

C&EN

CHEMICAL & ENGINEERING NEWS

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HYDRAULIC FRACTURING

Method to extract gas from shale is under scrutiny **P.42**

CUSTOM SEED OILS

Genetics and breeding help tailor compositions **P.52**

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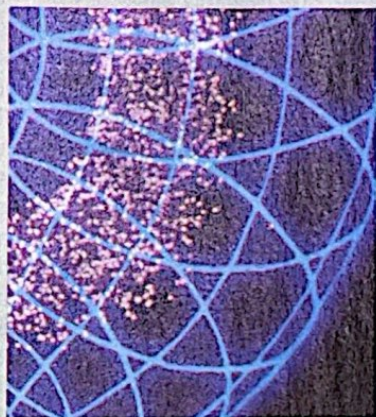
FINE CHEMICALS

Seeking solubility solutions **P.13**

COVER STORY

FORMULATION FRENZY

Contract firms offer ways to improve drug solubility; biopharma firms try to turn injectable biologics into pills. PAGES 13, 27



QUOTE OF THE WEEK

"It's awfully tough when someone says, 'It's a nice molecule, but we are never going to be able to make a product out of it.'"

ROBIN H. BOGNER,
ASSOCIATE PROFESSOR
OF PHARMACEUTICS,
UNIVERSITY OF
CONNECTICUT **PAGE 13**

NEWS OF THE WEEK

- 8 OIL SPILL HAMMER**
President Obama halts offshore drilling for now; Gulf spill surpasses Exxon Valdez record.
- 9 ABBOTT LABS AIMS HIGH IN INDIA**
Purchase of Piramal's generics business will put firm at the top of a lucrative emerging market.
- 9 FOOD SAFETY TRAINING LAB**
Set up by Waters Corp. and the University of Maryland, facility will instruct foreign scientists.
- 10 NEW IDEAS ABOUT ARDI**
Disagreement abounds about the habitat and classification of *Ardipithecus ramidus*.
- 10 R&D SHIFTS IN BIG PHARMA**
Pfizer consolidates R&D under one head; AstraZeneca installs new R&D chief.
- 11 A CASE OF OPPOSITES**
Researchers explain why similar small molecules have contrary effects on heat-shock protein 70.
- 11 SHIN-ETSU CEO STEPS ASIDE**
Chihiro Kanagawa will become chairman, and Shunzo Mori will succeed him.
- 12 DISCLOSING CONFLICTS OF INTEREST**
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- 12 CATALYST SINGLES OUT CO**
Low-coordination iron drives the oxidation of the fuel-cell poison to CO₂ with 100% selectivity.

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New specialty chemical company marries Dow Chemical and Rohm and Haas businesses.

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COVER: Newscom

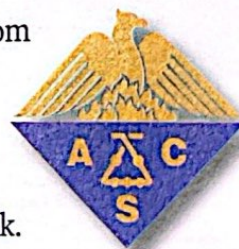


THIS WEEK ONLINE

WWW.CEN-ONLINE.ORG

OFFICIAL REPORTS

The official reports from the San Francisco meeting are now available. Check C&EN's online Table of Contents for the link.



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mentation process to transform sugar from corn into isobutanol. Meanwhile, Lanxess researchers are optimizing a process to dehydrate isobutanol into isobutene. The company says renewable isobutene would expand its supply options in the face of volatile raw material prices and petrochemical industry consolidation.—MV

AMRI CUTS IN U.S., ADDS INTERNATIONALLY

As part of an international push, the contract research firm AMRI will reduce its U.S. workforce by about 10%, or an estimated 80 jobs, including currently open positions that won't be filled. In addition, the firm is closing a research lab in Rensselaer, N.Y., and moving employees and equipment to nearby locations. The moves will save about \$10 million annually, AMRI says. At the same time, the firm says it is adding about 180 non-U.S. employees in 2009 and 2010 and investing \$30 million in international expansion. CEO Thomas E. D'Ambra says the actions reflect "a continued shift in demand for AMRI's services from the U.S. to lower-cost resources in Asia and Europe."—MM

DSM LAUNCHES BLUE FIBER FOR SURGERY

DSM has come out with what it calls the first colored ultrahigh-molecular-weight polyethylene fiber for use in arthroscopic sur-



DSM says Dyneema is 15 times stronger than steel.

gery. The Dutch chemical maker says its Dyneema Purity Blue fiber offers surgeons better contrast during surgery and differentiation between multiple sutures. The firm claims its surgical fiber is stronger and offers lower irritation compared with polyester and nylon alternatives.—MM

GENZYME SIGNS CONSENT DECREE WITH U.S.

Genzyme has signed a consent decree agreeing to correct manufacturing quality problems at its Allston, Mass., facility. In 2009, it halted some production after finding reactors contaminated with a virus. An FDA inspection later found problems that led to products contaminated with metal, fiber, rubber, and glass particles. Genzyme will pay the U.S. government \$175 million and move final production steps for its Cerezyme, Fabrazyme, Myozyme, and Thyrogen enzyme replacement products out of the plant. The company also must conduct

a two- to three-year-long remediation program, under FDA approval and overseen by the consulting group Quantec, to improve quality and compliance at the facility. A U.S. District Court in Massachusetts must still approve the decree.—AMT

THERMO FISHER BUYS CANADA'S FERMENTAS

Thermo Fisher Scientific has signed a definitive agreement to acquire Fermentas International for \$260 million in cash. Based in Burlington, Ontario, Fermentas makes enzymes, reagents, and kits for molecular and cellular biology research. It employs about 500 people and had sales last year of \$54 million. Thermo CEO Marc N. Casper says the combination of Fermentas, recently acquired Finnzymes, and Thermo's new Solaris qPCR assays deepens the firm's polymerase chain reaction market.—MM

ASPEN SEEKS SIGMA IN GENERICS PLAY

The South African generic drugs firm Aspen Pharmacare has offered to buy Sigma Pharmaceuticals, an Australian generic drug-maker and health care distributor, in a stock deal valued at about \$1.2 billion. Aspen has annual sales of about \$1.1 billion, compared with Sigma's \$2.6 billion. According to reports from Australia, however, Sigma may attempt to attract other bidders.—RM

BUSINESS ROUNDUP

RHODIA will close its cellulose acetate cigarette filter tow plant in Valencia, Venezuela, by the end of 2010. The plant employs about 120 people. Rhodia says it will serve filter tow customers from plants in Germany, Russia, Brazil, and the U.S.

CHEMTURA has opened a technical support and applications development center in Nanjing, China. Staffed with 25 scientists, the center will support Chemtura's crop protection, flame retardants,

petroleum additives, and urethanes businesses. Chemtura recently moved its Asia-Pacific headquarters from Singapore to Shanghai.

EVONIK Industries plans to shut down polyethylene wax production in Herne, Germany, by the end of 2010 because of declining profitability. However, the firm says it will continue to sell Fischer-Tropsch-based waxes.

BASF has licensed from Japan's Meiji Seika most global rights to a new highly selective insecticide that controls piercing and

sucking insects. The pesticide will be approved for launch outside Japan in 2015, BASF expects. It can be used on vegetables, fruits, and other crops.

SOLVAY is making an additional \$2.1 million investment in ACAL Energy, a U.K.-based developer of platinum-free cathode technology for fuel cells. The two companies plan to test the technology in a demonstration plant at Solvay's Cheshire, England, facility.

MITSUBISHI Chemical will take a 49% stake in a Chinese producer of lith-

ium-ion battery raw materials. The new venture, owned 37% by China's Qingdao Taida and 14% by Japanese chemical producer Meiwa, will build a 2,000-metric-ton-per-year spherical graphite anode plant in Qingdao, China.

SHIMADZU'S Kratos Analytical subsidiary and diagnostics developer bioMérieux will work together to develop a new matrix-assisted laser desorption/ionization time-of-flight mass spectrometry system for bacterial identification. They intend to optimize the

technology for use in microbiology laboratories.

PFIZER Animal Health has acquired Microtek International, a specialist in aquaculture vaccines. Pfizer notes that global fish consumption now exceeds that of pork, poultry, beef, or dairy.

CLOVIS Oncology will help advance Avila Therapeutics' epidermal growth factor receptor mutant-selective inhibitor program. Clovis will handle development, paying Avila an up-front fee and milestones totaling up to \$209 million.