

BARNARD CHEMISTRY DEPARTMENT NEWSLETTER

June 2003

Greetings to alumnae and friends. Classes are over, grades have been submitted, the class of 2003 has graduated (it was sunny for Barnard's ceremony and rained the following day for Columbia's, but spirits were high throughout), and reunion festivities are over, so it is time to reflect on the academic year and bring you up to date on the college, the department, the faculty, the students, and those alumnae about whom we have recent news.

NEWS OF THE COLLEGE

Things go well at Barnard. The economic downturn has a two-fold impact --- income on endowment is less and students' needs are greater --- but Barnard continues to plan positively for the future. In recent years, Barnard has become the most selective undergraduate college for women, so our greatest asset, an extraordinarily bright and talented student body, is as strong as ever. From other college communications you have probably heard about the campus master plan: a visionary document that spells out how the Barnard campus can accommodate the college of the future. Careful studies assessed critical needs. High on the list is performance space for Theater and Dance. These are areas where Barnard, according to the intercorporate agreement, provides the undergraduate program for both Barnard and Columbia. Libraries are changing profoundly. With a four-acre campus, Barnard's space has always had to be multi-purpose, and the balance of demands on space is constantly changing. What has emerged as the first major step is a new taller building to replace McIntosh center (working name: Nexus). Over time, this will become connected to a heavily renovated and reconfigured Lehman (with a lot of library function shifting to the Nexus). Selection of an architect for the Nexus is expected to be made this fall. If you are interested in details of the master plan, a great deal of information is available on the Barnard web page.

In recent years the lack of Barnard faculty housing has become an increasing problem. While there is some access to Columbia housing, the amount provided by the BC-CU agreement is much less than is needed. As housing costs soar in the city (and close by) it is more and more difficult for young faculty to afford to live within reasonable commuting distance; this makes recruiting young faculty more and more difficult. The trustees have been working on this. We were thrilled to learn this spring of a wonderful solution. For some time, Columbia had been working on the purchase and development of a property on 110th St. at Morningside Ave. A building had been planned with extensive negotiations with the community. Because of other priorities, Columbia decided to offer this project to Barnard. This new building, slated to be complete in Fall 2004, will include both faculty and student apartments. The building will also have middle-class housing and a large public area that will probably house, among other things, a day-care center.

In the meantime, Columbia's new building for both faculty housing and a new primary school approaches completion at 110th St and Broadway (where D'Agostino's used to be). The school will start as K-5, but eventually grow to K-8. It will be interesting to watch what effect this school will have on the Columbia and Morningside Heights communities. Jumping one subway stop south, Columbia will soon start construction of another new building for faculty housing, at 103rd St. and Broadway. Prof. Chapman, who lives a block away, notes that there have been meetings soliciting community views about the use of commercial space; she hopes for a supermarket.

A big event on this year's college calendar was The Barnard Summit. Organized out of the President's office, these large Summits (there was one two years ago) are designed to enhance Barnard's visibility by assembling a program of very distinguished people to engage in lively discussion of an issue of special importance to women. This year's topic was Women and Health. This event, held in the LeFrak Gymnasium in April, was recorded for broadcast by Connecticut Public Television. There were three excellent panels. The moderators (Judith Shapiro, Lynn Scherr of ABC News, and Soledad O'Brian

of NBC News) did a superb job, affording all panelists enough opportunity to have their voices heard, while still having lively interaction and a coherent story. Lots of students were present: the ones we spoke to found this to be a stimulating and exciting day, exploring many aspects of women's health from the vantage points of many of the most distinguished experts in the field.

Another important event in the College Calendar is the annual Hughes Lecture. Part of the activities funded by the Howard Hughes Medical Institute, this lecture brings a distinguished woman scientist to the campus. We were especially pleased this year that **Freya Schnabel '78** (a chemistry major at Barnard) was the speaker. Chief of Breast Surgery at Columbia-Presbyterian and Medical Director of the Women at Risk Program at Columbia, Freya spoke on "Breast Cancer: Risk Assessment and Risk Management". It was a fascinating talk. Considering risk, which often requires a sophisticated understanding of statistics, while thinking about life-threatening disease, is an extraordinary important challenge. Freya joined faculty and the current Hughes Interns for dinner afterwards. We enjoyed some reminiscing. Thanks, Freya!

Prof. **Philip Ammirato** of the biology is retiring this year. Many of you may recall his energetic lectures in general biology or his wonderful and demanding plant physiology courses. Prof. Ammirato will continue to participate in the team-teaching of a course in science and society focused on biotechnology.

NEWS OF THE DEPARTMENT

Several faculty and staff have joined the department. **Dr. Joanna Goodey Pellois**, a Term Assistant Professor, will be with the department for two years. An inorganic chemist, Prof. Pellois took over some of the teaching responsibilities of Prof. Doerr, who was on leave for the year. Prof. Pellois has a B.S. in chemistry from the College of William and Mary, and did both her Ph. D. and post-doctoral research at the University of Houston. She specializes in inorganic chemistry and materials, and has synthesized some very interesting new substances, looking to make materials with specific properties. Joanna was married shortly before arriving at Barnard. She and her husband enjoy getting to know New York.

Two new Laboratory Associates joined the department. **Dr. Stanley Shapiro** who has a B.S. in Chemistry from American University and an Ed.D. in Science Education from NYU, has extensive experience in chemistry education. As a chemistry teacher at Midwood High School in Brooklyn, he directed their very successful Intel (previously Westinghouse) Science program. **Mr. Robert Black** has a B.S. in chemistry from Hofstra and a M.S. in School Administration from Pace. He has extensive teaching and administrative experience. He spent many years at Brooklyn Technical High School, which has the largest high school chemistry department in the U.S. We are very pleased that both Bob and Stan will be returning to teach at Barnard next year too. We also have a new Departmental Administrator: **Ms. Laura Shifley**. An accomplished violinist, Laura received her B.A. in Chemistry from Hampshire College in 2001. Among her recent jobs, she has been a marketing assistant for Jazz at Lincoln Center. Her many talents make her particularly suited for this multi-faceted job.

A small renovation project is progressing this summer on the 6th floor of Altschul. Prof. Doerr's research lab is being reconfigured so she will be able to have two glove boxes to work with air- and water-sensitive compounds. Two small offices are being carved out of the 6th floor instrument room, one for Prof. Doerr's research students, and the other for a postdoc, **Dr. David Millar**, coming from Glasgow Caledonian University, who will be working with her starting this fall, supported by her NSF Career grant. We hope we can make more efficient use of space in the smaller instrument room. Plans are moving forward for a desperately needed larger renovation project: the organic labs on the 7th floor. Preliminary plans were prepared based on extensive discussions between the department and the architects. The most important feature: sufficient hood space that all students can work safely with potentially hazardous reagents. The college is seeking funds to make this happen soon. (Checks

welcome.) Our hope is to start the job a year from now, to be ready for the spring term in 2005. Stay tuned.

In keeping with a recent tradition, we scheduled two afternoons in September for a "Summer Research Celebration". Chemistry and Biochemistry students who had summer research experiences, both here and elsewhere, were invited to talk about their work. Twelve students gave talks. We continue a longstanding tradition of departmental luncheons with invited speakers each semester. The fall speaker was Prof. Maitland Jones of Princeton (who also did a guest lecture in the Organic II course) and the spring speaker was Prof. Brian Gibney of Columbia.

Six students and six faculty members attended the annual Nichols Medal Symposium and Dinner, held this year at the Marriott Marquis in Manhattan for a special 100th Anniversary gala celebration. The medalist was Prof. Harry Gray of Caltech. The symposium was quite inspiring for students: several speakers paid particular attention to challenging problems that need to be solved.

The Senior Thesis Program passed a milestone this spring: a total of 75 students have completed theses since 1990. Most students do their research projects in the department, but some work in other departments in Altschul, across the street at Columbia, and uptown at P&S. While undergraduate research has been a tradition here for many more years, one element of the formal thesis program is that students and faculty have a weekly joint meeting. Included in this meeting are frequent oral research updates: students become proficient at presenting their work and responding to questions, and we all learn a lot. Some of us have learned much of what we know about modern molecular biology from thesis presentations by our students. This year's group is listed below.

Student	Advisor	Topic
Roxanne Atienza	Christian Rojas	Synthesis of Amino-sugars via Metallanitrenes
Esther Francisco	Jan Kitajewski (P&S)	Notch Signaling in Endothelial Cells
Rayna Goldstein	Ann Shinnar	Localization of Squalamine Biosynthesis in Livers of Shark Species
Hyon Ju Park	Ann Shinnar	Towards Understanding the Biological Role of Bromotryptophan in Hagfish Intestinal Antimicrobial Peptides
Kseniya Petrova	Tae-Wan Kim (P&S)	Processing of the p75 Neurotrophin Receptor by Alzheimers' Disease-Linked γ -Secretase
Sahar Saddoughi	Jack Norton (CU)	Relationship between the Mechanism of Hydride Transfer and the Direction of Ring Opening in Protonated Epoxides and Aziridinium Cations
Abigail Smenton	Christian Rojas	Use of Metallanitrenes in Amidoglycosylation as a Synthetic Pathway to 2-Amino Sugars
Kate Zelenova	Dina Merrer	Mechanism of Singlet Carbene Addition to Benzocyclopropene

Our students continue to excel. Special recognition for 2002-2003 went to the following:

Prize won in college-wide competition

Alpha Zeta Club Graduate Scholarship

Hyon Ju Park

Departmental Prizes

CRC Prize for excellence in First Year Chemistry

Carolyn Olson

ACS-PMSE Prize for excellence in Organic Chemistry

Sonal Patel

ACS Prize for excellence in Analytical chemistry

Montana Childress

Departmental Prizes (continued)

Marie Reimer Prize: outstanding junior Chemistry major	Karen Chang
American Institute of Chemists Prize: outstanding senior in Biochemistry	Hyon Ju Park
Ira and John Kauderer Prize: premedical student majoring in chemistry	Kseniya Petrova
Hughes Summer Internships	Aimee Peck, Lauren Tal, and Louisa Morrison
Bernice G. Segal Summer Internship	Diana Huang and Bridget Marcellino

Fifteen Chemistry and Biochemistry majors have graduated (or will soon graduate) this year. Some know their plans for the coming year, others are still searching: it is not an easy year to find jobs.

Roxanne Atienza, who was a star of the Columbia Archery team, is looking for work.

Esther Francisco continues to work in Prof. Kitajewski's lab at Columbia P&S. She started this work as a junior and continued it for her thesis, so she is now proficient at gene splicing, cloning, and PCR.

Rayna Goldstein was elected to $\phi\beta\kappa$. Rayna will be attending medical school, most likely at Albert Einstein.

Lisa Horwitz will be attending law school at George Washington University.

Jennifer Lo is looking for work; she hopes to find a job in "big pharma".

Judy Pan has not yet decided on her immediate plans, but will be applying to medical school.

Hyon Ju Park was elected to $\phi\beta\kappa$. She will be attending medical school, probably at NYU.

Archna Patel has applied to graduate programs in Forensic Science.

Kseniya Petrova was elected to $\phi\beta\kappa$. She is entering the M.D./Ph.D. program at NYU.

Riffat Rahman and her husband had a son this past fall. Riffat's plans for the future are still open; she is considering teaching.

Alexis Sabo will be working as a lay minister with LAMP ministries in the Bronx.

Sahar Saddoughi will be working in an analytical chemistry lab at General Electric Corporate Research and Development near Albany, NY. She looks forward to spending a year near her family, and anticipates applying to graduate programs in chemistry for the fall of 2004.

Abigail Smenton has landed a job as an associate in Medicinal Chemistry at Merck in Rahway. She has also found an apartment in Greenwich Village.

Kate Zelenova is actively looking for a job; she has one offer and is on the short list at another firm.

Ruo Hong Zhai has not yet made plans. She is looking for work, but may take advantage of the intervening time to travel.

NEWS OF THE FACULTY

Prof. Sally Chapman taught General Chemistry I in the fall. Enrollment remains high: more than 140 eager and hard-working students completed the semester. Talk about feeling old: two students in this class have mothers who also took a chemistry course at Barnard with her: Meira Abramowitz (daughter of Dr. **Shira Burnstein Abramowitz '80**) and Julia Hibbs (daughter of Dr. **Agnes Szell Hibbs '78**). In the spring, Prof. Chapman taught Introduction to Thermodynamics and Kinetics (the first semester of physical chemistry) and the Integrated Lab (Physical, Inorganic, and Instrumental). It had been more than a decade since she had last taught the latter course, so she enjoyed revisiting classic experiments like the visible spectrum of I_2 (often with newer equipment) as well as designing some new ones. Using a new Raman Spectrometer, we do an experiment involving both measurement and modeling of vibrational spectroscopy. The fall, Prof. Chapman was honored to receive a Metro-NY AWIS award as an

outstanding woman scientist, and was touched by the Barnard turnout for the presentation. Sally gave a talk at the ACS meeting in New Orleans on Barnard's first-year chemistry curriculum. Although we have been teaching just one semester of general chemistry (and then embarking on organic in the first year) for almost 30 years, such an arrangement is still deemed innovative. Barnard's chemistry curriculum is mentioned in the National Academy of Sciences 2002 report *BIO2020: Transforming Undergraduate Education for Future Research Biologists*. Prof Chapman continues to enjoy her activities with COACH, a committee promoting academic women chemists. (Web site recommended for the curious: <http://coach.uoregon.edu>) She has also become involved with the ACS PROGRESS program involving visits to chemistry departments. Sally has a sabbatical leave this coming fall, and is hoping to complete two papers as well as to take some time to think about future directions. She just returned from a two-week trip with old friends to Scotland and Ireland.

Prof. Linda Doerr spent the 2002-'03 academic year on Special Assistant professor leave. During the fall she visited collaborators in Oxford, England and Knoxville, Tennessee and gave talks at Ohio State University, University of Washington, and the California Institute of Technology. From January until her return to Barnard, she worked in the laboratory of Prof. Kit Cummins at the Massachusetts Institute of Technology, where she also gave a talk. The Doerr group has published a paper in the *Journal of Molecular Structure* called "Short, strong hydrogen bond between an aryloxide and phenol in aprotic media". At the spring ACS meeting in New Orleans she co-organized a symposium entitled "Program Impact of One Semester of General Chemistry".

Prof. Elizabeth Kujawinski taught general chemistry II once again this spring. Together with Prof. Merrer, she acquired a high-resolution GC/MS/FID to be used for research. This instrument was funded by a grant from the National Science Foundation with some matching funds from Barnard. In addition, she was awarded a PRF grant to examine the role of microorganisms in breaking down organic compounds in aquatic systems. She is taking a research cruise from Woods Hole in June.

Prof. Leslie Lessinger was kept very busy teaching, as chair of the chemistry department, and as co-director of the Centennial Scholars program. His courses were all junior/senior level, and included quantum chemistry, methods and applications in physical chemistry, and the first semester of the integrated laboratory course. Students now get a good introduction to modern molecular calculation methods, database programs, and basics of spectroscopic theory in the quantum course. If you haven't watched an animation of the normal modes of vibration of spiropentane, you haven't lived! In methods and applications, students go through the actual process of solving a crystal structure and drawing chemical conclusions from the unexpected result, as they follow a very nice paper by F. A. Cotton and co-workers. The lab course now includes a group project on the synthesis of a series of solid solutions, the distinction between a homogeneous solid solution compound and a heterogeneous mixture as nicely shown by X-ray diffraction, and a fun examination of magnetic properties of all the samples together, with thanks to Prof. Tim Halpin-Healy of Physics for the loan of his huge powerful horseshoe magnet.

Work continues on developing the new course on the chemistry and physics of materials, with experiments in optical properties, liquid crystals, surface imaging, and purification of solids by zone refining coming on board this year.

Prof. Lessinger did a lot of work in drawing architectural plans and generally keeping an eye on the progress of present and future work in renovating the organic laboratories and the whole seventh floor of Altschul, which is a top priority for the college's fundraising efforts; renovation of Linda Doerr's laboratory and the sixth floor instrument room, and the creation of two office and storage spaces on the sixth floor; and the proposed conversion of the chemistry library to laboratory space for a new faculty member and for new courses. We have to do this to implement in practice the hiring of the two new faculty members we are authorized to have, but currently cannot provide lab or office space for. So lots of pushing, pushing, pushing and administrative work lies ahead, but the department will be immensely strengthened in the near future.

Our seniors did very nice work on their theses this year, and Prof. Lessinger was happy to sit on four of the examination committees. He learns a lot of chemistry from these students, and is pleased that their intense efforts often yield such good results. We have a good group of juniors and an even larger group of sophomores, many of whom are very interested in research and have begun this summer working with faculty in the department.

Prof. Dina Merrer taught Organic II and I lectures in the fall and spring semesters, respectively. She is excited to continue teaching the same group of Organic students from this spring through Organic II in the fall. On the research front, Dina continues her computational investigation into the reaction of dichlorocarbene with 1,2-disubstituted cyclopropenes. She also supervised the senior thesis research of **Ekaterina (Kate) Zelenova '03**, who worked on the mechanism of singlet carbene addition to benzocyclopropene. A recipient of an Eli Lilly/Women Chemists Committee travel award, Kate traveled with Dina to the ACS Meeting in New Orleans in March, where each presented her research. **Annice Ormiston '05** also conducted research in the Merrer lab during the fall and spring semesters. This summer **Diana Huang '05** and **Marina Khrapunovich '06** join the Merrer group to examine further the mechanisms and kinetics of the intermolecular reactions of singlet carbenes. Additionally, Diana has been awarded a Bernice Segal fellowship for the summer. The Merrer group is enthusiastic about quantifying their results using the new GC/MS/FID that was acquired through an NSF grant (\$90,049) written with Liz Kujawinski (Chemistry and Environmental Science). Dina sends congratulations to the Class of 2003 and hello to all Chem/Biochem alums.

Prof. Christian Rojas published a paper on iron(II)-mediated nitrogen insertion reactions for amino sugar synthesis in *Tetrahedron Letters* (2002, **43**: 7225-7228) with David Churchill of Columbia, who did the X-ray crystallography. He gave talks at the National ACS meeting in Boston last August; at Albany Molecular Research, Syracuse NY, in October; and at the Columbia University Organic Chemistry Colloquium in March. Christian taught the Advanced Organic Laboratory last fall and was off from teaching during the spring semester thanks to a course release for assistant professors. He is looking forward to teaching a new Advanced Organic Chemistry lecture course with Asst. Prof. Dina Merrer in the spring of 2004. His daughter, Sidney, 4, just finished a year of nursery school, while Alice, 2, will be going to the Barnard Toddler Center next year.

In addition to teaching biochemistry (lab in the fall, lecture in the spring), **Prof. Ann E. Shinnar** coordinated the Senior Thesis Seminar and taught our new Senior Colloquium (CHE 3590). Under the theme "Chemistry and Society," Dr. Shinnar and eight seniors focused on five major contemporary issues: nuclear chemistry (theory and applications), pharmaceutical development, environmental chemistry, ethics and integrity in science, and women in science. Dr. Shinnar continues to do biochemical research with hagfish, lamprey, and sharks, characterizing their antimicrobial compounds. In January, she participated in the annual meeting of the Society for Integrative and Comparative Biology (SICB) in Toronto. She gave a talk, "Innate and adaptive immunity in hagfish: role of cathelicidin antimicrobial peptides in the hagfish gut," based on work with collaborators from the former Magainin Pharmaceuticals Inc., and she also presented a poster, "Biosynthesis of squalamine in various shark species," co-authored with **Christine Musich '02**, **Joan Shu '01**, and 3 collaborators from Norway. On June 9th, Dr. Shinnar went to the ACS Middle Atlantic Regional Meeting at Princeton University, where she gave a keynote talk entitled "Hagfish Cathelicidins: New Insights into an Ancient Gene Family and the Role of Protease Resistance". A number of publications reached fruition this year: Basañez, Shinnar, and Zimmerberg "Interaction of Hagfish Cathelicidin Antimicrobial Peptides with Model Lipid Membranes," *FEBS Letters* **532**: 115-120 (2002); Uzzell, Stolzenberg, Shinnar, and Zasloff, "Hagfish cathelin-associated antimicrobial peptides and genes," *Patent Application*, PCT # WO 03012044, February 13, 2003; and Shinnar, **K. Curran '02**, and **H. J. Park '03**, "Cathelicidin Antimicrobial Peptides: Proteolytic Processing and Protease Resistance," *Bioorganic Chemistry*, in press. "Lamprey Intestinal Antimicrobial Peptides," a manuscript co-authored with **Rachel Mandell '96**, **Olga Fishman '98**, **Sheng-Ching Wang '96**, and **Tiffany DeSimone '02** was submitted to *Comparative Biochemistry*

and Physiology, and received a conditional acceptance (pending revisions). The most active project this year focuses on which sharks produce antimicrobial aminosterols such as squalamine. Student participants working with (smelly) shark livers include **Eleanor Allen '03** (biology), **Rayna Goldstein '02**, **Lauren Tal '05**, **Aimee Peck, '06**, and **Sevan Ozcetinkaya'06**.

Dr. Meena Rao had a busy and successful year. Both the Modern Techniques and Introductory Organic Lab courses went very smoothly. She reviewed a proposal for the Petroleum Research Fund and she was an honorary judge for the Long Island Science and Engineering Fair. However, her most satisfying moment, she says, was when she was complimented by Prof. Chapman on how nice and organized the Organic Stock Room was. On the personal front, her husband is busy working on a book based on his popular course at Columbia Business School. Daughter Gowri has finished her sophomore year at Princeton, majoring in Mechanical and Aerospace Engineering and minoring in Spanish and Computer Science. Son Gautam finished 7th grade and had an excellent year. He ranked 3rd nationally in a Spanish exam taken by more than 21,000 students and received 1310 on the SAT as a 12 year old.

Mrs. SuQing Liu is proud to report that she received her Masters in Biochemistry from City College last month, completing 10 courses (32 credits). This is her second Masters: she earned the first in Chemistry in China before coming to the USA. She thanks all who helped her. After preparing and assisting in instruction for four lab courses this past academic year, she is now working with Prof. Shinnar improving several of our Biochemistry laboratory experiments.

When **Dr. Toby Berger Holtz '67** wasn't working in the labs and stockrooms, she was busy planning for recent family weddings. We offer her condolences on the death of her mother. **Mrs. Olympia Jebejian** reports no new milestones this year. She enjoys being a grandmother. We continue to rely on the dedication and skill of a number of experienced Laboratory Associates: **Dr. Frances Feerst**, **Dr. Colette Levi**, **Dr. Mandy Bennett**, and **Mrs. Ying Xie**. **Dr. Joy Thomas Kunjappu** taught Chemistry BC3232y for the second year. Dr. Kunjappu is an expert in ink chemistry.

Ms. Gwen Buchanan, Administrative Assistant for the Chemistry and Physics/Astronomy Departments, had a serious health crisis this fall. Prof Lessinger, worried that she was absent without calling in (totally out of character for Gwen), asked Barnard to investigate. Gwen was found, suffering from kidney failure and barely conscious, and rushed to Columbia-Presbyterian. There is a happy ending: after a lengthy convalescence, Gwen is very glad to be back at work in Altschul.

NEWS OF FORMER FACULTY AND STAFF

Dr. Grace King lives in the neighborhood and drops by for a visit from time to time.

Prof. Bernice Segal's daughter, Elizabeth (who is the registrar at Bank Street College), forwarded the following good news about her brother: "[The Pitzer College faculty] has voted to award Professor Daniel Segal, Professor of Anthropology and Historical Studies, the Jean Pitzer Chair in Anthropology. The Chair, established in 1998 by members of the founding family of Pitzer College, is awarded to a senior faculty person who inspires in their students and colleagues an interest in the field of anthropology. Dan, who joined the Pitzer faculty in 1986, has a stellar record of teaching, research, and publication. Dan served for many years as editor of Cultural Anthropology and is currently president of the Society for Cultural Anthropology." Bernice would be so proud.

NEWS OF ALUMNAE

Classes of 2000-2002

Kiryn Haslinger '02 has had a fascinating year, working with Dr. James T. Watson on his recently released book, *DNA*. There is a very warm acknowledgement of her contributions in the introduction. Among her responsibilities, she sorted and selected photographs, interviewed key players, and researched documents. She is now helping to design and write an exhibition for the NY Public Library commemorating the 50th anniversary of the Watson-Crick discovery. Kiryn will be starting graduate school in chemistry at NYU in the fall.

Lisa Perlson '02 reports from Stanford that she received an NSF Graduate Fellowship. Congratulations! She continues: "Things are going really well here. I've started working in the Boxer lab doing Stark spectroscopy of mixed valence metal complexes. So far I've been spending most of my time just learning the theory and how to do the experiments, but hopefully I will start collecting my own data soon. I like the people in the lab, and so far I'm getting along well with Steve, so I think I made the right decision. Besides lab work, I continue to love living out here. My friend and I just got an apartment so that we can move off campus, which I am very excited about. I also just bought a piano. It's from 1901, but it's in great condition and I love the way it sounds. I can't wait for it to be delivered so that I can get back to playing on a regular basis."

Thanh-Nha (Sandy) Cao '02 wrote a year ago: "I am currently taking microbiology to fulfill my pre-pharmacy requirement. I have an interview with Kaiser this Friday for part-time summer job to gain more pharmacy experience. Hopefully everything will work out. Still haven't heard from University of Pacific yet. So crossing my fingers." We hope your plans worked out.

Katie Curran '02 writes about her experiences as a first-year medical student at Columbia: "I've just finished my fifth exam block (out of seven), and the long weekend has given me an opportunity to reflect upon the experience... We have small group sessions each week to discuss the ethical and social aspects of clinical practice, and I take special pride in raising questions and challenging others to re-examine their ideas. I'm sure it irritates some of my classmates, but the fiery discussions at Barnard taught me that openness and debate can be beautiful things. I've discovered that medical school isn't intrinsically difficult, rather it's comparable to drinking from a fire hose: drinking water is a simple task, but not when sixty gallons pound you within seconds. The material is fascinating, and I just wish that we had more time to ponder and to experiment with it. After the emphasis on critical thinking that you and other Chemistry faculty members incorporated into our classes, right now the work feels more like "stuffing" and hoping something sticks, not necessarily learning. ...The faculty members at P&S are truly amazing, very approachable, brilliant and accomplished, and they go out of their way to help students who demonstrate interest. Through contacts here, I've been fortunate enough to start a volunteering program on the pediatric bone marrow transplantation ward; the patients are amazing. The program has allowed me to revisit the tangible impact of the field, and to remember the precious aspects of medicine that can become lost in lectures and textbooks. Last week, I rocked a 10-month old baby, a transplant recipient, to sleep. The week before that, I had the opportunity to see a patient off as she left for home, her cancer in remission." We understand that Katie was just married. Congratulations!

We were pleased to see **Christine Musich '02** and her mother at the Barnard Summit in April. Christine has been working at Albany Medical Research this year, and plans to enter graduate school in chemistry at U.C. Berkeley this fall. Congratulations, Christine!

Alison Rinderspacher '01, an English major at Barnard, took many chemistry classes here and is now a graduate student at Dartmouth, working with heterocyclic chemist Gordon Gribble.

Classes of the 1990's

Cindy Kan '99 wrote from Stanford, where she is a graduate student in synthetic organic chemistry. "Life is okay here in sunny California. I have learned a lot in my 2.5 years here and I feel that I am wiser, although not yet wise enough." She continued with a question about rate-limiting steps. We hope to answer it soon. Cindy's work goes well in Prof. Paul Wender's group: two papers were published in the last year, one in *JACS*, and one in *Pure and Applied Chemistry*.

Hannah Storrie '99 visited Barnard in April. Things are going very well in her graduate study at Northwestern. She is making good progress, working in the research group of Prof. Sam Stupp. The group designs materials for a variety of biomedical purposes.

Last we heard from **Moushumi Paul '99** she was training to participate in a 40 mile Avon two-day Walk for Breast Cancer in early June. We hope it went well. Moushumi is a graduate student in Chemistry at The University of Illinois in Urbana-Champaign.

Christine Dunham '97 wrote recently: "I am graduating in June from the University of California at Santa Cruz with a Ph.D. from the Department of Chemistry and Biochemistry. My Ph.D dissertation advisor is William G. Scott who is a young faculty member: I will be his first student to graduate with a Ph.D. We study macromolecular x-ray crystallography specifically on RNA enzymes (or ribozymes) or RNA-protein complexes with an emphasis on time-resolved crystallography. We are really at the forefront of studying enzyme mechanisms inside crystals and it has been truly exciting. As for my future plans, I have accepted a postdoctoral position with Venki Ramakrishan at the LMB (Laboratory of Molecular Biology) of the MRC (Molecular Research Council) in Cambridge, England where I will be expanding my crystallographic education by working on a much larger ribozyme: the ribosome. Hopefully we will be able to perform time resolved crystallography on the ribosome and see functional states at a higher resolution. I have really enjoyed living in California and I hope to maybe come back once I finish my postdoctoral training. But then again, I also miss New York City so maybe I will be back there in a few years!"

Eileen Doyle Bayman '97 writes: "Darren and I just bought a condo here in Carmel Valley, so we'll be staying a while. I was also just in contact with **Rebecca Begley '97**, who is up at Stanford. Hopefully we'll be able to meet half way at some point. Work is going well, I'm on a much more productive project now, our team has tripled from 3 to 9, we have chemistry support, biophysics, high throughput screening, and biochemistry. I've been learning tons more, protein purification and all sorts of molecular biology that I have not explored in depth before this. It's pretty cool; I never would have thought two years ago that I would be here in a job and getting so much out of it, but it seems fate is taking care of me because each new situation I get into complements the last. ...It's nice to finally be one of those Women in Science professors are always teaching about."

Natalie Seiser '97 is completing her second year of Medical School at NYU. She sent us some news of her classmates: "**Aly Abbasi** had a baby girl in May [2002]. She still lives in Dallas. I also ran into **Janet Yee**, and I think she was working in finance. I did some tissue engineering research for a plastic surgeon here at NYU Med this summer. That was a lot of fun."

Classes of the 80's

Marialisa Ascione '85 dropped by last August, along with her 12-year-old daughter. Lisa is an OB/GYN at NYU.

Susan Hausmann Saffar '83 writes: " I live in Rockland County, NY and have an 11 year old son Justin. After leaving Barnard, I worked full-time and received my M.S. in Chemistry (but of course!) from St. John's University. My current position is Manager, Corporate Compliance (which includes Quality Assurance, Quality Control and Analytical Services) for Glatt Air Techniques in Ramsey, NJ. Glatt

manufactures pharmaceutical products for other companies. In the past 2 years, Glatt started the Analytical Services group to perform testing in-house for customers. We now have revenues (similar to your grants!), we've grown, purchased state-of-the-art equipment, hired several chemists and are actively searching for at least one more chemist. My cousin, **Adrienne Raphael Farid '82**, is a Group Leader at Hoffmann La Roche in Nutley, NJ. I see her several times a year. She has 2 boys and lives in Short Hills, NJ."

Karen Goldberg '83 wrote in December: "Just thought I would drop you a quick line and let you know that Linda Doerrer visited us at the University of Washington yesterday. She gave an excellent seminar. The amount of work that she has accomplished in such a short time is really impressive. ...In other news, I am having my second child on Tuesday (Barnard class of 2024?). I am planning on attending the New Orleans Spring ACS meeting with the baby. ...Hopefully she will be a good baby and the trip won't turn out to be a disaster."

Prof. Lessinger ran into **Carol Eliason '81** with her husband and 5-year-old daughter at the South Street Seaport last summer.

We had the incorrect location for **Dorothy Beckett '80** in the last newsletter. She has been a Professor at the University of Maryland in College Park since February of 1999.

Caroline Frottier McCarthy '80 brought us up-to-date of her news: "I spent two years in the chemistry PhD program at Penn, and then transferred to the Veterinary School, I received my degree in 1986 and an MBA from Wharton in 1987. I married an American chemistry grad student while at Penn and we have 2 children who were born while we were at grad school. Since then we have been shuttling back and forth between the States and England as we don't seem to be able to make up our minds on which continent to live. Our daughter is a pianist (I guess that having two scientist parents inspired her to go into the arts) and our son is in the International Baccalaureate class at the American school (taking chemistry high placement if you please!)" Caroline reports that on a recent visit she "also saw **Jean Baum '80** during that time (she's a professor at Rutgers now) and we reminisced (rather sentimentally) about our classes.

Classes before 1980

Diana Caspar '78 called the department recently. A neuroscientist at Montefiore Hospital, Diana studies Parkinson's Disease. She called to tell us about a job opening; we appreciate such calls. Diana sent along a reprint of a recent paper in *Cell Transplantation*.

Pearl Steinmetz-Herskovitz '75 writes: "My family and I made aliya (moved) to Israel in 1986, a year before the first intifada. I've been working as an attending radiologist at Rabin Medical Center in Petach Tikva since 1987, since 1993 at the Golda Campus. I am head of the CT Service. Except for the current very difficult terror situation, I like living here, though I do miss certain things about America, mainly people's capability to walk around inside each others' shoes and their ability to plan for the future. My oldest son, Yaakov, is in the Israeli Defense Forces doing his required 3 years. Our middle son, Netanel, 17½, is graduating from high school next week. He was "moderately" injured in a "suicide" bomber attack in March, 2001 (one of the first such) and, as a result, is blind in his right eye. He goes about living as usual, a very brave, very realistic young man. Our youngest, a daughter, Re'ut (means comradeship) is 5 years old, a great age. My husband works in Occupational Safety and Health, a field he also worked in while in the States."

Jackie Barton '74 was the featured speaker preceding the Columbia chemistry awards dinner this May. Her talk was "DNA Charge Transport in Chemistry and Biology". Several Barnard seniors enjoyed getting a chance to talk to Jackie following her talk. Jackie gave the Ullyot Public Affairs Lecture at the Chemical Heritage Foundation in September 2002.

Barbara Hudson Roberts '65 is Director of the Women's Cardiac Center at the Miriam Hospital, the first women's cardiac center in Rhode Island. She continues: "I carry on an active practice in adult

cardiology seeing both men and women patients, and am an Associate Clinical Professor of Medicine in the Brown University Medical Program."

CLOSING REMARKS

As usual, we take this opportunity to remind you of two important funds at the college. Both continue to grow, thanks to your generosity. **The Edward J. King Memorial Fund**, in honor of Prof. King, chemistry Chair from 1960 to 1973, provides research assistance for junior faculty throughout the college. Awards this year totaling \$10,500 went to **Hilary Callahan** (Biology) "Response of seed and seedling traits to long-term experimental nutrient manipulations", **Janet Larkin** (Biology) "Trafficking of ABC Transporters in Hepatocytes", and **Anne Senghas** (Psychology) "The Emergence of Grammatical Structure in Nicaraguan Sign Language". The **Bernice G. Segal Memorial Fund** originated with a fund set up by Prof. Segal in her lifetime, assigning a share of the proceeds of her textbook. The fund, which provides summer fellowships for science students to do research at Barnard, continues as a memorial to her. Prof. Segal recognized what is very much true today: without generous stipends, financial pressures prevent needy students from availing themselves of important research opportunities. To make a donation to either fund, please send a check to the Development Office, payable to Barnard College. *Please specify clearly the fund to which you wish your gift applied.*


Keep in touch. We enjoy hearing from you and sharing your news. Faculty e-mail addresses are (initial-name)[@barnard.edu](mailto:initial-name@barnard.edu), e.g. llessinger@barnard.edu or schapman@barnard.edu. Phone calls are welcome too (Lessinger: 212-854-8461; Chapman: 212-854-2098; others can be found in the directory on Barnard's web page), as is old-fashioned mail. Our apologies if any news above is incorrect: we sometimes assemble information from incomplete sources and not always reliable memory. Please write, and we will happily make corrections or add more personal details.

As you probably know, the ACS National Meeting is in New York this September. If you are coming, and would enjoy a Barnard get-together, perhaps over dinner, send e-mail to schapman@barnard.edu, including times you would be available. If there is sufficient interest, we will make arrangements. You are always welcome to come to campus for a visit.

With warmest regards,



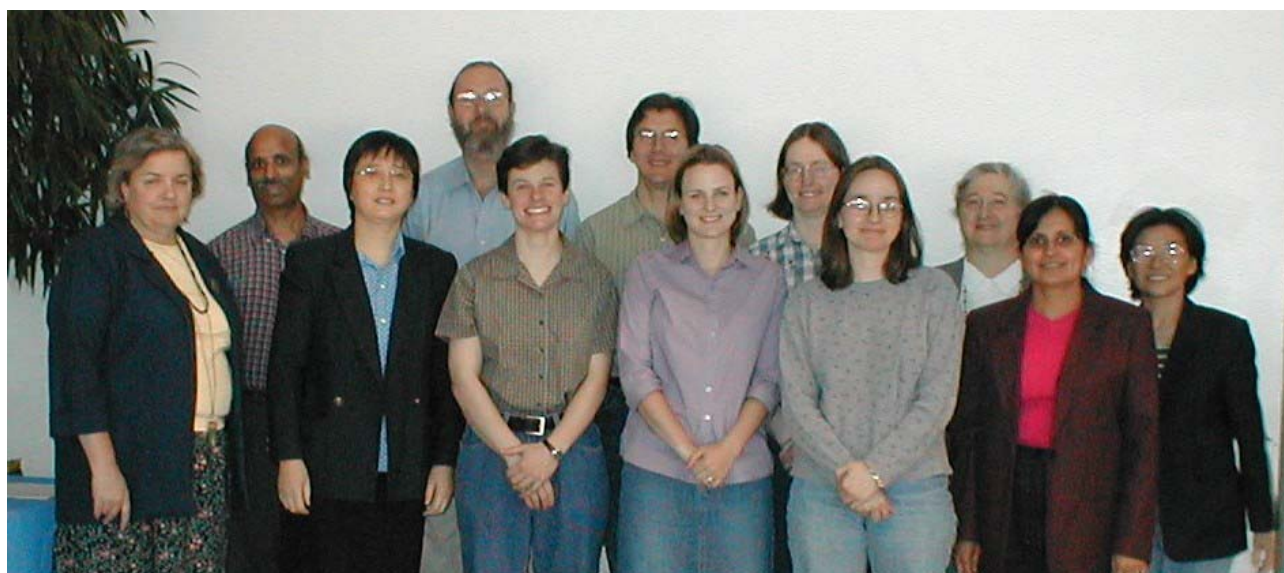
Sally Chapman
Professor



Leslie Lessinger
Professor and Chair

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Chemistry Department, Spring 2003: S. Chapman, J. Kunjappu, S. Liu, L. Lessinger, D. Merrer, C. Rojas, J. Pellois, A. Shinnar, E. Kujawinski, T. Holtz, M. Rao, Y. Xie (missing: M. Bennett, R. Black, G. Buchanan, L. Doerrler, F. Feerst, C. Levi, S. Shapiro, L. Shifley)