

BIO TECHNOLOGY**EDITOR**Susan Hassler
(New York)**RESEARCH EDITOR**Harvey Bialy
(New York)**ARTICLES EDITOR**John Hodgson
(London)**SENIOR EDITOR**Stephen M. Edgington
(New York)**ASSOCIATE****RESEARCH EDITOR**Philip Bernstein
(New York)**NEWS EDITOR**B.J. Spalding
(San Francisco)**PRODUCTION EDITOR**Mark Goodstein
(New York)**CONTRIBUTING EDITORS**Bernard Dixon (London); Jeffrey L. Fox
(Washington, D.C.); Russ Hoyle (New York);
George Kidd (Shorewood, WI);
Kevin McGough (Bronxville, NY);
Mike Ward (Oxford, U.K.)**ART DIRECTOR**

Lou Pippo

ASST. ART DIRECTOR

Edna D. Thomas

PRESIDENT & PUBLISHER

James Skowrenski

VICE PRESIDENT—SALES

Marion Delaney

ADVERTISING SALES MANAGERSSande Giaccone (U.S.)
Kathryn Wayman (Europe)
Bill Moran (Classified, U.S.)
Iain Jawad (Classified, Europe)**MARKETING DIRECTOR**

Barbara Lande

MARKETING MANAGERSEdelyn Enerio (U.S.)
Carolyn Hall (Europe)**PRODUCTION MANAGER**

Estelle B. Selzer

ASST. PRODUCTION MANAGER

Renée M. Roberts

PUBLISHING DIRECTOR

Andy Sutherland

EUROPEAN PUBLISHING MANAGER

John Hodgson

NEW YORK345 Park Avenue South, New York, NY 10010
Tel: 1 (212) 726-9200 Fax: 1 (212) 696-9006
Editorial fax: 1 (212) 696-9635 MCI ID #: 329-8956
E-mail: biotech@natureny.com**LONDON**Porter's South, Crinan Street, London N1 9XW
Tel: 44 (171) 833-4000 Fax: 44 (171) 843-4998
E-mail: j.hodgson@biotechnology.com**SCIENTIFIC ADVISORY BOARD**

Leroy Hood (chair)	University of Washington, Seattle
Ken-ichi Arai	University of Tokyo
Roger Beachy	Scripps Research Institute
Teruhiko Beppu	Nihon University
Ronald E. Cape	Darwin Molecular Corporation
Jean-Pierre Changeux	Institut Pasteur
Mary-Dell Chilton	CIBA-Geigy
Nam-Hai Chua	Rockefeller University
Rita R. Colwell	Maryland Biotechnology Institute
Arnold Demain	Massachusetts Institute of Technology
J. Lawrence Fox	Amoco Technology
David Goeddel	Tularik
Morio Ikehara	Protein Engineering Research Institute
Ernest Jaworski	Monsanto Company
Kary Mullis	Consultant
Victor Nussenzweig	New York University Medical Ctr
Gregory Petsko	Brandeis University
George Poste	SmithKline Beecham
George Rose	Washington University
Carl-Gustaf Rosen	Abitec AB
Kendall Smith	New York Hospital/Cornell Medical Ctr
Yukio Sugino	Takeda Chemicals
Marc Van Montagu	University of Ghent
Indra K. Vasil	University of Florida
Wataru Yamaya	Seikagaku Kogyo
Douglas Youvan	Palo Alto Institute for Molecular Medicine

/THE FIRST WORD**Grace Under Fire**

The week in mid-September that Jeremy Rifkin and the "coalition of more than 200" (as the press generally refers to them) filed a challenge against W.R. Grace's pesticide patent on an extract of the neem tree's active ingredient, azadirachtin, was unusually busy in Bangalore. Local authorities there shut down, albeit briefly, a newly emergent Kentucky Fried Chicken outlet, ostensibly because the food it was serving had too much monosodium glutamate in it, but clearly to protest the latest neocolonial occupation of that Indian technopolis. While in mid-scheme to open its economic doors to the world (Bangalore, for its part, is one of India's high-tech showcases, home to a flourishing software technology park and an ultramodern biotechnology center), India is now also dealing with the developing reality of having its cities littered with Golden Arches and Pizza Huts. More jobs, more money, less soul?

And then comes along W.R. Grace, a big slow American bomber of a company, with its plan to target a bit of neem, the Indian equivalent of chicken soup or Mom's apple pie. By most accounts, the neem tree and its products can be and have been used by everyone to do just about everything. Neem has been used as a nontoxic insect repellent, a beauty aid, an antimalarial, a mouth cleanser, soap, lubricant. No part of the tree seems to have gone untouched—twigs, leaves, seeds, wood. It has been patented in Japan for use against cancer. The neem tree's value as a pesticide has been known for hundreds of years—it wards off everything from locusts to boll weevils while leaving the surrounding flora and fauna intact. There are neem farms in the Bahamas, Mexico, and Haiti.

Rifkin et al. have challenged Grace's Neemix on "prior use" issues—claiming the patent is based on widely used and previously published methods of extracting azadirachtin. A similar claim was filed in the European patent office. Grace in turn says the patent does not restrict or limit the use of neem products, and applies only to a specific formulation of the pesticide's active ingredient, which extends its shelf-life and stability. (Under normal conditions, neem is only good for a week or so, and cannot be stored or transported for use beyond the area where it is grown.) Patents have already been issued on other formulations of azadirachtin, and some of them are owned by Indian companies (although India, does not, as yet, recognize patents on agricultural or medicinal products, a situation that seemed to be changing before the Grace challenge).

The prior art questions in this particular lawsuit will be resolved, and most likely in Grace's favor, as this appears to be another Rifkin smoke-and-mirrors case. Clearly companies should be able to patent a new method as well as a new product. But the larger issues will remain unresolved and festering. W.R. Grace is, after all, the corporate parent of Agracetus, owner of a hotly contested genetically altered cotton patent, and one on soybean as well. From the point of view of the patent owner, the intention is to do only good—create business and capital in developing countries, and strengthen the agricultural product base, with no intent to monopolize or restrain trade.

W.R. Grace, of necessity and to its credit, has been using local Indian subsidiaries in Bangalore to produce the neem concentrate it uses to make Neemix. But Grace is no Shaman Pharmaceuticals, which has gone out of its way to set up compensation mechanisms in the places it has gone drug hunting. Even Shaman may be no more Shaman: They recently named Kirk Raab chairman of their board, and in so doing sent out a new, much less warm and fuzzy, message. The issue of prior art with respect to natural products is one that affects them directly; with Raab on board, it will be interesting to see how conciliatory they remain.

But we are not in Kansas, and one has to wonder, as one does coming upon McDonald's on the Champs Elysees, is this progress, or just commerce? Biotechnology certainly did not invent questions of ownership, but it makes us confront them with renewed urgency: As with the information coming out of the human genome project, who now gets to control and own the germplasm? Is it the inheritance of all, or the property of a few?

—SUSAN HASSLER

E-mail: s.hassler@natureny.com