CHANG et al., "Amino Acid Phosphoramidate Monoesters of 3'-Azido-3'-deoxythymidine: Relationship between Antiviral Potency and Intracellular Metabolism," J. Med. Chem., vol. 44, No. 2, pp. 223-231 (2001).	
	CQ3**	CHAPMAN et al., "Practical Synthesis, Separation, and Stereochemical Assignment of the PMPA Pro-Drug GS-7340," Nucleosides, Nucleotides & Nucleic Acids, vol. 20, No. 4-7, pp. 621-628 (2001).	
	CR3**	CHAPMAN et al., "Purification of PMPA Amidate Prodrugs by SMB Chromatography and X-Ray Crystallography of the Diastereomerically Pure GS-7340," Nucleosides, Nucleotides & Nucleic Acids, vol. 20, No. 4-7, pp. 1085-1090 (2001).	
	CS3**	CHEN et al., "In Vivo Pharmacokinetics and Metabolism of Anti-Human Immunodeficiency Virus Agent D4t-5'-[P-Bromophenyl Methoxyalaninyl Phosphate] (Sampidine) in Mice," Drug Metabolism and Disposition, vol. 29, No. 7, pp. 1035-1041 (2001).	
	CT3**	CHEN et al., "Metabolism of Stavudine-5'-[P-Bromophenyl Methoxyalaninyl Phosphate], Stampidine, in Mice, Dogs, and Cats," Drug Metabolism and Disposition, vol. 30, No. 12, pp. 1523-1531 (2002).	
	CU3**	CHOU et al., "Evidence that Human Histidine Triad Nucleotide Binding Protein 3 (Hint3) is a Distinct Branch of the Histidine Triad (HIT) Superfamily," J. Mol. Biol., vol. 373, pp. 978-989 (2007).	
	CV3**	CHOU et al., "Phosphoramidate Pronucleotides: A Comparison of the Phosphoramidase Substrate Specificity of Human and Escherichia coli Histidine Triad Nucleotide Binding Proteins," Molecular Pharmaceutics, vol. 4, No. 2, pp. 208-217 (2006).	

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Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	CY3**	CIHLAR et al. "Design and Profiling of GS-9148, a Novel Nucleotide Analog Active against Nucleoside-Resistant Variants of Human Immunodeficiency Virus Type 1, and Its Orally Bioavailable Phosphonoamidate Prodrug, GS-9131," Antimicrobial Agents and Chemotherapy, vol. 52, No. 2, pp. 655-665 (2008).	
	CZ3**	CLARK et al., "Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-C-methylcytidine, a Potent Inhibitor of Hepatitis C Virus Replication," J. Med. Chem., vol. 48, No. 17, pp. 5504-5508 (2005).	
	CA4**	CONGIATU et al. "Molecular Modeling Studies on the Binding of Some Protides to the Putative Human Phosphoramidase Hint1," Nucleosides, Nucleotides and Nucleic Acids, vol. 26, pp. 1121-1124 (2007).	
	CB4**	CONGIATU et al., "Naphthyl Phosphoramidate Derivatives of BVdU as Potential Anticancer Agents: Design, Synthesis and Biological Evaluation," Nucleosides, Nucleotides, and Nucleic Acids, vol. 24, No. 5-7, pp. 485-489 (2005).	
	CC4**	CURLEY et al., "Synthesis and anti-HIV evaluation of some phosphoramidate derivatives of AZT: studies on the effect of chain elongation on biological activity," Antiviral Research, vol. 14, pp. 345-356 (1990).	
	CD4**	DAVIS, G. L., "Current Therapy for Chronic Hepatitis C," Gastroenterology, vol. 118, No. 2, pp. S104-S114 (2000).	
	CE4**	D'CRUZ et al., "Stampidine: a selective oculo-genital microbicide," Journal of Antimicrobial Chemotherapy, vol. 56, pp. 10-19 (2005).	
	CF4**	DE LOMBAERT et al., "N-Phosphonomethyl Dipeptides and Their Phosphonate Prodrugs, a New Generation of Neutral Endopeptidase (NEP, EC 3.4.24.11) Inhibitors," J. Med. Chem., vol. 37, No. 4, pp. 498-511 (1994).	

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	CH4**	DUMEZ, DARIN, et al., "Large-Scale Synthesis and Formulation of GMP-Grade Stampidine, a New Anti-HIV Agent," Arzneim.-Forsch./Drug Res. (2006) 56(2a):136-151.	
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	CJ4**	EDMUNDSON et al., "Cyclic Organophosphorus Compounds. Part 23. Configurational Assignments in the 4-Phenyl-1,3,2-dioxaphosphorinane Series. X-Ray Molecular Structure of cis-2-Benzylamino-4-phenyl-1,3,2-dioxaphosphorinane 2-oxide," J. Chem. Research (S), pp. 122-123 (1989).	
	CK4**	EGRON et al., "S-Acyl-2-thioethyl Phosphoramidate Diester Derivatives as Mononucleotide Prodrugs" J. Med. Chem., vol. 46, No. 21, pp. 4564-4571 (2003).	
	CL4**	EISENBERG et al., "Metabolism of GS-7340, a Novel Phenyl Monophosphoramidate Intracellular Prodrug of PMPA, in Blood," Nucleosides, Nucleotides & Nucleic Acids, vol. 20, No. 4-7, pp. 1091-1098 (2001).	
	CM4**	ELDRUP et al., "Oral Session V: Hepatitis C Virus, Flaviviruses," Program and Abstracts, The Sixteenth International Conference on Antiviral Research, p. A75, Abstract 119 (Apr. 27 to May 1, 2003).	
	CN4**	ELDRUP et al., "Structure-Activity Relationship of Purine Ribonucleosides for Inhibition of Hepatitis C Virus RNA-Dependent RNA Polymerase," J. Med. Chem., vol. 47, No. 9, pp. 2283-2295 (2004).	
	CO4**	ENGELS et al., "Ctclophosphate, III. Synthese and Eignschaften von Uridin-3',5'-cyclophosphat-estern," Chemische Berichte, vol. 110, No. 6, pp. 2019-2027 (1977).	
	CP4**	FAILLA et al., "Both NS3 and NS4A are Required for Proteolytic Processing of Hepatitis C Virus Nonstructural Proteins," J. Virol., vol. 68, No. 6, pp. 3753-3760 (1994).	

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	CQ4**	FARQUHAR et al., "Synthesis and Biological Evaluation of Neutral Derivatives of 5-Fluoro-2'-deoxyuridine 5'-Phosphate," J. Med. Chem., vol. 26, No. 8, pp. 1153-1158 (1983).	
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	CS4**	FREED et al., "Evidence for acyloxymethyl esters of pyrimidine 5'-deoxyribonucleotides as extracellular sources of active 5'-deoxyribonucleotides in cultured cells," Biochemical Pharmacology, vol. 38, No. 19, pp. 3193-3198 (1989).	
	CT4**	GILLESPIE, S., et al., "Stereoselective Inhibition of Cholesterol Esterase by Enantiomeric Phosphonates," Phosphorous, Sulfur and Silicon, 1997, 122: 205-208.	
	CU4**	GOEKJIAN et al., "Synthesis of Fluorinated Marcocyclic Bis(indolyl)maleimides as Potential 19F NMR Probes for Protein Kinase C," J. Org. Chem. vol., 64., No. 12, pp. 4238-4246 (1999).	
	CV4**	GORBALENYA et al., "A conserved NTP-motif in putative helicases," Nature, vol. 333, p. 22 (1988).	
	CW4**	GORBALENYA et al., "N-terminal domains of putative helicases of flavi-and pestiviruses may be serine proteases," Nucleic Acids Research, vol. 17, No. 10, pp. 3889-3897 (1989).	
	CX4**	GRAKOUI et al., "A second hepatitis C virus-encoded proteinase," Proc. Natl. Acad. Sci., vol. 90, pp. 10583-10587 (1993).	
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	CZ4**	GRIFFITH et al., "HCV Anti-viral Agents," Annual Reports in Medicinal Chemistry, vol. 39, pp. 223-237 (2004).	

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	CA5**	GROMOVA et al., "Optical Rotatory Dispersion and Circular Dichroism of Mono- and Oligonucleotide-Amino Acids (Amidates),"Biochim. Biophys. Acta., vol. 240, No. 1, pp. 1-11 (1971).	
	CB5**	GUDMUNDSSON, KRISTJAN S., et al., "Phosphoramidate Protides of 2',3'-Dideoxy-3'-fluoroadenosine and Related Nucleosides with Potent Activity Against HIV and HBV," Nucleosides, Nucleotides & Nucleic Acids (2003) 22 (10):1953-1961.	
	CC5**	GUDMUNDSSON, KRISTJAN S., et al., "Phosphoramidate Protides of Carbocyclic 2',3'-Dideoxy-2',3'-Didehydro-7-Deazaadenosine with Potent Activity Against HIV and HBV," Nucleosides, Nucleotides & Nucleic Acids (2004) 23(12): 1929-1937.	
	CD5**	GUNIC et al., "6-Hydrazinopurine 2'-methyl ribonucleosides and their 5'-monophosphate prodrugs as potent hepatitis C virus inhibitors," Bioorg. & Med. Chem. Lett., vol. 17, pp. 2456-2458 (2007).	
	CE5**	HALSTEAD, S. B., "Pathogenesis of Dengue: Challenges to Molecular Biology," Science, vol. 239, pp. 476-481 (1988).	
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	CI5**	HERTEL et al., "Synthesis of 2-Deoxy-2,2-difluoro-D-ribose and 2-Deoxy-2,2-difluoro-D-ribofuranosyl Nucleosides," J. Org. Chem., vol. 53, No. 11, pp. 2406-2409 (1988).	
	CJ5**	HIJIKATA et al., "Two Distinct Proteinase Activities required for the Processing of a Putative Nonstructural Precursor Protein of Hepatitis C Virus," J. Virol., vol. 67, No. 8, pp. 4665-4675 (1993).	

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	CK5**	HOSTETLER et al., "Greatly Enhanced Inhibition of Human Immunodeficiency Virus Type 1 Replication in CEM and HT4-6C Cells by 3'-Deoxythymidine Diphosphate Dimyristoylglycerol, a Lipid Prodrug of 3'-Deoxythymidine," Antimicrobial Agents and Chemotherapy, vol. 36, No. 9, pp. 2025-2029 (1992).	
	CL5**	HOSTETLER et al., "Synthesis and Antiretroviral Activity of Phospholipid Analogs of Azidothymidine and Other Antiviral Nucleosides," J. Biol. Chem., vol. 265, No. 11, pp. 6112-6117 (1990).	
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	CO5**	International Preliminary Examination Report along with Written Opinion of the International Searching Authority issued in International PCT application No. PCT/US2008/058183 issued Apr. 7, 2010 (17 pages).	
	CP5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/EP2006/069060 (13 pages).	
	CQ5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/EP2006/069060 (7 pages) (Nov. 5, 2008).	
	CR5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2004/012472 (8 pages) (Dec. 1, 2005).	
	CS5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/025916 (4 pages)	
	CT5**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/025916 (5 pages) (Jan. 23, 2007)	

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	CZ5**	International Search Report issued in International Application No. PCT/EP2006/069060 mailed Jan. 30, 2007 (4 pages).	
	CA6**	International Search Report issued in International Application No. PCT/US2004/012472 mailed Dec. 30, 2004 (4 pages).	
	CB6**	International Search Report issued in International Application No. PCT/US2005/025916 mailed Jun. 15, 2006 (2 pages).	
	CC6**	International Search Report issued in International Application No. PCT/US2005/025916 mailed Jun. 15, 2006.	
	CD6**	International Search Report issued in International Application No. PCT/US2005/032406 mailed May 8, 2008 (3 pages).	

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	CI6**	Invitation to Pay Additional Fees & Partial International Search Report issued in International Application No. PCT/US2010/035641 (10 pages) (July 23, 2010)	
	CJ6**	IYER et al., "Synthesis, in Vitro Anti-Breast Cancer Activity, and Intracellular Decomposition of Amino Acid Methyl Ester and Alkyl Amide Phosphoramidate Monoesters of 3'-Azido-3'-deoxythymidine (AZT)," J. Med. Chem., vol. 43, No. 11, pp. 2266-2274 (2000).	
	CK6**	JIN et al., "Expression, Isolation, and characterization of the Hepatitis C Virus ATPase/RNA Helicase," Archives of Biochemistry and Biophysics, vol. 323, No. 1, pp. 47-53 (1995).	
	CL6**	JONES et al., "Minireview: Nucleotide Prodrugs," Antiviral Research, vol. 27, No. 1-2pp. 1-17 (1995).	
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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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	CG9**	STELLA, V. J., "Prodrugs as Therapeutics," Expert opinion on therapeutic patents, vol. 14, No. 3, pp. 277-280 (Mar. 2004).	
	CH9**	STUYVER et al., "Dynamics of Subgenomic Hepatitis C Virus Replicon RNA Levels in Huh-7 Cells after Exposure to Nucleoside Antimetabolites," J. Virol., vol. 77, No. 19, pp. 10689-10694 (2003).	
	CI9**	STUYVER et al., "Inhibition of hepatitis C replicon RNA synthesis by B-D-2'-deoxy-2'-fluoro-2'-C-methlcytidine: a specific inhibitor of hepatitis C virus replication," Antiviral Chemistry & Chemotherapy, vol. 17, No. 2, pp. 79-87 (2006).	
	CJ9**	STUYVER et al., "Inhibition of the Subgenomic Hepatitis C Virus Replicon in Huh-7 Cells by 2'-Deoxy-2'-Fluorocytidine," Antimicrobial Agents and Chemotherapy, vol. 48, No. 2, pp. 651-654 (2004).	
	CK9**	STUYVER et al., "Ribonucleoside Analogue that Blocks Replication of Bovine Viral Diarrhea and Hepatitis C Viruses in Culture," Antimicrobial Agents and Chemotherapy, vol. 47, No. 1, pp. 244-254 (2003).	
	CL9**	TAN et al., "Hepatitis C Therapeutics: current Status and Emerging Strategies," Nature Reviews, vol. 1, pp. 867-881 (2002).	
	CM9**	TOMEI et al., "NS3 Is a Serine Protease Required for Processing of Hepatitis C Virus Polyprotein," J. Virol., vol. 67, No. 7, pp. 4017-4026 (1993).	
	CN9**	TOMEI et al., "NS3 Is a Serine Protease Required for Processing of Hepatitis C Virus Polyprotein," J. Virol., vol. 67, No. 7, pp. 4017-4026 (1993).	
	CO9**	U.S. Appl. No. 10/828,753, Final Office Action Rejection, mailed Feb. 26, 2008.	
	CP9**	U.S. Appl. No. 11/225,425, Final Office Action Rejection, mailed Feb. 18, 2010.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known	
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Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

Sheet	58	of	80

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	CQ9**	U.S. Appl. No. 11/225,425, Non-Final Office Action Rejection, mailed Jul. 7, 2009.	
	CR9**	U.S. Appl. No. 11/225,425, Non-Final Office Action Rejection, mailed Nov. 13, 2008.	
	CS9**	U.S. Appl. No. 11/353,597, Final Office Action Rejection, mailed Dec. 2, 2008.	
	CT9**	U.S. Appl. No. 11/353,597, Non-Final Office Action Rejection, mailed Oct. 2, 2007.	
	CU9**	U.S. Appl. No. 11/635,898, Non-Final Office Action Rejection, mailed Jul. 28, 2009.	
	CV9**	U.S. Appl. No. 11/854,218, Non-Final Office Action Rejection, mailed Oct. 1, 2009.	
	CW9**	U.S. Appl. No. 12/142,536, Non-Final Office Action Rejection, mailed Oct. 2, 2009.	
	CX9**	U.S. Appl. No. 12/142,554, Non-Final Office Action Rejection, mailed Oct. 1, 2009.	
	CY9**	U.S. Appl. No. 12/240,342, Non-Final Office Action Rejection, mailed Oct. 1, 2009.	
	CZ9**	U.S. Appl. No. 12/553,483, Non-Final Office Action Rejection, mailed Dec. 17, 2009.	

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	CAA**	U.S. Appl. No. 13/956,195, filed Jul. 31, 2013.	
	CBA**	U.S. Application No. 11/854,218, Pending claims filed 09/12/2007	
	CCA**	U.S. Application No. 12/142,536, Pending claims filed on 06/19/2008	
	CDA**	U.S. Application No. 12/479,075, filed on 06/05/2009, Group Art Unit 1614	
	CEA**	U.S. Application No. 12/645,765, filed on 12/23/2009, Group Art Unit 1614	
	CFA**	U.S. Application No. 12/645,821, filed on 12/23/2009, Group Art Unit 1636	
	CGA**	U.S. Patent Application No. 13/936,448, as filed July 08, 2013	
	CHA**	U.S. Patent Application No. 14/057,675, as filed October 18, 2013	
	CIA**	U.S. Patent Application No. 14/152,243, as filed January 10, 2014	
	CJA**	U.S. Provisional Patent Application No. 60/392,350, filed Jun. 28, 2002.	

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	CKA**	U.S. Provisional Patent Application No. 60/392,351, filed Jun. 28, 2002.	
	CLA**	UCHIYAMA, MAMORU, et al., "O-Selective Phosphorylation of Nucleosides without N-Protection," J. Org. Chem. (1993) 58:373-379.	
	CMA**	UCKUN et al., "In Vivo Pharmacokinetics and Toxicity Profile of the Anti-HIV Agent Stampidine in Dogs and Feline Immunodeficiency Virus-infected Cats," Arzneim.-Forsch./Drug Res., vol. 56, No. 2a, pp. 176-192 (2006).	
	CAN**	VALETTE et al., "Decomposition Pathways and in Vitro HIV Inhibitory Effects of IsoddA Pronucleotides: Toward a Rational Approach for Intracellular Delivery of Nucleoside 5?-Monophosphates," J. Med. Chem., vol. 39, No. 10, pp. 1981-1990 (1996).	
	COA**	VENKATACHALAM et al., "Rational Drug Design of Multifunctional Phosphoramidate Substituted Nucleoside Analogs," Current Pharmaceutical Design, vol. 10, No. 15, pp. 1713-1726 (2004).	
	CPA**	VENKATACHALAM et al., "Synthesis and metabolism of naphthyl substituted phosphoramidate derivatives of stavudine," Bioorg. and Med. Chem., vol. 14, pp. 5161-5177 (2006).	
	CQA**	UCHIYAMA, MAMORU, et al., "O-Selective Phosphorylation of Nucleosides without N-Protection," J. Org. Chem. (1993) 58:373-379.	
	CRA**	UCKUN et al., "In Vivo Pharmacokinetics and Toxicity Profile of the Anti-HIV Agent Stampidine in Dogs and Feline Immunodeficiency Virus-infected Cats," Arzneim.-Forsch./Drug Res., vol. 56, No. 2a, pp. 176-192 (2006).	
	CSA**	VALETTE et al., "Decomposition Pathways and in Vitro HIV Inhibitory Effects of IsoddA Pronucleotides: Toward a Rational Approach for Intracellular Delivery of Nucleoside 5'-Monophosphates," J. Med. Chem., vol. 39, No. 10, pp. 1981-1990 (1996).	
	CTA**	VENKATACHALAM et al., "Rational Drug Design of Multifunctional Phosphoramidate Substituted Nucleoside Analogs," Current Pharmaceutical Design, vol. 10, No. 15, pp. 1713-1726 (2004).	

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	CVA**	WAGNER et al., "Antiviral Nucleoside Drug Delivery via Amino Acid Phosphoramidates," Nucleosides, Nucleotides and Nucleic Acids, vol. 18, No. 4 & 5, pp. 913-919 (1999).	
	CWA**	WALKER et al., "Promising candidates for the treatment of chronic hepatitis C," Expert Opin. Investig. Drugs, vol. 12, No. 8, pp. 1269-1280 (2003).	
	CXA**	WARRENER et al., "Pestivirus NS3 (p80) Protein Possesses RNA Helicase Activity," J. Virol., vol. 69, No. 3, pp. 1720-1726 (1995).	
	CYA**	WU et al., "Synthesis and Biological Activity of a Gemcitabine Phosphoramidate Prodrug," J. Med. Chem., vol. 50, No. 15, pp. 3743-3746 (2007).	
	CZA**	WOLFF, M.E., "Burger's Medicinal Chemistry and Drug Discovery," Fifth Edition, vol. 1, pp. 975-977 (1995).	
	CAB**	WOZNIAK, LUCYNA A., et al., "The stereospecific synthesis of P-chiral biophosphates and their analogues by the Stec reaction," Chem. Soc. Rev. (2003) 32:158-169.	
	CBB**	XIAO-LING et al., "The Synthesis of (2S,3R)-Sphingosine from D-Mannitol", Acta Chimica Sinica, vol. 54, pp. 826-832 (1996).	
	CCB**	XU et al., "Bovine Viral Diarrhea Virus NS3 Serine Proteinase: Polyprotein Cleavage Sites, Cofactor Requirements, and Molecular Model of an Enzyme Essential for Pestivirus Replication," J. Virol., vol. 71, No. 7, pp. 5312-5322 (1997).	
	CDB**	YUAN et al., "Expression, Purification, and Partial Characterization of HCV RNA Polymerase," Biochemical and Biophysical Research Communications, vol. 232, No. 1, pp. 231-235 (1997).	

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	CFB**	WU et al., "Targeting NS5B RNA-Dependent RNA Polymerase for Anti-HCV Chemotherapy," Current Drug Targets-Infectious Disorders, vol. 3, No. 3, pp. 207-219 (2003).	
	CGB**	XIAO-LING et al., "Study on the Chirality of Sulfur in Ethyl (2S, 3R,4R)-4,5-O-Isopropylidene-2,3-sulfinyl;-2,3,4,5-tetrahydroxy-pentanoate", Acta Chimica Sinica, vol. 55, pp. 600-604 (1997).	
	CHB**	XIAO-LING et al., "The Synthesis of (2S,3R)-Sphingosine from D-Mannitol", Acta Chimica Sinica, vol. 54, pp. 826-832 (1996).	
	CIB**	ABRAHAM et al. J. Med. Chem. (1996), Vol. 39, pages 4569-4575.	
	CJB**	AQUARO, et al. Antimicrobial Agents and Chemotherapy, 2000, 1, 173-177	
	CKB**	BARTENSCHLAGER, J. Viral., 1993, 67, 3835-3844	
	CLB**	BARTENSCHLAGER, J. Viral., 1994, 68, 5045-5055	
	CMB**	BASCHANG et al., Angewandte Chemie, 85:1,44-45, 1973	
	CNB**	BAZAN and FLETTERICK ,Virology, 1989, 171, 637-639	

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	COB**	BEAULIEU, P. L., Current Opinion in Investigational Drugs, 2004, 5, 838-850	
	CPB**	BEHRENS, EMBO, 1996, 15, 12-22	
	CQB**	BHAT B., "Synthesis and Pharmacokinetic Properties of Nucleoside Analogues as Possible Inhibitors of HCV RNA Replication," (Oral Session V: Hepatitis C Virus, Flaviviruses), 16th International Conference on Antiviral Research, Abstract No. 120, p. A75 (April. 27-May 1, 2003, Savannah, GA).	
	CRB**	BROEDERS et al., J. Am. Chem. Soc., 112:21,7475-7482, 1990	
	CSB**	CALISHER, J. Gen. Viral, 1989, 70, 37-43	
	CTB**	CARROL, S., Infectious Disorders-Drug Targets, 2006, 6, 17-29	
	CUB**	CHAPMAN, et al. Nucleotides, Nucleosides and Nucleic Acids, 2001, 20 (4-7), 1085-1090	
	CVB**	CHAPMAN, et al. Nuecleotides, Nucleosides and Nucleic Acids, 2001, 20 (4-7), 621-628	
	CWB**	CHU, M., Bioorganic & Medicinal Chemistry Letters, Vol. 9, 1949-1952, 1999	
	CXB**	CHU, M., Tetrahedron Letters, Vol. 37, No. 40,7229-7232, 1996	

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	CYB**	DE LOMBAERT, S., J. Med. Chem., Vol. 37, No.4, 498-511, 1994	
	CZB**	ECKART, Biochem. Biophys. Res. Comm. 1993, 192, 399-406	
	CAC**	EDMUNDSON, J. Chem. Res. Synop., 1989,5:122-123	
	CBC**	EISENBERG, et al. Nucleosides, Nucleotides & Nucleic Acids, 2001, 20(4-7), 1091-1098	
	CCC**	ELDRUP, A., "Structure Activity Relationship of 2' Modified Nucleosides for Inhibition of Hepatitis C Virus," (Oral Session V: Hepatitis C Virus, Flavaviruses), 16th International Conference on Antiviral Research, Abstract No. 119, p. A75 (April27-May I, 2003, Savannah, GA)	
	CDC**	ENGELS et al., Chem. Ber., 110:6, 2019-2027, 1977	
	CEC**	FAILLA, J. Viral., 1994, 68, 3753-3760	
	CFC**	Fields Virology, Editors: Fields, B. N., Knipe, D. M., and Howley, P.M., Lippincott- Raven Publishers, Philadelphia, PA, 1996, Chapter 31,931-959	
	CGC**	Final International Report and Written Opinion ofPCT/US2009/069475 mailed May 10, 2010	
	CHC**	GOEKJIAN, Journal of Organic Chemistry, 1999, 64 (12) 4238-4246	

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	CJC**	GORBALENYA, Nucleic Acid Res.,1989, 17, 3889-3897	
	CKC**	GRAKOUI, J. Viral. 1993, 67, 2832-2843	
	CLC**	GRAKOUI, Proc. Natl. Acad Sci. USA 1993, 90, 10583-10587	
	CMC**	GRIFFITH, R.C., Annual Reports in Medicinal Chemistry, 2004, 39,223-237	
	CNC**	GROMOVA et al., Biochem. Biophys. Acta, 1971,240, 1-11	
	COC**	HALSTEAD, S. B., Rev. Infect. Dis., 1984,6,251-264	
	CPC**	HALSTEAD, S. B., Science, 1988, 239, 476-481	
	CQC**	HARRIS et al., Antiviral Chemistry & Chemotherapy, 2002, 12, 293-300	
	CRC**	HERNANDEZ, Journal of Organic Chemistry, 2004, 69 (24), 8437-8444	

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	CSC**	HIJIKATA, J. Viral. 1993, 67, 4665-4675	
	CTC**	HOSTETLER, K., Antimicrob. Agents Chemother., Vol. 36, No.9, 2025-2029, 1992	
	CUC**	International Preliminary Examination Report of International PCT application no. PCT/US2008/058183 issued April 7, 2010	
	CVC**	International Preliminary Examination Report of PCT/EP2006/069060 mailed November 5, 2008	
	CWC**	International Preliminary Examination Report of PCT/US2004/012472 issued December 1, 2005	
	CXC**	International Preliminary Examination Report of PCT/US2005/025916 issued January 23, 2007	
	CYC**	International Preliminary Examination Report of PCT/US2005/032406 issued March 10, 2009	
	CZC**	International Search Report for International Application No. PCT/EP2006/069060 (W02007/065829) mailed January 30, 2007	
	CAD**	International Search Report for International Application No. PCT/US2004/0124 72 (W02005/003147) mailed December 30, 2004	
	CBD**	International Search Report for International Application No. PCT/US2005/025916 (W02006/012440) mailed June 15, 2006	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CCD**	International Search Report for International Application No. PCT/US2005/032406 (W02006/031725) mailed May 8, 2008	
	CDD**	International Search Report of International Application No. PCT/US05/25916 mailed June 15, 2006	
	CED**	International Search Report of International PCT application no. PCT/US2008/058183 mailed March 31, 2010	
	CFD**	International Search Report of PCT/US2009/046619 (W0/2009/152095) mailed September 23, 2010	
	CGD**	International Search Report of PCT/US2010/035641 mailed September 28, 2010	
	CHD**	Invitation to Pay Additional Fees & Partial International Search Report of PCT/US2010/035641 mailed July 23, 2010	
	CID**	JIN and PETERSON, Arch. Biochem. Biophys., 1995, 323, 47-53	
	CJD**	JUODKA et al., J. Carbohydrates, Nucleosides, Nucleotides, 1979, 6(4), 333-357	
	CKD**	JUODKA et al., J. Carbohydrates, Nucleosides, Nucleotides, 1981, 8(1), 19-39	
	CLD**	JUODKA et al., J. Carbohydrates, Nucleosides, Nucleotides, 1981, 8(6), 519-535	

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	CMD**	KIM et al., Biochem. Biophys. Res. Comm., 1995, 215, 160-166	
	CND**	KOONIN, E.V. and Dolja, V.V., Crir. Rev. Biochem. Malec. Biol. 1993, 28, 375-430	
	COD**	KRYUCHKOV et al., "Influence of Solvent on the Strength of Cyclic Oxygen-Containing Phosphorus Acids," Bulletin of the Academy of Sciences of the USSR. Division of Chemical Science, vol. 36, No. 6, Part 1, pp. 1145-1148 (1987)	
	CPD**	KUCERA, L., AIDS Research and Human Retroviruses, Vol. 6, No.4, 491-501, 1990	
	CQD**	LACKEY et al., Biochemical Pharmacology, 2001, 61, 179-189	
	CRD**	LEE, et al Antimicrobial Agents and Chemotherapy, 2005, 49(5), 1898-1906	
	CSD**	LOCHMANN, J. Viral., 1997, 71, 8416-8428	
	CTD**	LOPEZ APARICIO et al., "Branched-Chain Sugars, Part VII, Synthesis of Saccharinic Acid Derivatives" Carbohydrate Research, 129, 99-109, 1984	
	CUD**	MCGUIGAN, et al. Antiviral Chemistry and Chemotherapy 1998, 9, 473-479	
	CVD**	MCINTEE et al., Biorg. & Med. Chem. Lett., 2001, 11, 2803-2805	

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	CWD**	MEIER, C., Bioorganic & Medicinal Chemistry Letters, Vol. 7, No.2, 99-104, 1997	
	CXD**	MEYERS, G. and Thiel, H.J., Advances in Virus Research, 1996, 47, 53-118	
	CYD**	MOENING V., Adv. Vir. Res. 1992,41, 53-98	
	CZD**	MONATH, T. P., New Eng. J. Med, 1988, 319, 641-643	
	CAE**	MURAKAMI et al. Antimicrobial Agents and Chemotherapy (Feb. 2008), 52 (2), 458-464	
	CBE**	MURAKAMI, et al. Antiviral Chemistry & Chemotherapy, 2007, 51(2), 503-509	
	CCE**	NEIDLEIN, R., Heterocycles, Vol. 35, No.2, 1185-1203, 1993	
	CDE**	NELSON et al., J. Am. Chem. Soc., 109:13, 4058-4064, 1987	
	CEE**	NI, Z-J., Current Opinion in Drug Discovery and Development, 2004, 7, 446-459	
	CFE**	NIFANTYEV, E., Phosphorus, Sulfur, and Silicon and the Related Elements, Vol. 113, 1-13, 1996	

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	CGE**	NOVAK J.J.K., Collection of Czechoslovak Chemical Communications, Vol. 36, 3670-3677, 1971	
	CHE**	NOVAK, J.J .K., Collection of Czechoslovak Chemical Communications, Vol. 39, 869-882, 197 4	
	CIE**	OISHI, Tetrahedron Letters, 1993, 34 (22), 3573-3576	
	CJE**	OLSEN et al., "2'-Modified Nucleoside Analogs as Inhibitors of Hepatitis C RNA Replication," Program and Abstracts, 16th International Conference on Antiviral Research, Abstract No. 121, p. A76 (Apr. 27-May 1, 2003, Savannah, GA))	
	CKE**	Partial International Search Report ofPCT/US2009/069475 (W0/2010/075554) mailed March 5, 2010	
	CLE**	RAY, et al. Antimicrobial Agents and Chemotherapy, 2008, 52(2), 648-654	
	CME**	REMY et al., J. Org. Chem., 1962, 27, 2491-2500	
	CNE**	SHIH, Y., Bull. Inst. Chem., Academia Sinica, 41:9-16, 1994	
	COE**	SMIMOV et al., FEBS Letters, 1975, 51(1), 211-214	
	CPE**	SOFIA et al., "β-D-2'-Deoxy-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", Poster #P-259, 14th International Symposium on Hepatitis C Virus and Related Viruses, Glasgow, Scotland, UK (Sep. 9 to 13, 2007).	

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	CQE**	SOFIA et al., "β-D-2'-Deoxy-2'-fluoro-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", 2nd International Workshop on HCV, Poster #7 (Oct. 31, 2007).	
	CRE**	SOFIA, M.J., "β-D-2'-Deoxy-2'-fluoro-2'-C-methyluridine Phosphoramidates: Potent and Selective Inhibitors of HCV RNA Replication", 2nd International Workshop on HCV-Resistance and New Compounds (Oct. 31, 2007).	
	CSE**	STELLA, "Prodrugs as Therapeutics", Expert Opinion Ther. Patents, 2004, 14:3,277-280	
	CTE**	STUYVER, L.J. et al. Antiviral Chemistry & Chemotherapy, 2004, 48(2), 651-654	
	CUE**	Sun XIAO-LING and and Wu YU-LIN, "Study on the Chirality of Sulfur in Ethyl (2S, 3R,4R)-4,5-O-Isopropylidene-2,3-sulfinyl;-2,3,4,5-tetrahydroxy-pentanoate", Acta Chimica Sinica, vol. 55, pp. 600-604	
	CVE**	Sun XIAO-LING and and Wu YU-LIN., "The Synthesis of (2S,3R)-Sphingosine from D-Mannitol", Acta Chimica Sinica, vol. 54, pp. 826-832	
	CWE**	Supplemental European Search Report of European patent appln no. EP 05775359.2 dated September 15, 2010	
	CXE**	TAN, S.-L., Nature Rev. Drug Discov., 2002, 1, 867-881	
	CYE**	TOME, J. Viral., 1993, 67, 4017-4026	
	CZE**	U.S. application no. 10/828,753 Final Rejection mailed 02-26-2008	

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	CAF**	U.S. application no. 10/828,753 Non-Final Rejection mailed 03-30-2007	
	CBF**	U.S. application no. 11/225,425 Final Rejection mailed 02-18-2010	
	CCF**	U.S. application no. 11/225,425 Non-Final Rejection mailed 07-07-2009	
	CDF**	U.S. application no. 11/225,425 Non-Final Rejection mailed 11-13-2008	
	CEF**	U.S. application no. 11/225,425 pending claims filed 10-02-2009	
	CFF**	U.S. application no. 11/353,597 Final Rejection mailed 12-02-2008	
	CGF**	U.S. application no. 11/353,597 Non-Final Rejection mailed 07-17-2008	
	CHF**	U.S. application no. 11/353,597 Non-Final Rejection mailed 10-02-2007	
	CIF**	U.S. application no. 11/635,898 Non-Final Rejection mailed 07-28-2009	
	CJF**	U.S. application no. 11/635,898 pending claims filed 12-24-2009	

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	CKF**	U.S. application no. 11/854,218 Non-Final Rejection mailed 10-01-2009	
	CLF**	U.S. application no. 11/854,218 pending claims filed 09-12-2007	
	CMF**	U.S. application no. 12/142,536 Non-Final Rejection mailed 10-02-2009	
	CNF**	U.S. application no. 12/142,536 pending claims filed 06-19-2008	
	COF**	U.S. application no. 12/142,554 Non-Final Rejection mailed 10-01-2009	
	CPF**	U.S. application no. 12/142,554 pending claims filed 12-17-2009	
	CQF**	U.S. application no. 12/240,342 Non-Final Rejection mailed 10-01-2009	
	CRF**	U.S. application no. 12/240,342 pending claims filed 09-29-2008	
	CSF**	U.S. application no. 12/479,075 filed 06-05-2009	
	CTF**	U.S. application no. 12/553,483 Non-Final Rejection mailed 12-17-2009	

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	CUF**	U.S. application no. 12/553,483 pending claims filed 02-22-2010	
	CVF**	U.S. application no. 12/645,710 filed 12-23-2009	
	CWF**	U.S. application no. 12/645,765 filed 12-23-2009	
	CXF**	U.S. application no. 12/645,821 filed 12-23-2009	
	CYF**	WALKER, M.P., Exp. Opin. Investigational Drugs, 2003, 12, 1269-1280	
	CZF**	WARRENER and COLLETT, J. Viral. 1995, 69, 1720-1726	
	CAG**	WISKERCHEN and COLLETT, Virology, 1991, 184, 341-350	
	CBG**	Written Opinion of PCT/EP2006/069060 mailed January 30, 2007	
	CCG**	Written Opinion of PCT/US2004/012472 mailed December 30, 2004	
	CDG**	Written Opinion of PCT/US2008/058183 mailed March 31,2010	

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	CEG**	WU, J., Current Drug Targets-Infectious Disorders, 2003, 3, 207-219	
	CFG**	XU et al., J. Viral., 1997, 71:5312-5322	
	CGG**	YUAN, Biochem. Biophys. Res. Comm. 1997,232,231-235	
	CHG***	YUODKA et al., translated from Bioorganicheskaya Khimiya, 1976, 2(11), 1513-1519	
	CIG**	ZHONG, J. Viral., 1998, 72, 9365-9369	
	CJG**	ZON, G., "4 Cyclophosphoamide Analogues," Progress in Medicinal Chemistry, vol. 19, pp. 205-246 (1982).	
	CKG**	AQUARO et al., Antimicrobial Agents and Chemotherapy (2000) 1: 173-177.	
	CLG**	CHAPMAN et al., Nucleotides, Nucleosides and Nucleic Acids (2001) 20(4-7): 1085-1090.	
	CMG**	CHAPMAN et al., Nucleotides, Nucleosides and Nucleic Acids (2001) 20(4-7): 621-628.	
	CNG**	EISENBERG et al., Nucleosides, Nucleotides & Nucleic Acids (2001) 20(4-7): 1091-1098.	

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	CPG**	MA et al., J. Biol. Chem. (2007) 282(41): 29812-29820.	
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	CTG**	PERRONE et al., J. Med. Chem. (2007) 50(8): 1840-1849.	
	CUG**	RAY et al., Antimicrobial Agents and Chemotherapy (2008) 52(2): 648-654.	
	CVG**	Selected Prosecution Documents for US 11/854,218: (1) September 12, 2007 Amendment; (2) October 1, 2009 Office Action; (3) March 31, 2010 Response; (4) March 31, 2011 Declaration; (5) July 22, 2010 Office Action; (6) October 11, 2010 Amendment; (7) October 11, 2010 Declaration; (8) December 23, 2010 Office Action; (9) June 28, 2011 Amendment.	
	CWG**	Selected Prosecution Documents for US 12/878,262: (1) September 9, 2010 Amendment; (2) June 8, 2011 Office Action; and (3) September 1, 2011 Amendment.	
	CXG**	Selected Prosecution Documents from US 10/828,753: (1) February 26, 2007 Amendment; (2) March 30, 2007 Office Action; (3) June 19,2007 Interview Summary; (4) September 12,2007 Amendment; (5) September 12, 2007 Declaration; (6) September 24, 2007 Declaration; (7) November 28, 2007 Amendment; (8) February 26, 2008 Office Action; (9) March 11,2008 Amendment; and (10) May 29, 2008 Notice of Allowance	

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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PTO/SB/08b (07-09)
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

Sheet	77	of	80

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CYG**	Selected Prosecution Documents from US 12/053,015: (1) June 15, 2010 Restriction Requirement; (2) October 28, 2010 Amendment; (3) January 5, 2011 Notice of Allowance; and (4) Aprill, 2011 Amendment.	
	CZG**	STUYVER et al., Antiviral Chemistry & Chemotherapy (2004) 48(2): 651-654.	
	CAH**	US 11/854,218- Pending Claims as of June 28, 2011	
	CBH**	US 12/645,710, filed December 23, 2009 -Originally filed claims.	
	CCH**	US 12/783,680, filed May 20, 2010- Originally filed claims.	
	CDH**	US 12/878,262- Pending Claims as of September 1, 2011	
	CEH**	US 13/076,552, filed March 31,2011- Originally filed claims.	
	CFH**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2004/012472 (8 pages)	
	CGH**	International Preliminary Report on Patentability and Written Opinion of the International Searching Authority issued in International Application No. PCT/US2005/032406 (4 pages)	
	CHH**	International Search Report and Written Opinion of the International Searching Authority issued in PCT/US2010/035641 (10 pages)	

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

Sheet	78	of	80

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CIH**	Partial International Search Report issued in International Application No. PCT/US2009/069475 (7 pages) (Mar. 5, 2010)	
	CJH**	The Extended search report includes the supplementary European search report issued in European Application No. 05775359.2 dated September 15, 2010 (9 pages).	
	CKH**	U.S Application No. 11/635,898, Pending claims filed on 12/24/2009	
	CLH**	U.S. Appl. No. 10/828,753, Non-Final Office Action Rejection, mailed Mar. 30, 2007.	
	CMH**	U.S. Appl. No. 11/353,597, Non-Final Office Action Rejection, mailed Jul. 17, 2008.	
	CNH**	U.S. Application No. 12/240,342, Pending claims filed on 09/29/2008	
	COH**	U.S. Application No. 12/553,483, Pending claims filed on 02/22/2010	
	CPH**	U.S. Application No. 12/645,710, filed on 12/23/2009, Group Art Unit 1614	
	CQH**	U.S. Application No. 13/099,671, claims filed September4, 2012	
	CRH**	WISKERCHEN et al., Pestivirus Gene Expression: Protein p80 of Bovine Viral Diarrhea Virus Is a Proteinase Involved in Polyprotein Processing, Virology, vol. 184, pp. 341-350 (1991).	

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

Sheet	79	of	80

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CSH**	Written Opinion of the International Searching Authority issued in International Application No. PCT/US2004/012472 (7 pages)	
	CTH**	Written Opinion of the International Searching Authority issued in International Application No. PCT/US2004/012472 (7 pages) (Nov. 30, 2005).	
	CUH**	Written Opinion of the International Searching Authority issued in the International Application No. PCT/US/2008/058183 (12 pages)	
	CVH**	Written Opinion of the International Searching Authority issued in the International Application No. PCT/US/2008/058183 (16 pages) (Apr. 1, 2010)	
	CWH**	YUODKA et al., "Oligonucleotides and Polynucleotides. XXVI. Synthesis of Esters of Nucleotidyl- and Oligonucleotidyl-(5'-N)-(Amino Acid)S and -Peptides," Soviet Journal of Bioorganic Chemistry, vol. 2, No. 11 pp. 1089-1094(1976) Translated from Russian.	
	CXH**	ZHONG et al., "Identification and characterization of an RNA-Dependent RNA Polymerase Activity within the Nonstructural Protein 5B Region of Bovine Viral Diarrhea Virus," J. Virol., vol. 72, No. 11, pp. 9365-9369 (1998).	
	CYH	Ma et al., "Characterization of the Intracellular Metabolism of ?-d-2?-Deoxy-2?-Fluoro-2?-C-Methyl-Cytidine and the Inhibition of HCV Polymerase NS5B by its 5?-Triphosphate Species," Antiviral Research, (2007), 74(3): A36; Abstract 23.	
	CZH	McGuigan et al., " Sub Micromolar Inhibitors of HCV Generated from Inactive Nucleosides by Application of ProTide Technology," Antiviral Research, (2007), 74(3): A36; Abstract 24.	
	CAI	Kim et al., "Direct Measurement of Nucleoside Monophosphate Delivery from a Phosphoramidate Pronucleotide by Stable Isotope Labeling and LC-ESI--MS/MS," Molecular Pharmaceutics, 2004, 1 (2), pp 102-111.	
	CBI	Office Action dated 2016-02-24 for European Appl. No. 14179358.8	

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

Sheet	80	of	80

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CCI	Office Action dated 2016-03-02 for Argentina Appl. No. 20080101286	
	CDI	Office Action dated 2016-03-04 For Chinese Appl. No. 201410569402.3	
	CEI	Office Action dated 2016-04-06 For Taiwan Appl. No. 097111505	
	CFI	Office Action dated 2016-07-05 for Japanese Appl. No. 2015-139458	

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14656546	DU ET AL.
	Examiner	**Art Unit**
	PATRICK LEWIS	1672

CPC

Symbol					Type	Version
A61K		31	/	7072	F	2013-01-01
C07H		19	/	06	I	2013-01-01
A61K		45	/	06	I	2013-01-01
C07H		19	/	073	A	2013-01-01
A61K		31	/	7064	A	2013-01-01
A61K		31	/	706	A	2013-01-01
A61K		31	/	7068	A	2013-01-01
C07H		19	/	04	A	2013-01-01
			/			
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			/			
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CPC Combination Sets

Symbol					Type	Set	Ranking	Version
			/					
			/					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 10	
/PATRICK LEWIS/ Primary Examiner.Art Unit 1672 (Primary Examiner)	10/18/2016 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14656546	DU ET AL.
	Examiner	**Art Unit**
	PATRICK LEWIS	1672

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
514	51	A	0	1	N	43 / 04 (2006.01.01)					
CROSS REFERENCE(S)		A	6	1	K	31 / 70 (2006.01.01)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)										
514	42 43 49 50										

NONE (Assistant Examiner)	(Date)	Total Claims Allowed: 10	
/PATRICK LEWIS/ Primary Examiner.Art Unit 1672 (Primary Examiner)	10/18/2016 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

U.S. Patent and Trademark Office

Part of Paper No. 20161018

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14656546	DU ET AL.
	Examiner	**Art Unit**
	PATRICK LEWIS	1672

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17												
	2		18												
	3		19												
	4		20												
	5		21												
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	10														
	11														
	12														
	13														
	14														
	15														
	16														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 10	
/PATRICK LEWIS/ Primary Examiner.Art Unit 1672 (Primary Examiner)	10/18/2016 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

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Part of Paper No. 20161018

WEST Search History

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DATE: Tuesday, October 18, 2016

Hide?	Set Name	Query	Hit Count
Interference			
		DB=PGPB,USPT; PLUR=YES; OP=ADJ	
☐	L11	L10 and human	50
☐	L10	L9 and ns3 protease inhibitor	50
☐	L9	L8 and ns5a inhibitor	54
☐	L8	L7 and (fluoro or fluorine)	116
☐	L7	L6 and (uracil or uridine)	116
☐	L6	L5 and phosphoramidate prodrug	126
☐	L5	L4 and (hcv or hepatitis c)	468
☐	L4	L3 and prodrug	733
☐	L3	L2 and phosphoramidate	1312
☐	L2	L1 SPACE~or ((A61K31/7068 | A61K31/7072 | A61K31/706 | A61K31/7064 | C07H19/06 | C07H19/073 | C07H19/04).CPC.)	10139
☐	L1	(514/42 or 514/43 or 514/49 or 514/50 or 514/51)![CCLS]	5340

END OF SEARCH HISTORY

Gilead Exhibit 2019
PGR2023-00046 - Page 001044

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14656546	DU ET AL.
	Examiner	**Art Unit**
	PATRICK LEWIS	1672

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/21/2015	10/20/2015	04/11/2016	10/18/2016					
	1	-	-	-	-					
	2	-	-	-	-					
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	6	-	-	-	-					
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	8	-	-	-	-					
	9	-	-	-	-					
	10	-	-	-	-					
	11	-	-	-	-					
	12	-	-	-	-					
	13	✓	✓	✓	=					
	14	✓	✓	✓	=					
	15	✓	✓	✓	=					
	16	✓	✓	✓	=					
	17	✓	✓	✓	=					
	18	✓	✓	✓	=					
	19	✓	✓	✓	=					
	20	✓	✓	✓	=					
	21	✓	✓	✓	=					
	22	✓	✓	✓	=					

PTO/AIA/80 (07-12)
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

[■] Practitioners associated with Customer Number: 117796

OR

[ ] Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

[■] The address associated with Customer Number: 117796

OR

[ ] Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address: Gilead Pharmasset LLC
c/o Gilead Sciences, Inc.
333 Lakeside Drive
Foster City, CA 94404

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	March 4, 2014
Name	J. Elin Hartrum	Telephone	650-522-1871
Title	Associate General Counsel, Intellectual Property		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Gilead Pharmasset LLC

Application No./Patent No.: 14/656,546 Filed/Issue Date: March 12, 2015

Titled: NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

Gilead Pharmasset LLC (Name of Assignee), a corporation (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. [X] The assignee of the entire right, title, and interest.

2. [ ] An assignee of less than the entire right, title, and interest (check applicable box):

   [ ] The extent (by percentage) of its ownership interest is _____ %). Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   [ ] There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. [ ] The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. [ ] The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. [ ] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____ Frame _____, or for which a copy thereof is attached.

B. [X] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Michael Joseph Sofia et al. To: Pharmasset, Inc.
   The document was recorded in the United States Patent and Trademark Office at
   Reel 035351, Frame 0087, or for which a copy thereof is attached.

2. From: Pharmasset, Inc. To: Gilead Pharmasset LLC
   The document was recorded in the United States Patent and Trademark Office at
   Reel 035386, Frame 0358, or for which a copy thereof is attached.

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____
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Reel _____, Frame _____, or for which a copy thereof is attached.

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☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Lorna L. Tanner/	12/01/2016
Signature	Date
Lorna L. Tanner	50,782
Printed or Typed Name	Title or Registration Number

~~Application Data Sheet~~ Corrected Application Data Sheet

Inventor Information

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State or Province of mailing address::	CA
Postal or Zip Code of mailing address::	94404

Correspondence Information

Correspondence Customer Number::	~~124969~~ 117796

Application Information

Application Number::	14656546
Application Type::	Regular
Subject Matter::	Utility
CD-ROM or CD-R?::	None
Sequence submission?::	~~None~~ Yes
Computer Readable Form (CRF)?::	No
Title::	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
Attorney Docket Number::	~~PH3080.PG4C-TRK4~~ 37JD-199059-US8
Request for Early Publication?::	No
Request for Non-Publication?::	No
Small Entity?::	No
Petition included?::	No
Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2::	No
Authorization to Permit Access to the Instant	No

Corrected 14656546 12/01/2016

Application by the Participating Offices::

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013::	No

Representative Information

Representative Customer Number::	~~124063~~ 117796

Domestic Priority Information

This application is a continuation of U.S. Patent Application No. 14/013,237, filed August 29, 2013 which is a continuation of U.S. Patent Application No. 13/609,614, filed September 11, 2012, now U.S. Patent No. 8,580,765, which is a continuation of U.S. Application No. 13/099,671, filed May 3, 2011, now U.S. Patent No. 8,334,270, which is a continuation of U.S. Patent Application No. 12/053,015, filed March 21, 2008, now U.S. Patent No. 7,964,580, which claims priority under 35 U.S.C. § 119(e) to U.S. Provisional Application Nos. 60/909,315, filed March 30, 2007, and 60/982,309, filed October 24, 2007, all of which are hereby incorporated by reference in their entireties.

Foreign Priority Information

Applicant Information

Applicant Number::	1
Applicant Type::	Assignee
Organization Name::	Gilead Pharmasset LLC

Corrected 14656546 12/01/2016

	c/o Gilead Sciences, Inc.
Street of mailing address::	333 Lakeside Drive
City of mailing address::	Foster City
State or Province of mailing address::	CA
Postal or Zip Code of mailing address::	94404
E-Mail Address::	IPDocketing@gilead.com

Assignee Information Including Non-Applicant Assignee Information

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.			
Signature	/Lorna L. Tanner/	Date	12/01/2016
Name	**Lorna L. Tanner**	Registration Number	**50,782**

Corrected 14656546 12/01/2016

Electronic Acknowledgement Receipt

EFS ID:	27669334
Application Number:	14656546
International Application Number:	
Confirmation Number:	4415
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Customer Number:	124963
Filer:	Lorna Lea Tanner/christa carter
Filer Authorized By:	Lorna Lea Tanner
Attorney Docket Number:	PH3080.PC4C-TRK1
Receipt Date:	01-DEC-2016
Filing Date:	12-MAR-2015
Time Stamp:	16:53:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	US8.pdf	801317 [illegible]	no	8

Warnings:

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

Information:

Total Files Size (in bytes):	801317

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/656,546	03/12/2015	Jinfa Du	37JD-199059-US8

CONFIRMATION NO. 4415

POA ACCEPTANCE LETTER

117796
Gilead Sciences, Inc.
c/o Sheppard Mullin Richter & Hampton LLP
379 Lytton Avenue
Palo Alto, CA 94301

OC000000087630666

Date Mailed: 12/05/2016

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 12/01/2016.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/qtran/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/656,546	03/12/2015	Jinfa Du	PH3080.PC4C-TRK1

CONFIRMATION NO. 4415

POWER OF ATTORNEY NOTICE

124963
Gilead Pharmasset LLC
c/o Gilead Sciences, Inc.
333 Lakeside Drive
Foster City, CA 94404

OC000000087630647

Date Mailed: 12/05/2016

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 12/01/2016.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/qtran/

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

124963 7590 10/24/2016
Gilead Pharmasset LLC
c/o Gilead Sciences, Inc.
333 Lakeside Drive
Foster City, CA 94404

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Susan Ahearn	(Depositor's name)
/Susan Ahearn/	(Signature)
January 20, 2017	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/656,546	03/12/2015	Jinfa Du	PH3080.PC4C-TRK1	4415

TITLE OF INVENTION: NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	01/24/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEWIS, PATRICK T	1672	514-051000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 Lawrence F. Rozsnyai
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Gilead Pharmasset LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Foster City, California

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-6480 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Lawrence F. Rozsnyai/ Date January 20, 2017

Typed or printed name Lawrence F. Rozsnyai Registration No. 58,427

Electronic Patent Application Fee Transmittal

Application Number:	14656546
Filing Date:	12-Mar-2015
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Filer:	Lawrence F. Rozsnyai/Susan Ahearn
Attorney Docket Number:	37JD-199059-US8

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	960

Electronic Acknowledgement Receipt	
EFS ID:	28120983
Application Number:	14656546
International Application Number:	
Confirmation Number:	4415
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Customer Number:	117796
Filer:	Lawrence F. Rozsnyai/Susan Ahearn
Filer Authorized By:	Lawrence F. Rozsnyai
Attorney Docket Number:	37JD-199059-US8
Receipt Date:	20-JAN-2017
Filing Date:	12-MAR-2015
Time Stamp:	14:23:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$960
RAM confirmation Number	012317INTEFSW00010783506480
Deposit Account	506480
Authorized User	Susan Ahearn

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	PH3080PC4C-TRK1_2017-01-20_IssueFeeTransmittal.PDF	1279018 1d6bee6d7641d8417bc3e73a6fa2b6a8d8d7efd	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30664 a4a4e41aa93a0dc1bee4a765be97679f63dc c605c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1309682		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/08a (07-09)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	1	of	80

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-20100022468-A1	01-28-2010	Meppen et al.	
	AB	US-20130288997-A1	10-31-2013	Ross et al.	
	AC	US-20130310551-A1	11-21-2013	Ross et al.	
	AD	US-6,812,219	11-02-2004	LaColla et al.	
	AE	US-7,105,493	09-12-2006	Sommadossi et al.	
	AF	US-7,125,855	10-24-2006	Bhat et al.	
	AG	US-7,323,453	01-29-2008	Olsen et al.	
	AH	US-7,608,597	10-27-2009	Sommadossi et al.	
	AI	US-7,608,600	10-27-2009	Storer et al.	
	AJ	US-7,635,689	12-22-2009	LaColla et al.	
	AK	US-8,735,372	05-27-2014	Du et al.	
	AL	US-8,906,880	12-09-2014	Du et al.	
	AM	US-20030109697-A1	06-12-2003	Shepard et al.	
	AN	US-6,589,941	07-08-2003	Fahrig et al.	
	AO	US-20010034440-A1	10-25-2001	Shepard et al.	
	AP	US-20020058635-A1	05-16-2002	Averett	
	AQ	US-20020198173-A1	12-26-2002	Schinazi et al.	
	AR	US-20030050229-A1	03-13-2003	Sommadossi et al.	
	AS	US-20030060400-A1	03-27-2003	LaColla et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BA**	WO-2006/035061-A1	04-06-2006	TIBOTEC PHARM LTD, et al.		
	BB**	WO-2011/123645-A2	10-06-2011	PHARMASSET, INC.		
	BC**	WO-199629336	09-26-1996	Medical Res Council et al.		
	BD**	WO-1999/037753-A1	07-29-1999	NEWBIOTICS, INC.		
	BE**	WO-2001/07454 02/2001	~~02-01-2011~~	NEWBIOTICS, INC.		
	BF**	WO-2008/121634-A2	10-09-2008	PHARMASSET, INC.		

Change(s) applied to document, /Y.Y.S./ 11/15/2016

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: September 21, 2016 Signature: /Lawrence F. Rozsnyai/ (Electronic Signature for Lawrence F. Rozsnyai)

659920.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/18/2016)

PTO/SB/08a (07-09)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	32	of	80

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BY6**	WO-2003/106477-A1	12-24-2003	ISIS PHARMACEUTICALS INC, et al.		
	BZ6**	~~WO-298198~~ WO0208198	01-31-2002			
	BA7**	~~WO-298251~~ WO0208251	01-31-2002			
	BB7**	RE-29835-A	11-14-1978	WITKOWSKI ET AL.		

Change(s) applied to document, /Y.Y.S./ 11/18/2016

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

659920.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/18/2016)

PTO/SB/08a (07-09)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	31	of	80

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BS6**	WO-2009/152095-A2	12-17-2009	PHARMASSET INC.		
	BT6**	WO-2010/042834-A1	04-15-2010	ANADYS PHARMACEUICALS INC.		
	BU6**	WO-2010/075554-A1	07-01-2010	PHARMASSET INC, et al.		
	BV6**	WO-2010/080878-A1	07-15-2010	SCYNEXIS INC.		
	BW6**	EP-0350287-A2	01-10-1990	VICAL INC, et al.		
	BX6**	~~WO-109121~~-A2 WO2010009121	01-21-2010	University Of Florida Research Foundation, Inc.		

Change(s) applied to document, /Y.Y.S./ 11/18/2016

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

659920.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/18/2016)

PTO/SB/08a (07-09)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	27	of	80

Complete if Known	
Application Number	14/656,546
Filing Date	March 12, 2015
First Named Inventor	Jinfa Du
Art Unit	1672
Examiner Name	P. T. Lewis
Attorney Docket Number	PH3080.PC4C

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AHI	US-7964580	06-21-2011	Sofia et al.	
	AII	US-8148349	04-03-2012	Meppen et al.	
	AJI	US-8173621	05-08-2012	Du et al.	
	AKI	US-8334270	12-18-2012	Sofia et al.	
	ALI	US-8415322	04-09-2013	Clark	
	AMI	US-8551973	10-08-2013	Bao et al.	
	ANI	US-8580765	11-12-2013	Sofia et al.	
	AOI	US-RE29835	11-14-1978	Witkowski et al.	
	API	US-20060166964-A1	07-27-2006	Hudyma et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BU5**	WO-2007/015824 02/2007	~~07-17-2000~~	Intermune, Inc.		
	BV5**	WO-2007/020193-A2	02-22-2007	F. HOFFMANN-LA ROCHEAG		
	BW5**	WO-2007027248-A2	03-08-2007	Valeant Res & Dev et al.		
	BX5**	WO-2007/039142-A1	04-12-2007	GLAXO GROUP L TO.		
	BY5**	WO-2007/039145-A1	04-12-2007	GLAXO GROUP L TO.		
	BZ5**	WO-2007/065829-A1	06-14-2007	F. HOFFMANN-LA ROCHE AG		

Change(s) applied to document, /Y.Y.S./ 11/18/2016

Examiner Signature	/Patrick Lewis/ (10/18/2016)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

659920.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.L./ (10/18/2016)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/656,546	03/07/2017	9585906	37JD-199059-US8	4415

117796 7590 02/15/2017
Gilead Sciences, Inc.
c/o Sheppard Mullin Richter & Hampton LLP
379 Lytton Avenue
Palo Alto, CA 94301

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Jinfa Du, Redwood City, CA;
Gilead Pharmasset LLC, Foster City, CA;
Dhanapalan Nagarathnam, Bethany, CT;
Michael J. Sofia, Doylestown, PA;
Peiyuan Wang, San Mateo, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Docket No.: 37JD-199059-US8
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Gilead Pharmasset LLC

Patent No.: 9,585,906

Application No.: 14/656,546

Issued: March 7, 2017

For: NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

REQUEST FOR CERTIFICATE OF CORRECTION PURSUANT TO 37 C.F.R. § 1.322 AND § 1.323

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

Patentee respectfully requests correction of the patent as indicated on the enclosed Form PTO/SB/44. The errors appearing in the issued patent are as identified in the attached Form PTO/SB/44.

Applicant submits that the noted errors do not constitute new matter, and correction thereof would not require reexamination. Accordingly, Patentee respectfully solicits the granting of the requested Certificate of Correction.

Since at least one error is due to Applicant's error, please charge our Deposit Account No. 50-4561 in the amount of $150.00 covering the fee set forth in 37 C.F.R. § 1.20(a). The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to Deposit Account No. 50-4561.

Respectfully submitted,

Dated: January 6, 2020

By /Lorna L. Tanner/

Lorna L. Tanner
Registration No.: 50,782
Attorney for Applicant
SHEPPARD MULLIN RICHTER & HAMPTON LLP
379 Lytton Avenue
Palo Alto, California 94301
(650) 815-2658
Customer Number: 117796

PTO/SB/44 (09-07)
Approved for use through 01/31/2020. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

#

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION#

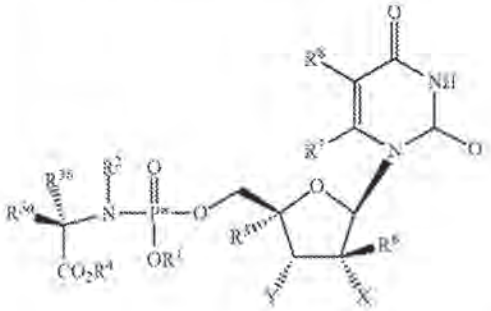
#
#
#

PATENT NO.	:	9,585,906
APPLICATION NO.	:	14/656,546
ISSUE DATE	:	March 7, 2017
INVENTOR(S)	:	Jinfa Du et al.

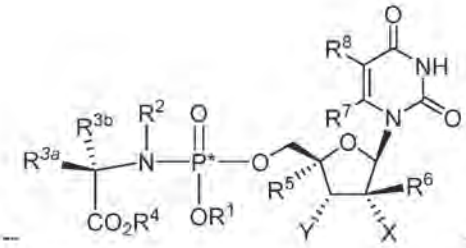
It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS

In Claim 1, column 651, lines 5-15, please replace



" with --



--

In Claim 1, column 651, line 23, please replace

"(e) R^4 is ^{i}Pr, ^{n}Pr, ^{n}Bu, 2-butyl, ^{t}Bu, or benzyl;"

with --(e) R^4 is ^{i}Pr, ^{n}Pr, ^{n}Bu, 2-butyl, ^{t}Bu, or benzyl;--

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):
Lorna L. Tanner
SHEPPARD MULLIN RICHTER & HAMPTON LLP 1
379 Lytton Avenue
Palo Alto, California 94301
SMRH:4823-3305-5919.3

PTO/SB/44 (09-07)
Approved for use through 01/31/2020. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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(Also Form PTO-1050)

#

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION#

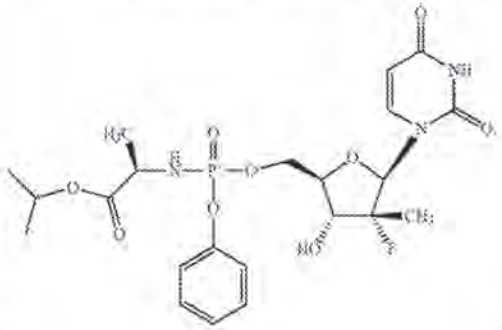
#
#
#

PATENT NO.	:	9,585,906
APPLICATION NO.	:	14/656,546
ISSUE DATE	:	March 7, 2017
INVENTOR(S)	:	Jinfa Du et al.

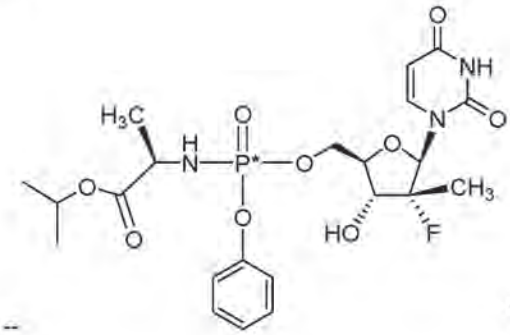
It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS

In Claim 2, column 651, lines 34-49, please replace



" with --



--

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):
Lorna L. Tanner
SHEPPARD MULLIN RICHTER & HAMPTON LLP 2
379 Lytton Avenue
Palo Alto, California 94301
SMRH:4823-3305-5919.3

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(Also Form PTO-1050)

#

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION#

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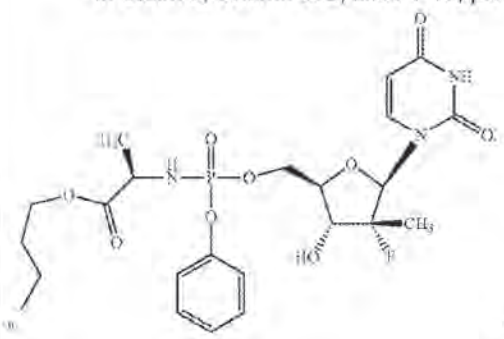
#

PATENT NO.	:	9,585,906
APPLICATION NO.	:	14/656,546
ISSUE DATE	:	March 7, 2017
INVENTOR(S)	:	Jinfa Du et al.

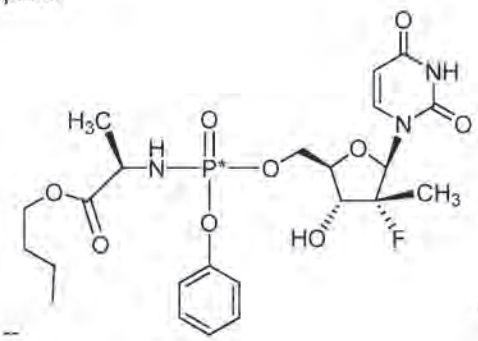
It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS

In Claim 3, column 652, lines 1-15, please replace



" with --



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MAILING ADDRESS OF SENDER (Please do not use Customer Number below):
Lorna L. Tanner
SHEPPARD MULLIN RICHTER & HAMPTON LLP 3
379 Lytton Avenue
Palo Alto, California 94301
SMRH:4823-3305-5919.3

PTO/SB/44 (09-07)
Approved for use through 01/31/2020. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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(Also Form PTO-1050)

#

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION#

#
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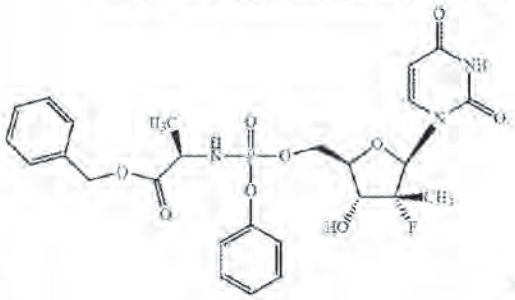
PATENT NO.	:	9,585,906
APPLICATION NO.	:	14/656,546
ISSUE DATE	:	March 7, 2017
INVENTOR(S)	:	Jinfa Du et al.

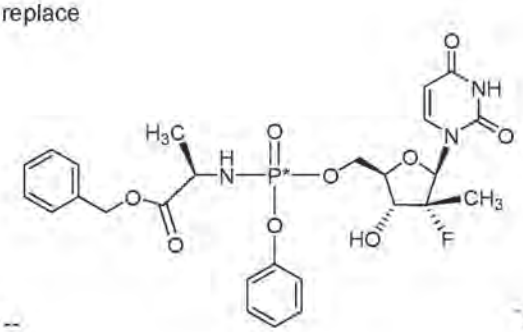
It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS

In Claim 4, column 652, lines 20-34, please replace



" with --



"--

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):
Lorna L. Tanner
SHEPPARD MULLIN RICHTER & HAMPTON LLP 4
379 Lytton Avenue
Palo Alto, California 94301
SMRH:4823-3305-5919.3

Electronic Patent Application Fee Transmittal

Application Number:	14656546
Filing Date:	12-Mar-2015
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Filer:	Lorna Lea Tanner/Joannah Laluces
Attorney Docket Number:	37JD-199059-US8

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
CERTIFICATE OF CORRECTION	1811	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	150

Electronic Acknowledgement Receipt	
EFS ID:	38209928
Application Number:	14656546
International Application Number:	
Confirmation Number:	4415
Title of Invention:	NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS
First Named Inventor/Applicant Name:	Jinfa Du
Customer Number:	117796
Filer:	Lorna Lea Tanner/Joannah Laluces
Filer Authorized By:	Lorna Lea Tanner
Attorney Docket Number:	37JD-199059-US8
Receipt Date:	06-JAN-2020
Filing Date:	12-MAR-2015
Time Stamp:	14:09:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$150
RAM confirmation Number	E202016E10439653
Deposit Account	504561
Authorized User	Joannah Laluces
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.20 (Post Issuance fees) 37 CFR 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	37JD-199059-US8_Request_for_Certificate_of_Correction.pdf	96673 c21c6a4d694a1dc815c37a96ca7ae2d1369b80e0	no	2
Warnings:					
Information:					
2	Request for Certificate of Correction	37JD-199059-US8_Certificates_of_Correction.pdf	131085 7e951bf9d1ada8007bd79816bf8c06581f017	no	4
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30173 fe4ee3ba1cb4353747a0e69d2e2e680c2f8eaa86	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	257931		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/656,546	03/12/2015	Jinfa Du	37JD-199059-US8	4415

117796 7590 01/30/2020
Gilead Sciences, Inc.
c/o Sheppard Mullin Richter & Hampton LLP
650 Town Center Drive, 10th Floor
Costa Mesa, CA 92626

EXAMINER
LEWIS, PATRICK T

ART UNIT	PAPER NUMBER
1672	

NOTIFICATION DATE	DELIVERY MODE
01/30/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

SheppardMullin_Pair@firsttofile.com
ipdocketing@gilead.com
svipdocketing@sheppardmullin.com

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Patent No.: 9585906
Issue Date: 03/07/2017
Appl. No.: 14/656,546
Filed: 03/12/2015

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed 06 January 2020.

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)
☑ Approved ☐ Approved in Part ☐ Denied

Comments: ____

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

☐ This is a decision on the petition filed ____ to correct inventorship under 37 CFR 1.324.

☐ This is a decision on the request under 37 CFR 1.48, petition filed ____. In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby: ☐ Granted ☐ Dismissed

Comment: ____

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/SHAOJIA A JIANG/
Supervisory Patent Examiner, Art Unit 1623
Technology Center 1600
Phone: (571)272-0655

Certificates of Correction Branch email: CustomerServiceCoC@uspto.gov CoC Central Phone Number: (703) 756-1814

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 4415

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/656,546	03/12/2015 RULE	514	1672	37JD-199059-US8

APPLICANTS
Gilead Pharmasset LLC, Foster City, CA;

INVENTORS
Jinfa Du, Redwood City, CA;
Dhanapalan Nagarathnam, Bethany, CT;
Michael J. Sofia, Doylestown, PA;
Peiyuan Wang, San Mateo, CA;

**** CONTINUING DATA ****************************
This application is a CON of 14/013,237 08/29/2013 PAT 9085573
which is a CON of 13/609,614 09/11/2012 PAT 8580765
which is a CON of 13/099,671 05/03/2011 PAT 8334270
which is a CON of 12/053,015 03/21/2008 PAT 7964580
which claims benefit of 60/909,315 03/30/2007
and claims benefit of 60/982,309 10/24/2007

**** FOREIGN APPLICATIONS ****************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
03/26/2015

Foreign Priority claimed	☐ Yes ☑ No		STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No	☐ Mel after Allowance				
Verified and Acknowledged	/PATRICK T LEWIS/ Examiner's Signature	Initials	CA	0	10	1

ADDRESS
Gilead Sciences, Inc.
c/o Sheppard Mullin Richter & Hampton LLP
650 Town Center Drive, 10th Floor
Costa Mesa, CA 92626
UNITED STATES

TITLE
NUCLEOSIDE PHOSPHORAMIDATE PRODRUGS

FILING FEE RECEIVED		
5600	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

UNITED STATES PATENT AND TRADEMARK OFFICE

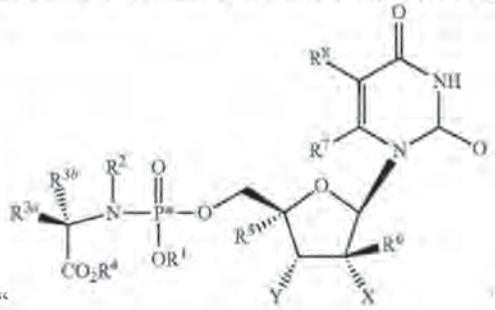
CERTIFICATE OF CORRECTION

PATENT NO. : 9,585,906 B2
APPLICATION NO. : 14/656546
DATED : March 7, 2017
INVENTOR(S) : Jinfa Du et al.

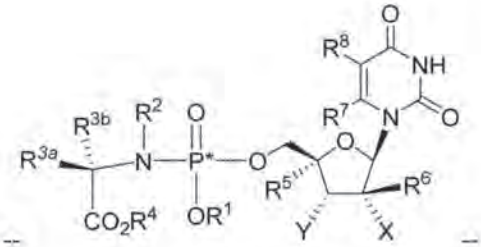
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

In Claim 1, Column 651, Lines 5-15, please replace



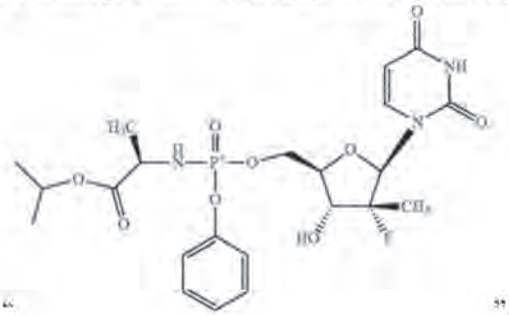
" with --



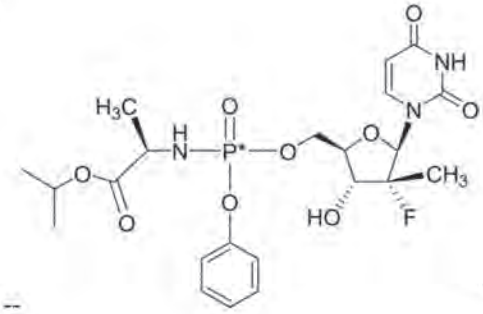
--

In Claim 1, Column 651, Line 23, please replace "(e) R^4 is ^{i}Pr, ^{n}Pr, ^{n}Bu, 2-butyl, ^{t}Bu, or benzyl;" with --(e) R^4 is ^{i}Pr, ^{n}Pr, ^{n}Bu, 2-butyl, ^{t}Bu, or benzyl;--

In Claim 2, Column 651, Lines 34-49, please replace



" with --

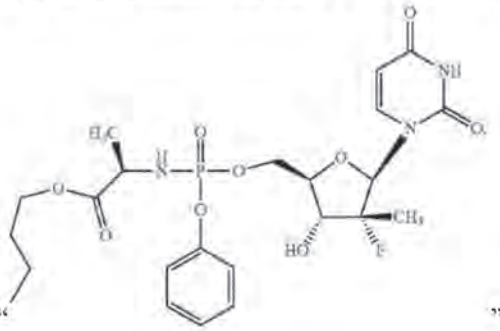


--

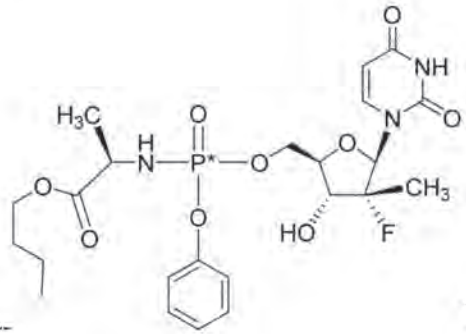
Signed and Sealed this
Twenty-fifth Day of February, 2020

Andrei Iancu
Director of the United States Patent and Trademark Office

In Claim 3, Column 652, Lines 1-15, please replace



" with --



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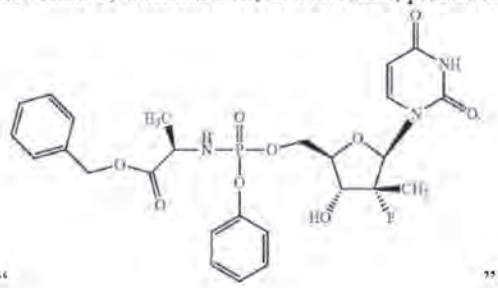
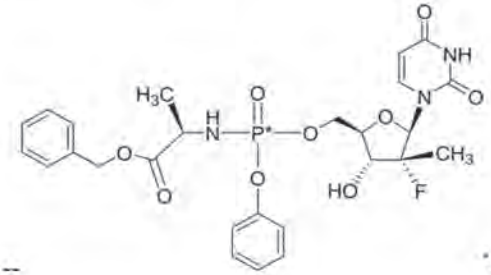
In Claim 4, Column 652, Lines 20-34, please replace



" with --



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