RESEARCH CORPORATION
A FOUNDATION FOR THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY

Notes on... grants and grantees

Physicists *Arthur Rich* and *Paul W. Zitzewitz* of the University of Michigan, both former Cottrell Research grantees, were among investigators recently reporting on efforts to discover why living systems are composed of only the left-handed form of amino acids. In an article published by *Nature* some months ago, the researchers described the use of positrons to probe amino acids and results that indicate a mechanism that could favor left-handedness. Another collaborator was chemist-grantee *Roger Hegstrom* of Wake Forest University.

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Unusual polymer research is described in news reports on work by former grantees John E. Sheats *of Rider College, Trenton, N.J., and* Donald B. DuPré *of the University of Louisville. Dr. Sheats foresees the use of organometallic polymers to prevent preheating of encapsulated deuterium-tritium fuels excited to fusion temperatures by laser shots, a present barrier to practical fusion. Dr. DuPré is doing research on ultrahigh strength fibers, produced from polymers with highly ordered molecular arrangements. The research, subject of a recent $156,000 NSF grant, may result in materials useful for aircraft, tires, cables and other applications.*

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A new award has been made to the fledgling MIRA observatory (Monterey Institute for Research in Astronomy). The $39,420 award is assisting five projects ranging from collection of spectrophotometric data for stars catalogued long ago to searching for new supernovas. Research Corporation gave MIRA its first grant in 1974.

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Eight former Research Corporation grantees were among winners of the American Chemical Society's 1982 awards: Robert L. Burwell, Jr. *of Northwestern;* Carl Djerassi *of Stanford;* Thomas L. Isenhour *of the University of North Carolina;* Stephen R. Leone, *Joint Institute for Laboratory Astrophysics;* K. Barry Sharpless *of M.I.T.;* Michell J. Sienko *of Cornell;* Richard S. Stein, *University of Massachusetts, and* Karel Wiesner *of the University of New Brunswick.*

"Research Corporation West" Takes Shape in Tucson; to Open Early in 1983

"Research Corporation West," a counterpart to the foundation's present New York City office, is quickly becoming a reality. The foundation has purchased a building in Tucson, Ariz., and is remodeling the structure to accommodate its western operations.

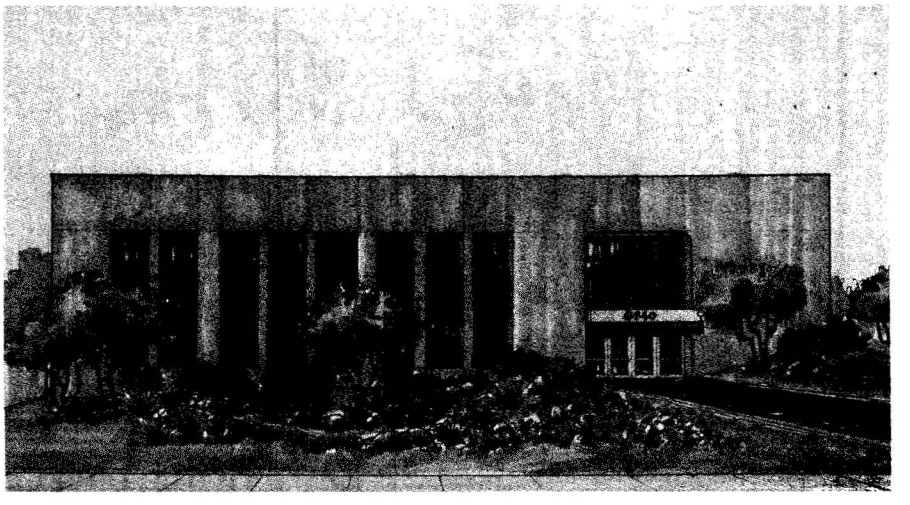
Both of Research Corporation's two major programs, Grants and Invention Administration, center on the evaluation of frontier scientific and technological ideas. A quiet suburban site was sought that would allow for concentrated study of new concepts and easy access to a research-oriented institution and to residential areas. All are features of the Tucson location.

The foundation's present midtown Manhattan office, in close proximity to Grand Central Station and the United Nations, will be reduced in size and maintained at the same address. It will permit continued close cooperation with eastern colleges, universities and industrial firms.

"The objective is to conserve resources for foundation programs," commented President John P. Schaefer in announcing the dual offices. "At the same time, we expect to achieve better communications with grantees, inventors, universities and industry, especially those in the West." Eventually the foundation's regional grants offices in Atlanta, Burlingame, Calif., and Minnetonka, Minn. will be combined with the Tucson and New York operations, introducing further efficiencies.

The attractive two-floor, adobe structure that will house Research Corporation in Tucson contains 16,000 square feet of floor space. Desert style landscaping with olive trees will greet the visitor; drought-resistant plant varieties will add a touch of color along a simulated dry stream bed. Those entering the modern, beige-colored edifice will find themselves in a glass-walled atrium highlighted by palms and a fountain. The first floor of the building will be devoted to the foundation's Invention Administration Program and legal department; executive and Grants Program offices will be housed on the second floor.

The foundation's address in Tucson is 6840 East Broadway Blvd., Tucson, Ariz. 85710; telephone 602/296-6400. For the present, correspondence and calls should be directed to the New York office unless otherwise indicated.



Schaefer Talks at Rutgers, University of Wisconsin

Research Corporation President John P. Schaefer has spoken out on two topics now occupying academic scientists: the obsolescence of much of the nation's college and university laboratory equipment, and the problems of forging working relationships with industry to develop recombinant DNA technology.

Private initiatives alone cannot solve the instrumentation problem, Dr. Schaefer pointed out at the University of Wisconsin. The Oct. 21-22 conference, the third to be held by the Analytical Lab Manager's Association, heard from representatives of government and industry as well as the academic and nonprofit sectors.

"New government legislation, such as the 19th century Morrill Act which established the land grant universities, might be in order," said Schaefer, "to overcome what is a major crisis." A National Science Foundation spokesman, for example, recently estimated that it would take between one and four *billion dollars* to enable university laboratories to do frontier research. Similarly, the Department of Defense has calculated that $1.5 to $2 billion would be required to upgrade all qualified laboratories to "world class" status.

Despite the magnitude of the problem, Schaefer pledged that Research Corporation would continue to do what it can. The foundation currently grants several million yearly for research in the natural sciences, of which well over half is budgeted for equipment by grantees. Research Corporation actively seeks foundation and industrial partners to support additional grants.

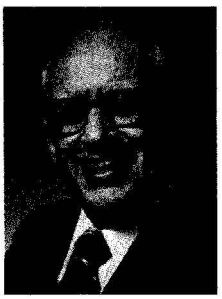
Developing Biotechnology

An audience of academic scientists, lawyers, government officials and representatives of pharmaceutical companies pondered the commercial and legal problems of funding and developing biological research at a second meeting Dec. 3. Addressing a luncheon session at Rutgers University's Waksman Institute, Dr. Schaefer noted that the foundation's Invention Administration Program had received the first U.S. patent on a genetic process: for a widely-used method of producing hybrid seed corn.

"Today," Schaefer continued, "Research Corporation administers a spectrum of biological discoveries including 'tools' for recombinant DNA research; product, hybridoma and medical diagnostic inventions." The foundation's Invention Administration Program, tested over many decades, offers a cost-effective method for insuring that worthwhile ideas are developed in the public interest, and that the institution receives a return.

Willard Marcy Retires; Led Invention Program

Willard Marcy, Vice President in charge of Research Corporation's Invention Administration Program and one of the IAP's principal architects, retired Dec. 31 following more than 18 years with the foundation. Widely regarded for his moderate, thoughtful approach to difficult issues in the handling of invention rights, Dr. Marcy's counsel has often been sought by administrators in academe, industry and government alike. Following four years in the U.S. Army Chemical Corps during W.W. II, Marcy graduated from M.I.T. with a Ph.D. in organic chemistry in 1949. He joined Research Corporation in 1964 after 15 years with Amstar Corp., first as a development engineer and later as a member of the management team that headed the company's Research and Development Division.



Willard Marcy

Research in nonprofit laboratories was burgeoning under the spur of greatly increased government support for science in the 1960s. Dr. Marcy advocated an enlarged, more active role for Research Corporation's Invention Administration Program. Under his leadership the foundation's technology transfer efforts increased severalfold with the aim of insuring that results from government-funded research would be made available to the industrial sector and the general public.

Dr. Marcy recommended "patent awareness" for college and university staff members: the realization that research findings must be disclosed if the public, the institution and the inventor are to benefit. In a period marked by bureaucratic regulation he urged closer cooperation among all sectors—government, profit-making and nonprofit—as a prerequisite to successful technology transfer.

In 1964 Research Corporation's small "patent program" had but four staff members. Invention administration agreements had been extended to only half the number of institutions currently served. Gross royalties on inventions administered by the foundation that year amounted to slightly over $1 million. By 1982 the same program, renamed "Invention Administration," had 14 staff members, agreements with nearly 300 nonprofits, and collected approximately $10 million in patent royalties annually.

Remaining active in both business and professional affairs, Dr. Marcy has accepted a post as president of ARDUS, Inc., a subsidiary of the Drug Science Foundation. He is president-elect of the American Institute of Chemists, the national professional organization, and was recently elected a member of the board of trustees of The Chemists' Club (New York).

Funds and Equipment Given for Research

Thanks to the generosity of foundation, individual and industrial donors, a number of additional grants will be made to stimulate fundamental research in the natural and physical sciences at the nation's colleges and universities. Commitments received by the close of 1982 included an additional $200,000 in funds and a promise by a manufacturer to contribute computer equipment for six projects.

Among organizations recently renewing support to academic science are the M. J. Murdock Charitable Trust and The Greenwall Foundation; Conoco Inc. and Schering-Plough Foundation, Inc. Contributions of microprocessors and peripheral equipment were made by the Apple Education Foundation.

Would-be supporters of college and university science can assist independently-conceived, peer-reviewed research projects under a foundation initiative begun several years ago. These project proposals, challenging and of high significance, are specifically invited from younger faculty members embarking on research careers and those wishing to do particularly speculative work in the sciences. Research Corporation funds as many grants as possible, and looks to others to join in supporting further work. The foundation bears all administrative costs of donor-sponsored grants.

Other grants contributors not mentioned above include the Atlantic Richfield Foundation; Crown Zellerbach Corporation; the late Joseph H. DeFrees; Dow Chemical U.S.A.; Foremost-McKesson Foundation, Inc.; Hercules Incorporated; The William and Flora Hewlett Foundation; Hooker Chemical Corporation; Celine Karraker; The Lubrizol Corporation; Northwest Area Foundation; Pennwalt Corporation; Pioneer Hi-Bred International, Inc.; Stauffer Chemical Company; The Thrasher Research Fund; United States Steel Foundation, Inc., and Westinghouse Educational Foundation.