

## Student Award Day April 25, 2003

Student Award Day was held on April 25, 2003. Dr. Sara Risch, CEO of Science By Design, gave the Award Day Lecture entitled "The Flavor of Chemistry, the Chemistry of Flavors".

"We eat food for basic nourishment, but also for the enjoyment that it gives us. One big part of that



Judges, left-right: Dr. Gul Afshan, MSOE (PhD '99); Dr. Sara Risch, Science By Design; Dr. Roy Vargas, MATC (PhD '93).

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enjoyment is the flavor of the food. Many people will try a product once, but if it doesn't taste good, they will not try it again. Flavor chemistry is a fascinating area of research covering the analysis of what contributes to the flavor of the products that we eat to development of flavors that will work in a wide variety of products to the quest for new and unique flavors."

The research poster competition for undergraduate and graduate students was also held. Judges included Dr. Gul Afshan, MSOE; Dr. Roy Vargas, MATC; and lecturer Dr. Sara Risch.

#### Graduate Level

##### *1st Place Keith Hall Award for Excellence in Graduate Research*

Jose Gomez: Stabilization of O<sub>2</sub>Fe(II) Bleomycin by DNA and Crystallization of MetalloBleomycin - DNA adducts.  
Advisor: David Petering

##### *2nd Place Keulks Award for Graduate Research*

Jason Harb: Studies of the Chemical and Physical Speciation of Polycyclic

Aromatic Hydrocarbons in Sediment.  
Advisor: Joseph Aldstadt

##### *3rd Place McFarland Award*

Christopher Johnson:

Advisor: Alan Schwabacher

##### *4th Place McFarland Award*

Luke Burkholder: Probing a Chiral Surface Template.

Advisor: Wilfred Tysoe

##### *5th Place McFarland Award*

Darin Evans: Proline-directed Kinase Motif is Essential for Proper Functioning of Vp11 in the Vaccinia Virus Life Cycle.

Advisor: Michael Reddy

#### Undergraduate Level

##### *1st Place McFarland Award*

Syeda Fizia Rizvi: The Chemistry Behind Breast Cancer Chemotherapy.  
Advisor: Tom Holme

##### *2nd Place McFarland Award*

Terry Clayton: Stripping Potentiometry Studies of Inorganic Arsenic Oxyanions at Trace Levels.

Advisor: Joseph Aldstadt

## 2003 Academic Awards

Louise A. Arndt Fellowship	Luke Burkholder
Trevisan-Fueger UWM Chemistry Award	Terry Clayton
Outstanding Freshman Award	Rebecca Banks
Chemistry Emeritus Award, Outstanding Junior	Nicole Adamczyk
Outstanding Senior Award	Elizabeth Watt
Charles B. Gates Award	Heather Hewitt
Outstanding Performance in Analytical Chemistry	Terry Clayton
Outstanding Performance in Biochemistry	Alphonso Amaya
Outstanding Performance in Inorganic Chemistry	Paul Henning
Outstanding Performance in Organic Chemistry	Tanya Lynn Mau
Vanselow Award in Physical Chemistry	Elizabeth Watt
Outstanding Teaching Assistant Award	Jason Harb/ Darin Evans

## Highlights from the Chair



You do us proud! Thanks for your support and thanks for the time you spent with us. We couldn't

succeed without you. Chemistry isn't social science but it sure depends on the people who become (and are) chemists.

Now for some news. First, our newsletter may need a name change. We have become the Department of Chemistry and Biochemistry. Any ideas? Email them to us at: chemdept@uwm.edu.

Second, enrollments are up. Freshman courses increased by about 20%. It appears we will have about 18 new graduate students. As usual, most came in fall, but we expect a half-dozen more in January. Faculty enrollment is up by one. Please welcome Professor Guilherme Indig. Gil's background is physical and organic, and his research is focused on areas of photochemistry and photobiology. The main objective of his research program is the development of new modalities of cancer treatment.

Third, faculty enrollment should continue to increase. Our young faculty are a large part of our future and we see a bright future for our Department.

I know many of you remember the UWM Science Bags for the public. Our Department has a tradition of strong contributions to this series. In 2003 Professor Dennis Bennett (inorganic) gave a Bag called "Energy: Use It and Lose It" and

this year our Royal Glassblower Bob Ponton will give a Bag called "A Glass Act". One of your own has contributed in the past. Dr. Roger Schneider (PhD 1982) caused real fireworks! ("The Rocket's Red Glare", 1985)

Some of you may know that our Chancellor Nancy Zimpher has taken the same post at Cincinnati. Nancy did a great job at UWM and we will miss her. A search is underway for her replacement. Professor Robert Greenstreet (Architecture) is Interim Chancellor.

We all — and yours truly in particular — owe Professor Kristene Surerus (biochemistry) a big thank you, a Laurel and Hardy handshake, and much more, for several months of stepping up to Chair while I ruptured my appendix. So give three cheers and one cheer more for Kristene! Professor Mike Reddy (biochemistry) also stepped up as Assistant Chair and his contributions are gratefully recognized.

As you will see, we are all busy and happy in the Department. This is a good time of year, a time for thinking fondly of family and friends and extended family such as you.

There are many special memories I have of Christmas. One that sticks is part of a song told me by my mother and grandmother. "Christmas is a comin' and the geese are gettin' fat. Please to put a penny in an old man's hat. If you haven't got a penny, then a halfpenny will do. If you haven't got a halfpenny, then \_\_\_ bless you."

May your holidays be peaceful and joyful; may the new year be rich and exciting.

Walter Ziegler

## Faculty Spotlight: Dr. Gil Indig

Professor Indig's research interests lie in the broadly defined areas of photochemistry and photobiology. The main objective of his



research program is the development of new modalities of cancer treatment based on selective targeting of neoplastic tissue with highly cytotoxic free radicals and electronically excited species. Professor Indig's work is multi-disciplinary and lies at the chemistry-biology interface. His research borrows modern experimental techniques and theories from fields such as physical-organic photochemistry, biophysics, biochemistry, and cell biology. Work currently in progress in his laboratory focuses primarily on the concepts of mitochondrial targeting and enzyme-directed prodrug therapy.

## Upcoming Events

### March 2004

**Bob Ponton, "A Glass Act"**  
Fridays: March 5th, 12th, 19th, and 26th at 8:00 p.m.  
Sunday: March 14th at 2 p.m.

### April 2004

Student Awards Day

## Alumni Travel Award Recipients



Several UWM Chemistry students traveled to the ACS 2003 Meeting in New Orleans to present posters on a variety of topics. Undergraduates (see photo, right) were awarded a \$1000 Alumni Travel Award and graduate students Sister Mary Rose Atuu and Annie Wearing (l-r, in photo above) were each awarded \$300 for travel to New Orleans to present their posters "Dynamic Kinetic Resolution of Tropic Acid Ester Me-

diated by Ruthenium and Lipase Ps Catalysts" and "Enantiospecific, Stereospecific Total Synthesis of Alstonisine and Approach to the Total Synthesis of N<sub>b</sub>-Demethylalstophylline Oxindole".

The guidelines for receiving alumni travel awards include a student or students' need for assistance with travel expenses related to attending a National meeting and presentation of a talk or poster.



## MASTER'S DEGREES AWARDED 2002-2003

### Zhu Le

Thesis Title: "Reduction of Iron (III) Bleomycin: Reactions with Physiological Reductants in the Absence and Presence of Defined DNA Base Sequences"  
Major Professor: David Petering

### Jose Gomez

Thesis Title: "Stabilization of O<sub>2</sub>-Fe(II)-Bleomycin by DNA and Crystallization of HO<sub>2</sub>-Co(III)-Bleomycin-5'd(CAGCTG)<sub>3</sub>"  
Major Professor: David Petering

## DOCTORAL DEGREES AWARDED 2002-2003

### Yanping Du

Thesis Title: "Expression and Purification of the Vaccinia Viral Major Phosphoprotein Vp11 in Heterologous Systems"  
Major Professor: Michael Reddy

### Dmitriy Krepiy

Thesis Title: "Effect of Toxic Metals on the Finger 3 TFIIIA Folding and Interaction with DNA"  
Major Professor: David Petering

### Kristen L. Murphy

Thesis Title: "Characterization of Isocyanides and their Complexes Chemisorbed to Palladium and Gold"  
Major Professor: Dennis Bennett

### Mark Redlich

Thesis Title: "Synthesis of Asymmetric Iron Lewis Acids and Application to Aziridine Forming Reactions"  
Major Professor: M. Mahmum Hossain

### Marsha Ann Collins

Thesis Title: "Parameterization of Main Group Elements with Physiological Applications"  
Major Professor: Thomas Holme

### Marion Myers

Thesis Title: "The Chemistry of Corrosion Resistant Porphyrinic and Porphyrinogenic Materials"  
Major Professor(s): E. Alexander Hill/James Cook

### Melissa Anne Singer Pressman

Thesis Title: "Development of Novel Analytical Techniques and Methods for the Determination of Trace Chromium in the Environment"  
Major Professor: Joseph Aldstadt

UWM Chemist is written and edited by Laura Hall, with assistance on this issue from Charity Guzmán. The Faculty Advisor is Dr. M. Mahmum Hossain. To contribute alumni news or feedback:

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## Welcome New Faculty & Staff

**Dr. Gil Indig** (Ph. D. University of Sao Paulo, Brazil) has joined our faculty as an assistant professor (biochemical). His work is focused on the development of new modalities of cancer treatment based on selective targeting of neoplastic tissue with highly cytotoxic free radicals and electronically excited species. See more about Dr. Indig's work in this issue's "Faculty Spotlight" (page 2.)

**Tammy Pettera** (BS - UW-Platteville) is on-board as our new Department Manager. Tammy manages all financial, personnel, and logistical activities of the Department. She assists students, staff and faculty daily to guarantee efficient and timely processing of grant proposals, payroll transactions, laboratory set-up, and other administrative tasks.

**Laura Hall**, the department's newest office staff member, has been charged with upgrading/ updating the department's web site at: <http://www.UWM.edu/Dept/Chemistry/> (check the site for our new look in early '04). She will also be working on Grant proposals/ reports and is the new editor of this fine publication, the **UWM Chemist**.

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## Alumni News

**Jeff Coffey** (MS '85, PhD '87) is now professor at Texas Christian University in Ft. Worth, TX.

**Neil Kestner** (BS '60) recently traveled to Iran as part of a National Academies of Sciences/Iranian Academy of Sciences workshop on new directions in higher education.

Neil currently serves as Charles Barre Professor of Chemistry at LSU in Baton Rouge, Louisiana.

**Scott Van Ornum** (PhD '98) is a Senior Chemist with Cedarburg Pharmaceuticals.

**Brian Simmons** (BS '74) is a cardiologist at Cardiology One in Canton, Ohio.

**Mary R. Starich, PhD** (BS '90) completed a PhD in structural biochemistry in 1995 at the University of Maryland - Baltimore. She finished her post-doctoral studies at the NIH in 1997 at which time she accepted a Staff Scientist position with the National Institute for Diabetes, Digestive and Kidney disease (NIDDK). She currently manages a high resonance NMR facility on a part-time basis for the National Cancer Institute and is also a certified Rolfer.

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## Thank you for your contributions!

A big thank you to the following :

### DONATIONS UP TO \$100

Mr. Christopher Whitehurst, Mrs. Mary Coffey, Dr. Jeffery Coffey, Mr. Carl Wolff, Dr. Charles Sundin, Mrs. Shirley Anderson, Dr. Richard Anderson, Mr. Robert Lenga, Dr. Michael Mayer, Dr. Nancy Memmel, Ms. Dale Rae Meyer, Dr. Rosemary Schreoter, Mr. Steven Mark Socol, Mr. John Stodola\*, Dr. Xiaoyun Xu\*, Dr. Thomas Holme, Dr. Steven Chmielewski\*, and Ms. Virginia Chmielewski\*.

### DONATIONS OF \$100-\$499

Dr. Michael DiPierro, Dr. Gene Hiegel, Mr. Neil Kestner, Ms. Carol Koroghlanian, Mr. Eric Raymond

Pohl, Dr. Cristian Soto\*, Mr. David Staats, Dr. Roy Vargas, Dr. Maria Vogt, Mrs. Susan Krezoski, Dr. Gregory Lannoye\*, Mr. Jeffrey Zwickey, Dr. Ralph Vanselow, Dr. Luke Fisher, and Dr. Brian Simmons.

### DONATIONS OVER \$500

Mr. Michael Martin\*, Dr. Roger Louis Schneider, and Mrs. Shirley Weber McLean\*.

*\*Funds matched by employer.*

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## E-News Bits

**E-mail Newsletter.** We would like to increase the number of Alumni receiving this newsletter via e-mail. If you are interested in receiving electronic versions of this newsletter, please send an e-mail to [ljhall@uwm.edu](mailto:ljhall@uwm.edu). Or, early next year, you can fill-out an e-mail newsletter request form on-line!

**Missing Alumni.** Where's the missing alumni list? Check out the new "Alumni" area of our website early next year for our list of "missing" alumni. If you know how to contact one of the "missing", there will be a quick contact form for you to let us know!

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## Assistantship Stipends 2003-04

Incoming first year graduate students will be supported by a combination of a Teaching Assistantship and Chancellor's Graduate Fellowship for a total annual salary of \$19,604. In addition, a \$7,402 academic year tuition and \$3,600 health insurance paid by the University are available for all graduate students. **This brings the total Compensation Package to \$30,606!**

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