

Cornell Chemistry

August 1995

Number 63

From the Chairman's Office

The Rewards of Royalties

Last year I received my first United States patent—number 5,231,185—on a new family of enzyme inhibitors. That discovery is but one of many conceived and patented by chemists and other researchers at Cornell. New technology on campus is being developed in such areas as advanced microelectronic devices, novel superconducting materials, disease-resistant crops, gene replacement therapies, and architecturally unique polymers. Now, as federal support for scientific research dwindles, the university is laying big plans to share in the financial returns on its patents.

Will today's faculty innovators, like geese that lay golden eggs, provide a dependable source of funds for research, new faculty hires, enhanced educational programs, and modern laboratory and instructional equipment? Everybody I know on campus agrees that this sounds great in principle. But can the revenues from Cornell-patented inventions really solve the university's financial crisis? Since technology transfer here is still in its infancy, it is too early to tell what the windfall from new inventions may be. However, the potential for future revenue is enormous. For example, the recently patented "fat gene" generated \$20 million in licensing fees for Rockefeller University. What incentives should the university provide, and how should royalty income from patents be distributed? The questions are both timely and important as Cornell debates a new patent policy.

Like it or not, inventions are part and parcel of the university's research mission. In fact, government funding agencies like the

National Science Foundation and National Institutes of Health, eager to see the technological advances of academic researchers enter the marketplace, have long encouraged universities to patent and license campus discoveries for the public good. At Cornell, the Cornell Research Foundation (CRF) is responsible for patenting and protecting the university's intellectual property for the benefit of its inventors, the university, and the community.

Securing a patent costs a fair amount of money—perhaps \$10,000 to \$20,000, depending on how slow and nitpicky the U. S. Patent Office decides to be. Since it's virtually impossible to predict which inventions will be the real money-makers, Cornell wisely chooses to patent lots of initial "invention disclosures." When a company is interested in an invention patented by Cornell, the firm licenses the patent and pays royalties to the university.

So where do the royalties go? Under existing policy, CRF is reimbursed for its

costs along with 15 percent of the remaining royalties to support future growth. What's left is divided between the inventor, the inventor's research program, and the inventor's college. In principle this split sounds more than generous. But Cornell uses a sliding *downward* scale of royalty distribution, so that the more successful the technology, the smaller the inventor's share of the pie, from 50 percent for the most modest licenses down to 15 percent for real blockbuster inventions.

Relatively few important inventions see the light of day at CRF. Just last year an inventor at the Cornell University Medical College nearly missed the deadline for filing a patent on a new tuberculosis vaccine. Fortunately CRF managed to secure patent rights for the university and in December 1994 Pasteur-Merieux-Connaught, a prestigious manufacturer of vaccines, agreed to pay over \$500,000 in initial royalty payments to the medical college. With 1.7 billion tuberculosis

infections worldwide, the prognosis for additional income seems assured.

Lack of motivation and of financial incentives are common reasons given for apparent apathy among campus inventors. Some criticize CRF for being overworked and slow to respond. Partly to remedy this situation, the Research Policies Committee of the Faculty Council of Representatives (FCR) proposed last year that the inventor's share be 50 percent. The remaining 50 percent would be distributed to the university, which in turn would provide a budget for CRF as well as royalties to the inventor's department. The CRF board of directors balked at this plan, claiming that it leaves the foundation vulnerable to annual fluctuations in the university budget. Statutory colleges, including the veterinary college and CALS, complained that the FCR policy neglects "other players" in the royalty stream. Translation: deans and department chairs want the revenue to offset shortfalls and shore up other weaknesses.

The bottom line is simple: what is the real resource that drives invention on campus? Judging from its proposed revisions, the university seems to feel that CRF represents a critical resource that needs nurturing and protection. Wrong: CRF is an office of patent attorneys and licensing specialists—albeit very good ones—but an office of service providers, nonetheless. The true resource is the collection of inventors among Cornell's faculty, staff, and students.

If the university really wants other multimillion-dollar fat genes and tuberculosis vaccines to see the light of day as Cornell inventions, it should put aside the narrow, self-serving interests of departmental and decanal administrators. Although my own invention, monosaccharide analog-based glycosidase inhibitors, will probably never earn big royalties for the university, other exciting findings are surely percolating in labs around campus. Encouraging the spirit of innovation and discovery will, in the long run, provide far greater benefits for all Cornellians.

—Bruce Ganem

Department Inaugurates Aggarwal Lecture

C. Grant Willson of the University of Texas at Austin inaugurated a Department of Chemistry lecture on May 23, 1995. In the first Aggarwal Lecture in Polymer Science, Willson addressed a joint meeting of the departments of chemistry and material sciences/engineering on "Specialty Polymers for the Electronics Industry: Where Will They Come From Now?" The lecture was coincident with the annual Polymer Outreach Program Symposium of the Material Sciences Center. The lecture is intended to become a series of talks on polymer research and is sponsored by Sundar L. Aggarwal PhD '49.

Aggarwal earned his Cornell doctorate in the emerging field of polymer science and engineering under Professor Frank A. Long. In 1957, he joined General Tire and Rubber Company (now GenCorp), serving in various research capacities and retiring as vice president and director of the GenCorp research division in 1988.

On his retirement Aggarwal founded Global Polymer Technology Associates, an industry consulting firm with international clients. He has received industry awards and has published articles on and received patents for synthetic rubbers, block polymers, and



Sundar L. Aggarwal

composites. He is a fellow of the Institute of Materials Science and a member of the American Chemical Society, the Directors of Industrial Research, and the Industrial Research Institute. He also remains active as an editor and as a member of industry awards and evaluation panels.

The second Aggarwal lecture will be delivered by Robert H. Grubbs of the California Institute of Technology on a topic to be announced, and is scheduled for September 20–21 in Baker Laboratory.

Have a Match?

Your company may offer an employee benefit that also benefits Cornell Chemistry. If you've been making your annual gift to Cornell and the Department of Chemistry, as we hope you have, your employer may double your yearly contribution in a corporate matching gift program.

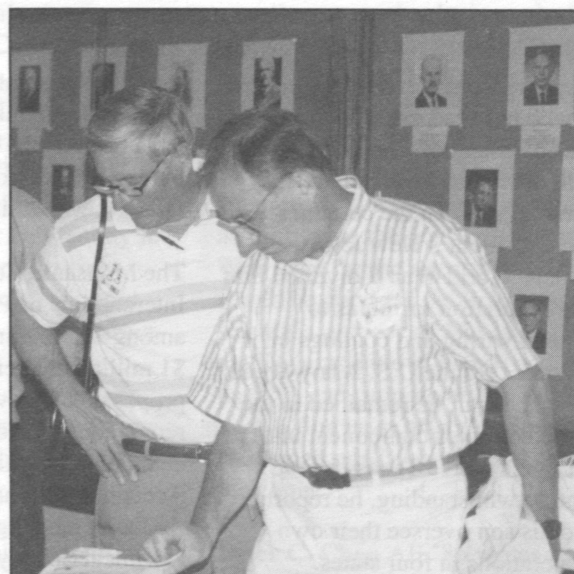
Check with your personnel office to learn whether your company offers this benefit. The office will have the proper forms to submit with your next contribution.

Reunion 1995

Each reunion seems to bring growing numbers of alumni visitors back to Baker Lab for the annual reception in the faculty lounge—a chance meeting with a lab mate or a former professor, reminiscences in a coded language born of a common predicament and changing with each class year, a quick browse through old photographs that document the passing decades of chemistry at Cornell.

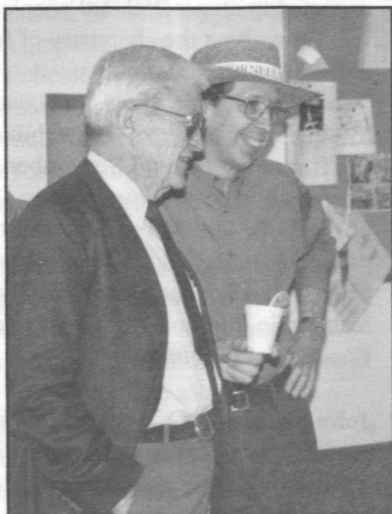


Dick McKillip, Mr. and Mrs. H. Arthur Strecker in background

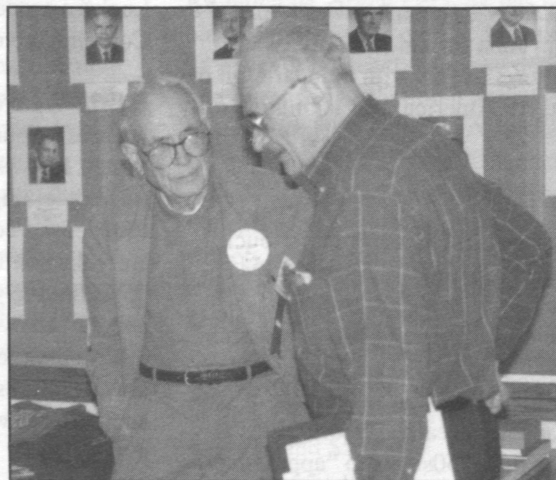


Chuck Carr and Donald Marshall

This year's returnees were **Ronald H. Wharton AB '85, Ellison H. Taylor BChem '35, H. Arthur Strecker AB '40, PhD '48, Richard McKillip AB '55, Marion Hodes AB '45, Gerald Schoenfeld AB '50, Donald W. Marshall AB '55, Paul Clark BChem '34, Charles A. Carr BChem '55, Leonard I. Ladin AB '55, Mina Dulcan AB '70, Walter Gadkowski AB '65, Kathleen Gaffney AB '65, Sue Roberts AB '70, Ralph PhD '62 and Margaret Miano AB '60, MA '61, Barbara Van Wagner Neumark AB '45, Albert Finch Jr. AB '60, Jay Shumsky AB '89, and Harvey Schwartz AB '70.**



Professor McLafferty with Leonard Ladin



Ellison Taylor and Professor Scheraga

News from Alumni and Friends

1931–1940

A career update from **Kermit H. Ballard** PhD '39, who has read every dispatch from the Department of Chemistry for 56 years. With doctorate fresh in hand, Ballard went to work in the ceramics laboratory of DuPont's New Jersey facility, where World War II diverted him from china decoration formulas to precious metal wiring and coatings in fusible ceramics for the U.S. Army Signal Corps. After the war, he remained in the company's electronics component until retirement to his native Texas in 1975. Retirement notwithstanding, he reports that he and his son oversee their own business operations in four states.

There is bad news and good news from **Alfred W. Bennett** AB '33. Alfred retired in 1977 as chief chemist for A&P at their large food manufacturing plant in Horseheads, New York. "Nearly five years after I retired, the plant was shut down for good," he writes. "The governor and the two state senators were trying to convince the A&P management to sell, lease, or do something so that people could be employed. It is a sad story." The good news is retirement in Camarillo, California, "a joy from day one."

"Not much news from here," muses **H. Arthur Strecker** AB '40, PhD '48 from the safe confines of retirement. He was one of "Lauby's students" who returned to Cornell in June for his 55th reunion. "I retired after 35 years with Standard Oil of Ohio and BP America, just taking life easy now."

1951–1960

Ellis Glazier AB '51 has kept in touch (see *Cornell Chemistry*, August 1994). Recently he has been lecturing on scientific ethics at teaching and research institutions around La Paz, Mexico. He recalls that his solution to the lack of undergraduate research opportunities at Cornell in the 1950s was to "apprentice

myself to graduate students to work for them as a general dogsbody. . . . I would have been happy to have my own project, but the times were not ready for that. What I did get was eminently satisfactory."

The Monsanto Corporation selected SRI International of Palo Alto, California from among 182 entrants as the recipient of a \$1 million challenge grant. The SRI proposal is to develop a cost-effective removal of ammonia from wastewater containing organic contaminants. Accepting the challenge for SRI at the Anaheim meeting of the American Chemical Society was **David Golden** AB '56, a vice president at SRI.

Since leaving Cornell "a few years" back, writes **Paul J. Luckern** MS '53, he earned JD and LLM degrees from Georgetown University Law School, served as a patent examiner, worked in U.S. and Swiss corporations, practiced intellectual property litigation, and has served for over a decade as an administrative law judge at the U.S. International Trade Commission in Washington, D.C. "In an investigation I presided over in the mid-80s," he continues, "Dr. Paul Flory was a witness. Dr. Flory taught me thermodynamics at Cornell, and that brought home to me what a small world we live in." Judge Luckern broadens his horizons through the Cornell Club of Washington.

Edwin Weaver PhD '59 has stayed put for nearly four decades. "I've been at Mount Holyoke College continuously since receiving my PhD from Cornell, except for a couple of sabbaticals. Mount Holyoke continues its outstanding record of producing young women in chemistry and indeed in all sciences. I've been back to Cornell a few times since 1958, and I'm always impressed with the physical plant and with the warmth and friendliness of the faculty."

1961–1970

Donald Boyd (a postdoctoral fellow with the Hoffmann group, 1967–68) is now a research professor of chemistry at Indiana University–Purdue University at Indianapolis, and has published a new volume of *Reviews in Computational Chemistry*. Volume VI, he writes, presents tutorials and reviews on computational methods for understanding molecular properties and includes a bibliographic essay tracking software usage as applied to research problems in chemistry.

Joseph A. Brennan AB '63 writes, "I was an author of an August 1993 issue of *Chemtech* magazine (ACS) entitled "Back-to-Basics Chemical Marketing," as well as earlier articles entitled "A Practical Guide to Replacing Acetone" in *Fabrication News* (Fiberglass Fabrication Association) and *Marine Business News* magazine."

In Canada, where chemistry is considered a sport, **David N. Harpp** is busy making it even more popular this summer at the Old Port in Montreal. Dr. Harpp and two colleagues have assembled a "show and tell" chemistry exhibition, "the largest and longest ever put together in Montreal." The bilingual series of demonstrations, a 15-projector slide show, and displays is expected to attract 250,000 people, who will learn about the chemistry of food, colors, and plastics, and view a "Chemistry Magic Show," all conducted by student *animateurs*. The exhibition will run from May 17 until September 17. Harpp was a postdoctoral fellow (1965–66) with the late Alfred Blomquist and is a professor at McGill University in Montreal. His educational venture is featured in the June 12, 1995, issue of *Chemical & Engineering News*.

John Shelton PhD '64 writes, "I am a professor of chemistry at California State University, Hayward, and have been there since 1965."

Stephen Warren AB '67 writes, "I am now a professor of geophysics and atmospheric sciences at the University of Washington in Seattle, doing research on the climatic role of snow and clouds."

1971–1980

There's a little animal in each of us.

Sheila Wilson Allen AB '76 received her DVM from Cornell University's College of Veterinary Medicine. After a residency in small animal medicine at the University of Georgia, she remained in Athens as an associate professor of small animal surgery. "Athens, Georgia, is just like Ithaca," she remarks, "only with warmer weather and a better football team!" (Editor's note: Veterinarians in Georgia commonly maintain that bulldogs are larger than bears.)

Don Betowski PhD '74 writes: "I am a research chemist with the Environmental Monitoring Systems Laboratory in Las Vegas, one of the national labs of the EPA. I am using mass spectrometry to develop methods for monitoring pollutants in the environment."

Fortunately for the future of software and of **Nicholas J. Gimbrone** AB '77, he spent his junior year as an undergraduate researcher. "It was this experience which showed me that it would be a mistake for me to pursue a career in chemistry," he writes. Instead, he was intrigued by the required computer courses he took in Cornell's chemistry program, and has "since worked as a full-time computer professional, first for Cornell University, and now for Sterling Software." Sometimes things work out for the best.

Donna Huryn AB '80 and her husband **Jay Kostman** AB '80 have remained in alphabetical order around Philadelphia—he as an assistant professor of medicine at Temple University, she as a research investigator in the department of preclinical oncology at Hoffmann-LaRoche Inc. in Nutley, New Jersey.

Nancy J. S. Peters AB '73 writes that she is a professor in the natural sciences division at Southampton College of Long Island University and plans to return to Cornell's Theory Center during her fall sabbatical to do molecular orbital calculations. She writes, "I have the dubious distinction of having been the first accident in the new Baker Lab facility in the spring of 1970. We were boiling something with sulfuric and nitric acid, with directions to remove the flask from the heat when we smelled hydrogen sulfide. . . . I used my hand to waft the vapors in the general direction of my nose. Unfortunately, I clipped the edge of the flask and everything spilled. I started to clean up the mess when I noticed the right sleeve of my yellow sweater (one of my favorites, of course) dissolving up my arm." With a little touch of sun, she says, Nancy's arm still glows a bit on that spot.

Our first news dispatch from **Glen Rodgers** PhD '71 is full of tidings. Rodgers is chairman of the chemistry department at Allegheny College in Meadville, Pennsylvania, and encourages his students to come to Cornell for graduate work. He is a recent recipient of the Julian Ross Award, presented by Allegheny College "for singular accomplishments and contributions through excellence in teaching." He reports that in 1994 McGraw-Hill published his sophomore-level text, *Introduction to Coordination, Solid State, and Descriptive Inorganic Chemistry*.

Ruth Stark AB '72 writes that she ran into **Jim Slama** AB '72 at an NIH Study Section meeting recently, "so we tried to catch up on more than 20 years of personal and professional gossip during the infrequent coffee breaks. It was fun nonetheless to see the paths we've taken in the chemical world; he's a faculty member at University of Toledo and I am the same at the City University of New York. Keep up the great work!"

1981–1990

Steven Akiyama PhD '81 noted in his e-mail message that he is on the intramural research staff of the National Institute of Dental Research, NIH.

Dan Bernardo PhD '89 proves a man of the times with his request that we "mention to the computer systems administrator the possibility of setting up a Web page for the department. I think it would be good for public relations and scientific purposes." Not to be outdone, the Department of Chemistry does have a page up and running on the World Wide Web—find us at <http://crcfquadra.tn.cornell.edu/> Alumni comments are welcome.

Peter C. Chen AB '86 writes from Atlanta that, "I'm in my third year as an assistant professor at Spelman College. I came to Spelman directly after graduate school at the University of Wisconsin."

Katy Conser AB '90 writes, "I am a graduate student at the University of Illinois–Urbana/Champaign. My PhD work involves studying the mechanism of electrophilic amination and my advisor is Peter Beak. I will start work with Union Carbide in Bound Brook, New Jersey, after that."

Krzysztof Holzer PhD '89 writes that he is currently doing freelance computer consulting in Caracas, Venezuela.

Angelica M. Stacy PhD '81 has been busy on the awards circuit. She was one of 24 exceptional teachers in the nation and one of only eight national awardees to receive the 1995 Catalyst Award of the Chemical Manufacturers Association. The award recognizes "individuals who have the ability to inspire students toward careers in chemistry and science-related fields through their excellent teaching ability in and out of the classroom." Angelica is an associate professor of chemistry at the University of California at Berkeley. She receives a medal, a citation, and \$5,000.

News from Alumni and Friends

Stacy also received the Francis P. Garvin–John M. Olin Medal at the April meeting of the ACS in Anaheim. The award is sponsored by the Olin Corporation to recognize women chemists in the United States who provide distinguished service to the field.

Rob Toreki AB '87 informs us that "I'm finishing up my second year as an assistant professor here at the University of Kentucky. I now have four grad students and am about to pick up a postdoc. My research interests include inorganic, organometallic, and materials chemistry. Current research areas involve metal carbide nanoparticles and rigid 3D molecular architectures." He also writes that you may find him on the world wide web at: <http://www.uky.edu/ArtsSciences/Chemistry/Research/Toreki>.

Bill Tuszyński PhD '82 writes, "After 13 plus years, I left Elf Atochem in April to join Inolex Chemical, a small (\$45 million) privately held manufacturer of specialty esters and polyester polyols located in Philadelphia. My time is split between managing existing customer accounts and being the new business development group."

Howard J. Worman AB '81 writes, "As of January 1, 1995, I started a position as an assistant professor of medicine, anatomy, and cell biology at the College of Physicians and Surgeons of Columbia University. Also appointed as assistant attending physician at Presbyterian Hospital in New York."

1991–1995

Richard Dronskowski, who was a visiting scientist at Baker Lab in the Hoffmann and DiSalvo group in 1991–92, writes from Stuttgart, Germany that he has been a member of the Max Planck Institute for Solid State Research since leaving Cornell, and since 1993 has also lectured in inorganic chemistry at Dortmund University. "If everything works out well, I'll receive my

'habilitation' this year, roughly equivalent to having completed the assistant professor status." *Cornell Chemistry*. Richard writes, "reminds me of that truly great time I had from 1991 to 1992. Since then I have been in constant touch with the Hoffmann and DiSalvo group on scientific and other matters. Actually, my bonds to Cornell are stronger than to any other university."

Jenny Frederick AB '93 is working on her PhD at Yale University as a member of the Schepartz group.

Sara Perkovic PhD '95 is a postdoctoral fellow at Stanford University in the group of Dr. Harden McConnell. She writes, "I tried to flee the weather in Ithaca, but I am not much luckier here: it rained EVERY day during my first month here."

Yoram A. Puius AB '92 writes, "I'm currently a third-year MD/PhD student at the Albert Einstein College of Medicine in the Bronx. So far, I've liked the first two years of med school. Now I'm doing my PhD in protein crystallography, and finding the theory, the practice, and the

applications to be really stimulating. I'd like to send a warm 'thank you' to Ben Widom for supporting me and teaching me in my last semester at Cornell, and would also like to send my regards to my two favorite teachers in the department, Laura Philips and Andreas Albrecht, who taught me physical chemistry. I used much of what they taught me, particularly when learning spectroscopy, protein and membrane structure, and biochemistry. (Tell the undergrads it's all useful! Really!)"

Kathryn Uhrich PhD '92 writes, "I have just accepted an excellent offer from Rutgers University in New Brunswick, New Jersey, and will start this fall. Presently I am doing a postdoc with Robert Langer at MIT."

—In Memoriam—

Willis J. Beach AB '34, on February 19, 1994, Cape Coral, Florida.

William Champion PhD '60, in November 1994, Colorado Springs, Colorado.

Thank you to all who responded to my request for electronic mail addresses. Most of you included news, which appears in this issue. If you haven't sent your e-mail address, please send me a quick note at kssl@cornell.edu. We are continually updating our mailing lists. If you are receiving *Cornell Chemistry* for the first time, or for the first time in a long while—welcome! We hope to hear from you soon.

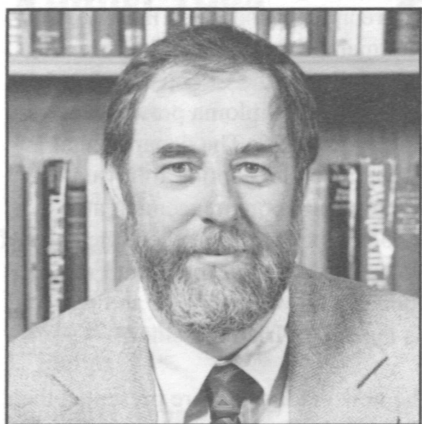
—Kelly

Alumni Breakfast at the ACS Meeting

The American Chemical Society will hold its 210th national meeting August 20–24 in Chicago. The program appears in the July 24 issue of *C&EN*. The Department of Chemistry will host its breakfast for alumni ACS attendees on Tuesday, August 22, 7:45–9:00 a.m. in Stetson E at the Hyatt Regency Chicago.

Faculty and Department News

Baker Lectures 1995



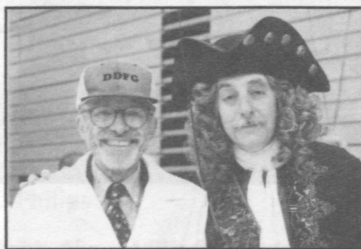
Graham R. Fleming, Arthur Holly Compton Distinguished Service Professor at the University of Chicago, will deliver the 1995 George F. Baker Lectures on the subject of *Ultrafast Spectroscopy*. Fleming's inaugural lecture will be given September 26, 1995, at 4:40 p.m. in Schwartz Auditorium, Rockefeller Hall. Subsequent lectures will be at 11:15 a.m. each Tuesday and Thursday (excluding October 24–26) through November 21 in Baker 119.

Baird Researchers Honored

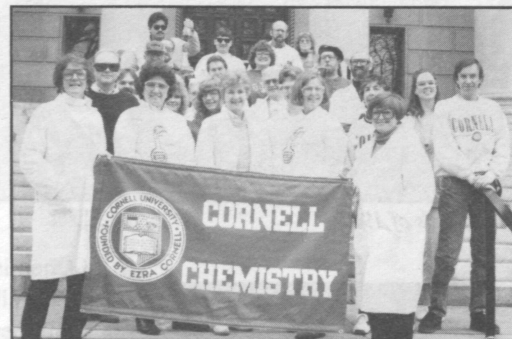
Katy Georgiadis, a postdoctoral fellow in Barbara Baird's research group, has been awarded a postdoctoral fellowship at the Arthritis Foundation in Atlanta. She will study interleukin-1 receptor aggregation and its role in signal transduction. Georgiadis earned her doctorate in chemistry from the University of California, Santa Cruz in 1994. **Jima Jenab '96** has been selected for the Howard Hughes Scholars Program and is working this summer in Professor Baird's laboratory, also the summer home of Dr. Nadia Marano, assistant professor of chemistry at St. Lawrence University, and her student Ndegwa Njuguna. The pair is working in the Pew Program in Undergraduate Science Education (New York State Cluster). Dr. Marano was also awarded an ROA grant from the National Science Foundation for her research here this summer.

Campus Parade Honors Rhodes

Retiring Cornell president Frank H. T. Rhodes and his wife Rosa were honored by Cornell employees in a campuswide parade terminating in a grand review and picnic in Barton Hall on Thursday, May 9. Various campus service contingents and academic departments turned out in the regalia and paraphernalia of their professions to march in a loop from Alberding Field House past Day Hall and back into Barton Hall, each department passing under the Rhodes's dais for review. The *Cornell Chemistry* inquiring photographer was on hand to record the pictorial highlights of the day.



Earl Peters with a member of the Department of Theatre Arts.



Staff members assembled for the parade.



The party's over.

Software Donation

The Palisade Corporation of Newfield, New York, has donated software to the department's GC/MS facility. The software includes the Wiley Mass Spectral Library and Benchtop-PBM software, the package valued at \$4,000. This enhances the Chemistry Department's current capabilities in searching mass spectral databases and performs reliable searches on data from chemical mixtures. It has also expanded the existing database from 140,000 to 250,000 mass spectra.

Jon C. Clardy, Horace White Professor of Chemistry, was recently appointed a fellow of the American Academy of Arts and Sciences.

Professor **Francis J. DiSalvo** delivered the Edward L. King Lecture in Boulder, Colorado, on June 5, 1995. The King

Lecture is the keynote in a yearly 10-lecture series on solid state chemistry sponsored by the University of Colorado. DiSalvo's lecture focused on the absence of a rational synthetic scheme that would allow for predictability and for new compound designs in solids with extended (nonmolecular) structures.

In November 1994, Goldwin Smith Professor of Chemistry **Benjamin Widom** traveled to Trondheim, Norway, to deliver the annual Onsager Lecture at the Norwegian Institute of Technology. His topic was "A Reptation Model of the Electrophoresis of Charged Polymers (DNA)." He was also presented with the 1994 Onsager Medal for contributions to theoretical chemistry, in particular in the thermodynamics and statistical mechanics of phase equilibrium.

Commencement 1995



The Class of 1995

Sixty new bachelor's degree recipients convened in Baker 200 with members of the faculty, friends, and family for the Chemistry Department's diploma presentation on Sunday, May 28. The departmental ceremony and reception followed the all-university commencement at Schoellkopf Stadium, where the class of '95 heard departing president Frank Rhodes's farewell address and received his legendary Irish blessing.

The new graduates were presented their diplomas by Dr. Bruce Ganem, Franz and Elisabeth Roessler Professor of

Chemistry and department chairman, who reminded the students that their years spent at Cornell have made them part of the larger Cornell community. The 1995 chemistry graduates numbered 64, the additional graduates having received degrees in January. They are:

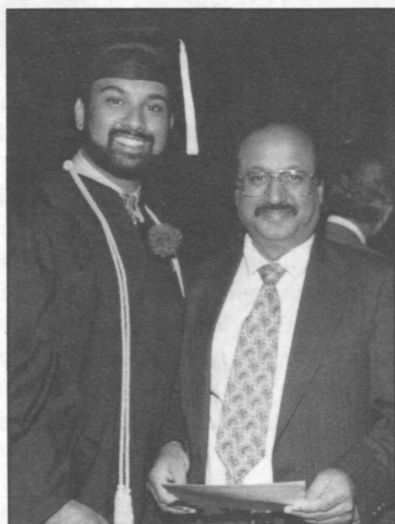
May Graduates

Avinash Agarwal, Sasha Alcott, David Banfield, Charles Blazey+, Sudip Bose, Kimberly Bungcayao, Dana Buske+, Rocco Casagrande, Anna Chan, Pao Chiu°, Cindy Chung, Hee Chung, Ralph Ciotti, Christopher Clark Jr., William Davidson, Christian Engell, Stephen Friedfeld, Miguel Gonzales, Brian Gruber, Lushantha Gunasekera, Gene Han, David Hanauer, Dong Kang, Colleen Kelly, David Kelly, Michael Krochmal*, George Lakis, Jason Leedy, Eva Lin, Ruth Lin, Peter Lu, Fadi Makhoul, Joshua Maloney, Toshiki Matsui, Peter Meehan, Sarah Michel, George Mount, Ganga Nair, Crystal O'Neil, Michael Ober, Insup Park, Kevin Petrik, Mark Platt, Victor Powell, Rosana Rosado, Savvas Savvides, Pavandeep Sethi, Aimee Seungdamrong°, Paul Shick, Amir Shuja, Faisal Siddiqui, Victor Stone, Christine Tempero, Elizabeth Truslow, Jan Upalakalin, Yoshiaki Usui, Lecia VanDam*, David Willis, Rachel Winston+, and Eugene Wu.

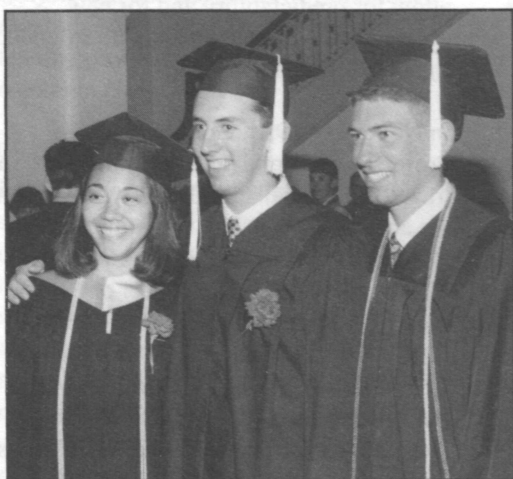
January Graduates

John Ervin, Leonardo Etcheto, Jean Ku, and Esteban Marten.

**summa cum laude* +*magna cum laude* °*cum laude*



Faisal Siddiqui with his father



Lecia VanDam, David Willis, and Stephen Friedfeld

Aimee Seungdamrong and family



PhDs Awarded 1994-95

August 1994

Richard Leslie Bretz
H. Abruña

Russell Allen Chorush
F. McLafferty

Kate Janine Graham
J. Clardy

Kevin Brian Hewett
L. Philips

Kimberly Anne Lawler
R. Hoffmann

Hao Li
L. Philips

Ying Chen Lynn
B. Carpenter

Patrick John Neill
J. Wiesenfeld

David William Neyer
P. Houston

Anthony Alexander Rywak
J. Burlitch

Stephanie Ann Schaertel
A. Albrecht

David K. Tan
A. Albrecht

Donna Lyn Taylor
H. Abruña

Qing Wang
J. Fréchet

Jeffrey David Wilson
R. Loring

Howell Stephen Yee
H. Abruña

January 1995

Grant Michael Ehrlich
F. DiSalvo

Karen Swanson Harpp
W. White

Robert Louis La Duca
P. Wolczanski

Angela Yuenon Lee
J. Clardy

Carl Cameron Miller
L. Philips

Robin Lynn Miller
P. Houston

Patrick J. O'Hagan
T. Rhodin

Sara Perkovic
B. Widom

Floyd Eric Romesberg
D. Collum

Michael William Senko
F. McLafferty

Stephen Patrick Smith
A. Albrecht

Gary Andrew Valaskovic
G. Morrison

May 1995

Kenneth Gordon Carson
B. Ganem

Isabelle Genevieve Gay
G. Morrison

Bradley Keith Goering
B. Ganem

Josh Harris Golden
F. DiSalvo

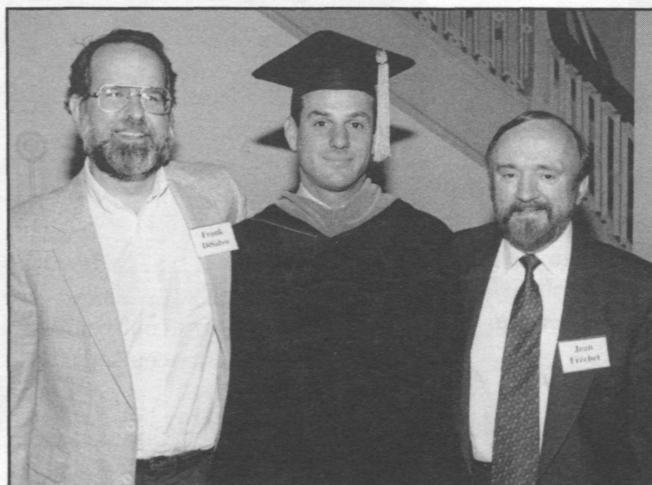
Julie Chu-Li Lee
J. Clardy

Zhi Liu
J. Meinwald

Rebecca Kristine Schmidt
A. Kuki

Leonard Wayne Schultz
J. Clardy

Kala Subramanian
B. Baird



*Josh Golden with Professors
DiSalvo and Fréchet*



*Kala Subramanian talking with Professor
Baird*

Undergraduate Awards



Professor Ganem with Dana Buske. . .

Leo and Berdie Mandelkern Prize

Awarded annually to an outstanding student of the senior class majoring in chemistry who will go on to graduate study in chemistry or biochemistry.

Dana Buske '95

George C. Caldwell Prize

Awarded annually to two senior chemistry majors who have shown general excellence.

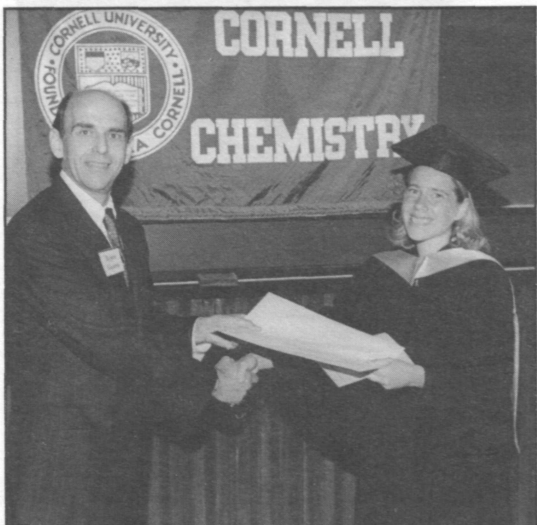
Michael Krochmal '95

Lecia VanDam '95

American Institute of Chemists Medal

Awarded to an outstanding graduating senior who has a demonstrated record of leadership, ability, character, and scholastic achievement.

Rachel Winston '95



. . . and Rachel Winston

Merck Index Award

This award consists of a Merck Index with the name of the recipient imprinted in gold. Awards are made each year to the two outstanding students of the senior class who are majoring in chemistry.

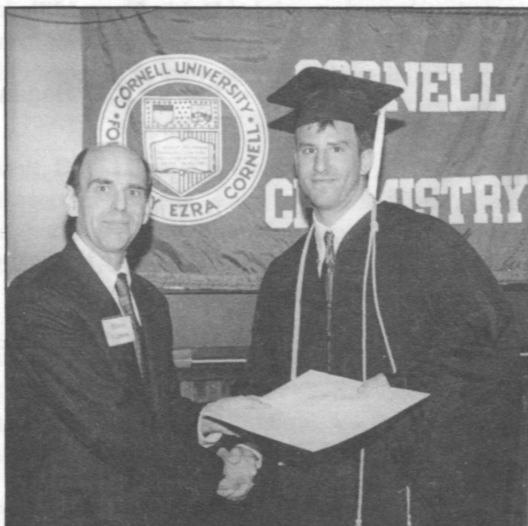
Charles Blazey '95

Brian Gruber '95

ACS Analytical Prize

This prize is intended to recognize a student in the College of Arts and Sciences who has completed the third year of undergraduate study and who displays interest in and aptitude for a career in analytical chemistry. The recipient receives an 8-month (16 issues) subscription to *Analytical Chemistry*.

Jima Jenab '96



. . . and Michael Krochmal

Harold Adlard Lovenberg Prize

Awarded annually to a member of the junior class with a major in chemistry who has shown general excellence.

Philip Geissler '96

CRC Press Chemistry Achievement Award

This is presented to two sophomore chemistry majors who do outstanding work in organic chemistry courses 357–358 or 359–360.

Elizabeth Papish '97

Cherie Purring '97

A.W. Laubengayer Prize

Awarded annually to an outstanding student in each of the introductory chemistry courses 103, 207, and 215.

Joseph Greco '97

Katherine Henzler '97

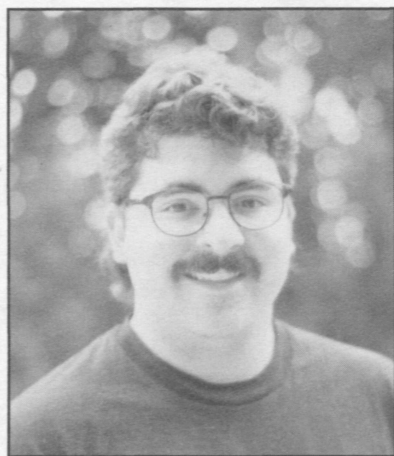
David Levinthal '97

Ilya Nasrallah '97

Graduate Awards

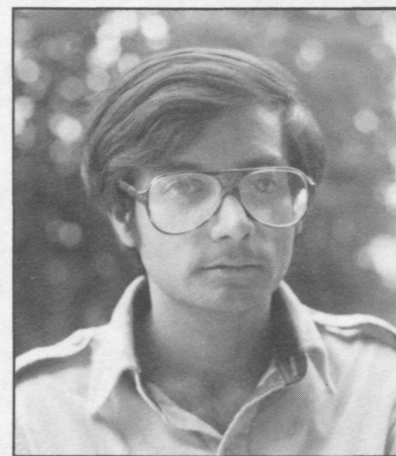


DuPont Teaching Prizes are presented annually by the Department of Chemistry to teaching assistants who have demonstrated excellence in teaching and the desire to upgrade the quality of undergraduate education. Graduate students who received the prize at a ceremony in June were (top row) **Paul Pyenta, Chris Bender, and Cynthia Kinsland;** (bottom row) **Himanshu Rastogi, Brett Lucht, Steve Schvaneveldt, and Wendy Sauer.** Not pictured: **Alan van Giessen.**



Jordan Bennett

Outstanding graduate students in any area of chemistry who have distinguished themselves both academically and in the quality and quantity of their research are awarded the **Tunis Wentink Prize**. This year's winners are **Jordan Bennett** and **Avik Chatterjee**. Research was presented at a March 1 symposium. Jordan's talk was entitled "Energetics of C-H Bond Activation by Transient $[(\text{Bu}_3\text{SiO})_2\text{Ti}=\text{NSi}^t\text{Bu}_3]$ " and Avik's "The Role of Entanglements in Dense Polymer Fluids."



Avik Chatterjee



The **Howard Neal Wachter Prize** is awarded each year to a promising graduate student in physical chemistry who has demonstrated a potential to contribute to the profession. This year the prize was awarded to **Stephen Schvaneveldt**, pictured at left.

Chemistry Club Reports

Over the course of the spring semester, the Cornell Chemistry Club split into two groups with different goals. While the Chemistry Club continued to promote chemistry and offer career-related explorations, another club formed to focus on more specific chemistry interests. The new club, calling itself the Research Club, met for one hour every week as a forum for presenting recently published articles and papers. Phillip Geissler '96 created the group with the strong support of Professor Charles Wilcox, who served as the advisor to both the Chemistry Club and the Research Club, and a handful of dedicated chemistry majors.

The Chemistry Club served as a resource for chemistry majors and students interested in chemistry by hosting an

informative session on applying for summer internships. The well-attended meeting consisted of a panel of students experienced with obtaining summer internships and a listing of internship positions. In another promotion for chemistry-related careers, the Chemistry Club also offered a trip to Corning for a tour of the Corning Glass manufacturing facilities. The annual happy hour concluded the year as professors and students gathered for dinner at the Chariot.

For the Research Club, the major agenda was preparing to present journal articles. Every member of the club researched at least one topic of his or her interest and presented the findings in a semiformal format. The topics brought about lively discussions of diverse subjects within chemistry and biochemistry. For example, an overview of a thesis was presented that dealt with a highly aggressive treatment

for brain tumors. Another presentation concerned a recent study of oscillatory reactions and a review of the Lotka mechanism. And a fascinating article on using DNA to solve mathematical puzzles such as the door-to-door salesman problem captured the interest of the entire group. Members of the Research Club will continue to meet during the summer because many participants have undergraduate research positions in the chemistry department.

With the formation of the Research Club, a new segment of the student body is represented. While its focus is different from that of the Chemistry Club, its independent goals are equally important. This diversity of interests is encouraging and recognizes what students want to explore.

—Mike Ho

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