Position	US-275 Table 9 - Claim 1 Single Substitution $PH20_{1-447}$ Mutants Reported Having 120% or Greater Activity													Sum
1	H	K	Q											3
15	V													1
24	H	R	E											3
27	D	K	R											3
29	E	I	K	L	M	P	R	S	V					9
30	G	H	K	L	M	R	S							7
31	A	C	G	H	I	K	L	P	R	S	T	V	W	13
32	F	G	H											3
33	W													1
37	F	M												2
39	N	T												2
48	F	H	K	N										4
63	K	L	M	R	W									5
67	V													1
69	A	C	E	F	G	I	L	M	P	R	W	Y		12
71	G	N	R	S										4
72	K	M	Q											3
73	A	H	K	L	T	W								6
75	F	L	Q	R	T									5
87	C	R	T	Y										4
92	C	L												2
93	I	L	R	S	T									5
94	Q	R												2
118	Q													1
120	F	I	L	S	V	Y								6
135	D	G	Q	R										4
141	H	R	Y											3
147	A	F	L	Q	R	S	V							7
148	H	K	Q											3
150	A	D	G	W	Y									5
151	A	H	K	M	Q	R	S	T	V	W	Y			11
152	R	T												2
155	D	G	K	R										4
156	D													1
163	A	E	K	Q	R	S								6
164	M	V												2
165	D	F	N	S	V									5
170	R													1
198	D													1
209														0
212	N													1
215	M													1
219	A	K	S											3
233	K	R												2
236	R													1
247	I													1
257	R	T												2
259	P													1
260	Y													1
263	K	R												2
269	A													1
271	G	L	M											3
272	D	T												2
276	D	H	R	S	Y									5
278	F	G	H	K	N	R	S	T	Y					9
282	M													1
293	A	C	D	F	K	M	P	Q	V	Y				10
305	E													1
308	G	K	N	R										4
313	A	H	K	R										4
320	H	K	R											3
324	R													1
325	A	D	E	G	H	K	M	N	Q	S	V			11
326	L	V												2
328	C	I	K	L	S	Y								6
353	V													1
359	T													1
371	H	K	R	S										4
377	D	H	K	P	R	S	T							7
380	W	Y												2
389	K													1
392	M	V												2
395	R													1
405	G													1
409	A	Q												2
410	T													1
418	E	L	P	V										4
425	G	K												2
436	K													1
437	I	M												2
438	T													1
441	A	F												2
442	C	R												2
446	A	H	M	W										4
447	D	E	F	I	N	P	Q	T	V					9
													Total	290

Note: Information in this sheet was compiled from US-275 [0626] (Table 9)

Yellow shading designates single substitution mutant replacements that are also recited in claim 2 of the '400 Patent.

Position	US-275 Table 9 - Claim 2 Single Substitution PH20$_{1-447}$ Mutants Reported Having 120% or Greater Activity													Sum
1			Q											1
15	V													1
24	H		E											2
27		K	R											2
29	E	I		L	M	P		S	V					7
30	G	H	K		M	R	S							6
31	A	C		H	I	K	L	P	R	S	T	V		11
32	F	G	H											3
33	W													1
37	F													1
39	N	T												2
48	F	H		N										3
63					W									1
67	V													1
69	A	C		F	G	I	L	M	P	R	W	Y		11
71			R	S										2
72		M	Q											2
73		H		L		W								3
75	F	L		R	T									4
87	C		T	Y										3
92	C													1
93	I	L	R		T									4
94		R												1
118	Q													1
120	F				V	Y								3
135	D	G		R										3
141	H		Y											2
147					R		V							2
148		K												1
150			G											1
151			K	M	Q	R								4
152	R													1
155		G	K											2
156	D													1
163	A	E	K		R									4
164	M	V												2
165	D		N											2
170	R													1
198	D													1
209														0
212	N													1
215	M													1
219			S											1
233	K	R												2
236	R													1
247	I													1
257		T												1
259	P													1
260	Y													1
263	K	R												2
269	A													1
271		L	M											2
272		T												1
276	D			S	Y									3
278			H	K	N	R	S	T	Y					7
282	M													1
293	A	C		F		M	P	Q	V					7
305	E													1
308	G		N											2
313			K	R										2
320	H	K	R											3
324	R													1
325	A	D	E	G	H	K	M	N	Q	S				10
326		V												1
328		I	K	L	S	Y								5
353	V													1
359	T													1
371			R											1
377				P			T							2
380	W	Y												2
389	K													1
392	M													1
395	R													1
405	G													1
409	A	Q												2
410	T													1
418			P											1
425		K												1
436	K													1
437	I	M												2
438	T													1
441		F												1
442		R												1
446	A													1
447	D				N		Q							3
													Total	189

Note: Information in this sheet was compiled from US-275 [0626] (Table 9)

Position	US-275 Table 9 - Claim 4 Single Substitution $PH20_{1-447}$ Mutants Reported Having 120% or Greater Activity													Sum
12	E													1
26	E	K												2
46	R													1
52	Q													1
58	Q													1
68	H	Q												2
70	A	C	F	G	H	K	L	N	P	R	S	T		12
74	A	C	G	N	P	R	S	V	W					9
84	G	R												2
97	G													1
127	H	N												2
131	G	V												2
142	R													1
166	A	F	H	L	R	Y								6
174	K													1
206	K													1
213	M	N												2
237	E													1
238	S													1
261	N													1
277	R	T												2
309	L	N	Q	R	T									5
310	A	G												2
315	H													1
317	I	K	R											3
318	M													1
347	G	S												2
399	M	T	W											3
407	D	Q												2
419	F	I	R	S										4
421	K	N	Q	R	S									5
431	A	H	K	Q	R	S	V							7
433	L	R												2
439	V													1
440	H	R												2
443	A	M												2
445	M	P												2
													Total	**96**

Note: Information in this sheet was compiled from US-275 [0626] (Table 9)

Position	US-275 Table 9 - Claim 6 Single Substitution PH20 1-447 Mutants Reported Having 200% or Greater Activity													Sum
1			Q											1
15	V													1
24	H		E											2
27		K												1
29	E			L	M	P		S						5
30	G		K											2
31	A	C		H	I	K	L		R		T	V		9
32	F		H											2
33														0
37	F													1
39	N													1
48	F			N										2
63														0
67														0
69	A			F	G	I	L	M	P	R	W	Y		10
71			R											1
72		M	Q											2
73														0
75	F	L		R	T									4
87				Y										1
92														0
93	I				T									2
94		R												1
118	Q													1
120	F													1
135	D	G		R										3
141	H													1
147					R		V							2
148														0
150			G											1
151			K		Q									2
152														0
155														0
156														0
163														0
164														0
165	D		N											2
170	R													1
198														0
209														0
212														0
215														0
219			S											1
233														0
236	R													1
247	I													1
257		T												1
259														0
260														0
263	K													1
269														0
271		L	M											2
272														0
276														0
278			H			R								2
282	M													1
293						M			V					2
305														0
308			N											1
313			K	R										2
320		K	R											2
324	R													1
325			E	G	H	K	M	N	Q	S				8
326		V												1
328			K	L	S									3
353														0
359	T													1
371														0
377				P			T							2
380	W													1
389														0
392														0
395														0
405	G													1
409	A	Q												2
410														0
418			P											1
425														0
436	K													1
437	I	M												2
438	T													1
441		F												1
442		R												1
446														0
447	D						Q							2
													Total	108

Note: Information in this sheet was compiled from US-275 [0626] (Table 9)