

## ***Start-up fund study described***

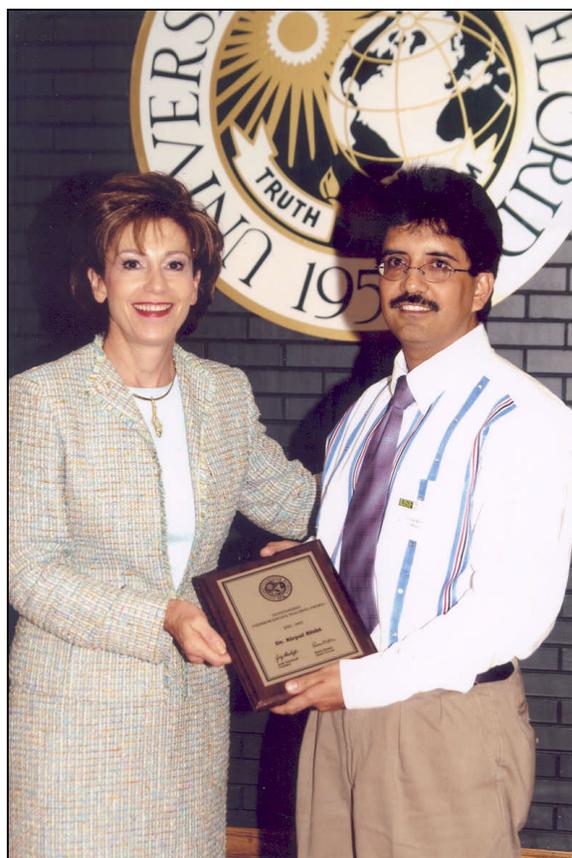
**Dr. Mike Zaworotko** described a study of the impact of start-up funds given to department faculty members in recent years. These are funds that are provided to new faculty members to initiate their research programs when they join the department. Such funds are highly competitive these days, and the so-called “start-up package” may often determine whether a prospective faculty member will elect to join the chemistry faculty of a given institution. Rather than a cost, these funds are really an investment that is ultimately expected to pay off in the form of research grants that bring with them prestige, support for graduate students and overhead funds to support the indirect costs of the research.

The study reported at a recent Department of Chemistry Faculty meeting looked at the costs associated with new faculty starting with **Dr. Kyung Jung** (who came in 1996 and is now a tenured associate professor and Coordinator of the Division of Organic Chemistry). The study included ten other faculty members who joined subsequently through **Dr. Eddaoudi** (2002). The total start-up cost, provided entirely by the University, was \$3.2 million. By comparison, Dr. Zaworotko found that the total value of grants and contracts raised by these faculty members has already totaled \$7.9 million and that the amount of overhead that they generated was \$1.95 million.

“We have hard numbers to show the value of these good investments,” declared Dr. Zaworotko. “The success of the recently hired faculty should help us in the future when it comes to allocating positions and start-up funds for new faculty members.”

## ***Recognition***

Dr. Kirpal Bisht, Assistant Professor of chemistry, received an “Outstanding Undergraduate Teaching Award 2002-2003”



*Dr. Kirpal Bisht receiving Outstanding Undergraduate Teaching Award from President Genshaft.*

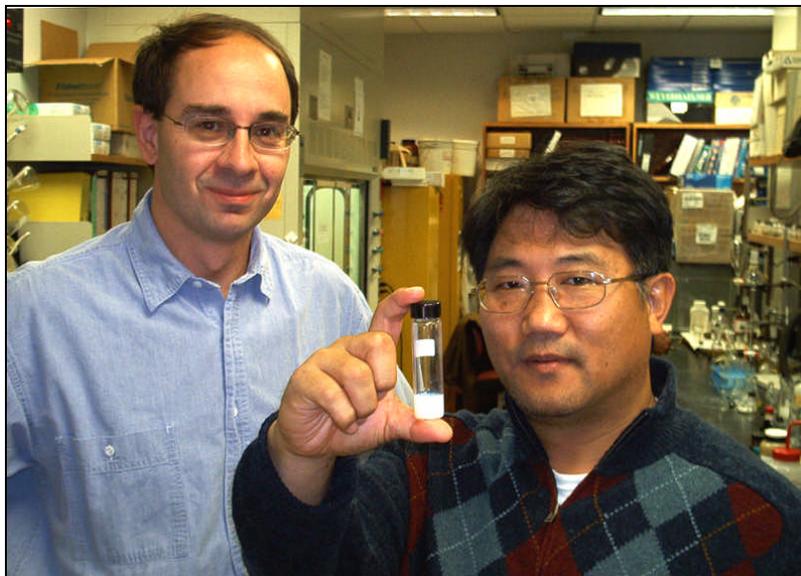
from President Genshaft and Interim Provost Khator recently. He was recognized for his creative efforts in teaching organic chemistry. Students commented favorably on his making the notes on PowerPoint available in advance of the lectures and for his use of Internet and web-based technologies in the course, as well as for his encouraging comments during lectures.

### **Spotlight on**

*[We hope to provide a description of the research of a current faculty member in each news letter]*

The research of **Dr. Ed Turos** was featured recently. “USF chemists have developed new synthetic antibiotics and a nano-sized delivery system that successfully attacks drug-resistant bacteria in the body” was the lead of a story in the USF Oracle featuring research done by Dr. Ed Turos, Professor of Chemistry, and students in his research group.

Dr. Turos noted that methicillin-resistant staph (MRSA) bacteria are responsible for most hospital-borne infections as well as those found in homes. Antibiotics developed by Dr. Turos and collaborators target only certain bacteria and not the



*Dr. Ed Turos and Jeung Yeop Shim.*

useful microbes found in the human body.

In addition their efforts are concerned with a nano-sized delivery system that was developed by then doctoral candidate, **Jeung-Yeop Shim**. Dr. Shim was quoted as estimating that the nano-particles containing the synthetic antibiotics are 20 times the strength of commercial antibiotics.

The small size of the particles allows them to pass easily through the blood stream, and possibly even through blood-brain barriers, according to Turos. The system is a polymer ball coated with the antibiotics the groups has synthesized. This nano-particle can travel to the targeted bacterium, by-passing others, and attach itself to the wall or membrane of the target

bacterium. The researchers have found that the systems have a high selectivity for MSRA bacteria. The “why” remains to be determined by project collaborators.

The project is supported by a grant obtained by Dr. Turos from NIH.

**Dr. Turos** and his collaborators are considering another feature of the work - detection of bacteria, e.g., those used by bio-terrorists. Dr. Shim commented that instead of three days, the nano-particles might be able to detect appropriate bacteria in a matter of minutes.

## ***The joy of our present, the hope of our future***

*[Editor's note: it was suggested that we feature a current graduate student in each issue, and this we are happy to do with copy provided by the person being featured.]*

**Heba Abourahma** was born and raised in Kuwait City, Kuwait before she moved with her family to Halifax, Nova Scotia in 1992. There, she attended Saint Mary's University where she obtained her B.Sc. with honors in chemistry. She then moved to Ottawa, Ontario to attend the University of Ottawa and obtain her M.Sc. in organic chemistry. She joined the chemistry department at the University of South Florida in the spring of 2000 to work on her Ph.D. under the supervision of Professor George Newkome in dendrimer chemistry. In the spring of 2001, upon relocation of Professor Newkome to Akron, Ohio, Heba joined the group of Professor Zaworotko to continue her Ph.D. work in the area of supramolecular chemistry. She is currently a visiting assistant professor at Eckerd



*Heba Abourahma*

College in St. Petersburg where she teaches general, organic and inorganic chemistry. Heba plans to finish her Ph.D. work and graduate in May of 2004.

## ***We hear from alumni***

**Bibi Ephraim** (Ph.D. '95) worked with Dr. Meisels then pursued a study in information management at UC-Berkeley. Subsequently he accepted a position in the area of information and knowledge management with Hewlett Packard.

**Dr. Joanna Fowler** (B.A. '64), Senior Chemist, Brookhaven National Laboratory was the Fall 2003 Barbara and Dean Martin Lecturer. Her seminar was entitled "Imaging Drug Addiction in the Human Brain". Dr. Fowler was elected to the National Academy of Sciences in May 2003, and she and her husband, Dr. Frank W. Fowler (B.A. '64), Professor of Chemistry at SUNY-Stony Brook, were named "Outstanding Chemistry Alumni" at an April, 1994 Undergraduate Awards Banquet.

**Kenneth H. Heffner** (Ph.D. '03) is a Senior Staff Design Engineer in Aerospace Electronic Systems of Honeywell (Clearwater, FL). We were visiting with him in front of the Science Center and asked him to bring us up to date, and he wrote: "As Honeywell's campus manager (Recently appointed) for the University of South Florida, I have an interest in topics that range from USF research initiatives pertinent to our core technologies to recruiting Engineering, Physical Science and Computer Science students has application to what I do here. I look forward to the next newsletter."

**Ron Lobosco** who published with a couple of members of the chemistry faculty is a

Chemist I at SWFWMD in the same laboratory as Jackie Robbins.

**Venkatraj Narayanan** (M.S. '93; Ph.D.'97) wrote: "Thank you for the newsletter. As usual it is heartwarming to read it and look at pictures that take you back down memory lane... On our side we are doing fine. I recently became a father. My son is 4 months old and his name is Pratyoosh. He is quite playful and keeps us busy. I work for the beverages division of Unilever lab in [Bangalore] India. Please keep sending in your emails and newsletters."

**Yixue Pan** (M.S. '92) is a Programmer Analyst for at PCSU Financial Services.

**Anil Patri** (Ph.D. '99) was a post-doctoral associate with Dr. Don Tomalia (University of Michigan) on PAMAM dendrimers then joined the Center for Biologic Nanotechnology at Michigan as a Scientist. He continues to work on dendrimers and their applications.

**Jackie Hohman Robbins** (M.S.' 92) since graduation has been associated with Southwest Florida Water Management District (SWFWMD) in Brooksville, where she is a Chemist II in the Resource Management Department Water Quality Laboratory, and we hear great things about her from our sources there. She wrote: "I remain very busy at work, the Perkin Elmer 4300 DV is a great machine, in the last year I completed over 12,000 metals tests. It keeps me busy! I have been at the District nearly 11 years, and plan to stay until retirement."

**Robert E. Summers** (BA '01) is a Development Chemist at Transitions Optical, Inc in Pinellas Park.

**Chuhua Wang** (Ph.D. '98) wrote that he enjoyed the last newsletter. He is employed by Technic, Inc in RI and is busy supplying technical support for the firm's Chinese facility in Shanghai as his firm expands its business there in semiconductor materials.

### ***Remember when?***

Tony Gambino (Ph.D.'93) is pictured at the '90 Open House describing his research to an unidentified visitor. Drs Jack Fernandez and Stewart Schneller are pictured in the background. Dr. Gambino is Professor of Chemistry and Chair of the Natural Sciences Department at Manatee Community College.



*Anthony J. Gambino (Ph.D. 1993)*

## ***What are they up to?***

What happens when faculty members retire? It depends, of course.

**Dr. Robert S. Braman** and **Dr. Jesse S. Binford** (who retired at the end of the spring 2003 term) were both awarded status of Professor Emeritus.

**Dr. Jack E. Fernandez**, Professor Emeritus, and his wife spent a week in Paris and three in Spain last fall.

**Dr. T. W. Graham Solomons** continued to work on his popular textbook "Organic Chemistry" that is now in the 8th edition, which was co-written with Craig B. Fryhle (Pacific Lutheran University). The text is being used at USF and is widely adopted. He spends time in England at his home in Surrey and he also spends time at a family home that he renovated in McClenandville, SC.

**Dr. Terence C. Owen**, Professor Emeritus, continues to synthesize organic compounds. In 2003, he obtained a prestigious Dreyfus grant that supported a collaborative effort with Dr. David Merkler, a member of the Biochemistry division and Associate Chairman. The funds supported an undergraduate student to spend the summer working with the two chemists. In addition, a patent that he obtained in 1993 has been very popular and the compounds that he described are used in the detection of tumors.

**Dr. George Wenzinger** joined us at a dinner for Dr. Joanna Fowler in November.

## ***Graduate student support***

Graduate students in the Department are supported by teaching assistantships and

research assistantships, but it is desirable to have additional support to help the good students that we have attracted and to attract even better ones.

Thanks to a generous endowment from the late Mr. and Mrs. Tharp, funds are available for summer research stipends for outstanding students. In the past, these funds were used to assist students to attend national meetings, and we hope to attract additional funds to support this worthy activity.

In addition, outstanding graduate students are recognized and given additional support thanks to helpful donors who established three funds:

The **Theodore and Venette Askounes Ashford Fellowship** provides \$1,000 to an outstanding graduate student, based on a decision by a panel of faculty members. The endowment was established by Dr. and Mrs. Ashford. He was the first chemist to be hired and was the first full professor. A son, Robert Ashford, Ph.D., J.D. presented the Award last spring. The award was first presented in 1983 to Jack Linn, a doctoral advisee of Dr. Robert S. Braman.

The **George Bursa Award** (\$1000) is awarded annually to a person who has provided outstanding service to the Department and/or the Department. The fund was started by Dr. and Mrs. Dean Martin in 1997.

The **Alexiou Award in Environmental Chemistry** (currently \$500) was first awarded in 2002 and is presented to a student who a committee judges is doing outstanding work in the field of environmental chemistry. The Award was established with a \$10,000 donation by **Nicholas G. Alexiou**, M.D., M.P.H., a

retired physician and member of the Institute for Environmental Studies Board of Directors.

### ***News and feedback...***

For additional information about our faculty, students, and programs, please see our Departmental Home Page:

<http://www.cas.usf.edu/chemistry/>.

And if you have news for us, contact us at:

[dmartin@chumal.cas.usf.edu](mailto:dmartin@chumal.cas.usf.edu).



*NES Building, facing west. February 26, 2004.*