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The contents of this Periodic Cable were organized by Dr. Judy Ratliff but it was composed and contributed to by all of the faculty and staff. Any errors or omissions are entirely the responsibility of Dr. Ratliff and she would be grateful if you would bring these to her attention for correction in future Periodic Cables. Phone: (270) 762-6542; FAX: (270) 762-6474; e-mail: judy.ratliff@murraystate.edu; or regular mail:

**Department of Chemistry
456 Blackburn Science
Murray State University
Murray, KY 42071-3346**

Letter from the Chairman



Greeting From All of Us in the Chemistry Department.

Since our last Periodic Cable we have had two faculty members and one Post Doctoral Research Assistant leave us. Dr. Margaret Whalen left us last year shortly after the last *Periodic Cable* to take a position at Tennessee State University in Nashville. We were very fortunate to replace her this year with Dr. Ricky Cox. As some of you know, Ricky got his M. S. degree here at Murray and then went on to get his Ph.D. at the University of Tennessee at Knoxville. We are particularly pleased to have Ricky on board because we already knew from his time here that he not only is an excellent teacher but researcher as well.

This fall, Dr. Lugemwa decided to take a break from academics and has taken a position with the Kairos Corporation in Louisiana. As a result we are presently looking for a new faculty member to replace him. Dr. Muscio is heading up the search for that position in the area of Bio-Organic Chemistry. We are also searching for

another faculty member as a result of Dr. Henley's second retirement this coming spring. As you may recall, Melvin officially retired 3.5 years ago but assumed our ½ time line. We'll all miss Melvin but I'm sure I'll be able to twist his arm for return visits to campus for the Scholarship Tournament as well as the yearly phonathon.

Dr. Loganathan accepted a faculty position at a university in Georgia but is continuing to collaborate with Dr. Owen on several research projects.

Speaking of the phonathon, I once again want to thank all of you for your support every year. Your donations are greatly appreciated. You will find elsewhere in the Cable the names of students who were assisted as a result of your generosity. I am also pleased to note that the Marshall and Annette Gordon Research Grants Program can now provide one research grant each year of up to \$1,500.00. These grants are primarily used to support undergraduate research.

We hope you enjoy this issue of the periodic cable. Be sure to look us up on the web as well. Ricky Cox is our new Webmaster! From all of us in Chemistry, we hope you have a good year.

Jeff Anderson

A View From Over the Hill

by Dr. Melvin Henley

On the occasion of beginning my last year in the MSU Chemistry Department, Judy Ratliff has held a gun on me as a means of forcing me to write my memories of the department. I will choose as my title, "A View From Over the Hill," which, after 35 years teaching in the department, seemed at least apropos.

My first experience in what is now Blackburn Science Building was in 1950. I was a freshman high school student at the old laboratory school, then called Murray Training School, which was located between what is now the National Scouting Museum and 16th Street (the building was torn down in the seventies). I had a morning study hall and was asked by someone from the college (then Murray State College) if I would become a student worker and carry the campus mail for delivery, as that particular period of study hall happened to coincide with their delivery time. A friend and I took the job, picking up the mail in Dean Nash's office, located in what is now Wrather Museum, and distributing it to departments across the campus. The departments housed in the science building were on our distribution list. They were, if memory serves, Agriculture, Biology, and Natural Science (Chemistry and Physics).

The science building had opened in 1949 and had the only elevator on campus -- the freight elevator in the southern part of Blackburn, which was the original part of the present day structure. The elevator required a key to operate, but my friend and I were able to make one from a tin can, thus enabling us to ride up and down with our mail, as well as take joy rides; which we

spent some time doing each time we made mail delivery in Blackburn. Neither of us had ever been on an elevator, and I suspect that this one may have been the first mechanically operated elevator in Calloway County. Certainly, as a poor youth from rural Calloway County, I did not know of another, as a consequence of my not traveling in circles of people who might have the opportunity, or even the need, to ride in an elevator.

Much later, in the spring semester of 1959, having completed four years in the U.S. Air Force and having entered Murray State in the fall of 1958 as a pre-law student I switched to physics, and to the science building. Because the physics course that I had signed up for in the fall of 1958 seemed pretty easy, and this being the post-sputnik era, everyone wanted to be an engineer, and there seemed to be a great number of jobs in this field. Additionally, the G.I. bill paid only \$165 per month for my family of four, and paid for only 36 actual months of schooling. Thus it had become painfully apparent that I would not be financially able to attend law school (the concept of student loans not having yet been thought of). I had completed many of my general education courses at the University of Nevada and at Valley College in San Bernardino, California while in the military, so it was possible for me to begin the physics major in Spring, 1959 and finish my B. S. degree in August, 1961 with majors in physics, chemistry, and mathematics.

In the fall of 1960 I was applying for assistantships in math and physics at various universities, having no real interest in pursuing chemistry. During an organic chemistry laboratory in the fall of 1960, a friend, Bill Hunt from Mayfield, KY, asked me if I would accompany him to an interview with

a professor from Ole Miss. I declined, explaining that I was going to graduate school in either physics or mathematics, both of which had assistantships readily available at various universities. He asked that I go with him anyway, as Dr. Blackburn, head of the Chemistry Department (Natural Science having split into Chemistry and Physics Departments), wanted two people at a time to interview and he had no one to go into the interview with him. I obliged, and Dr. Maatman, from the University of Mississippi, outlined their chemistry program. He introduced us to the concept of National Defense Education Act Fellowships, which paid \$3200, \$3400 and \$3600 per year, plus tuition, for 3 years. Keep in mind that in 1960 a butcher in a Murray supermarket made about \$300 per month, and store clerks made even less.

Having 3 children by this time, and trying to survive on the G.I. Bill (\$165 per month during about 10½ months, including summer school, the \$3200 fellowship starting pay seemed astronomical to me. I took an application, filled it out and mailed it in. They wrote back, asking for a transcript, which I had the Registrar's office send. My GPA in Math, Physics and Chemistry, close to 2.9/3.0 at the time, resulted in my receiving an immediate letter awarding me a fellowship. My only problem seemed to be that the fellowship was good for only 3 years, necessitating a work week of 80 to 100 hours for that three-year period, but my putting in the necessary overtime resulted in the award of a Ph.D. in August, 1964. I immediately returned to Murray State College as the only Physical Chemist that they had ever had on staff. Dr. William Read asked me to teach some Physics courses, as I had minored in Physics during graduate school, but Dr. Blackburn vetoed the

suggestion having the quaint idea that he hired me to teach chemistry. As a result, I never taught any physics at Murray State.

I hope this story may be of more interest to students than the usual rendering of how the good ol' department has changed in my 35 years of teaching here. Of course it has changed. Everything in this country has changed, and colleges and universities have been no exception. They will change even more during the next 35 years, but I shall not have the opportunity to be a part of that change, as this is my final year. I can't say that I am sorry to move on to a different career track, business being at least as interesting as chemistry, and much more lucrative. It is my hope that present-day Murray State students will exhibit a work ethic such that they may have a successful career and make many accomplishments in their life's work.

Dr. Ricky Cox

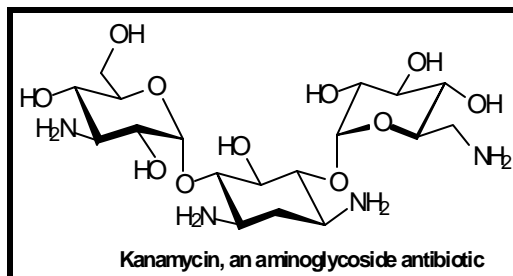


Dr. J. Ricky Cox has joined the chemistry department at Murray State University as an assistant professor of biochemistry and bio-organic chemistry. Dr. Cox is a native of Paris, TN who completed his B.S. at the University of Tennessee at Martin, his M. S. at Murray State University under the direction of Dr. Robert Volp and his Ph. D. at the University of Tennessee at Knoxville.

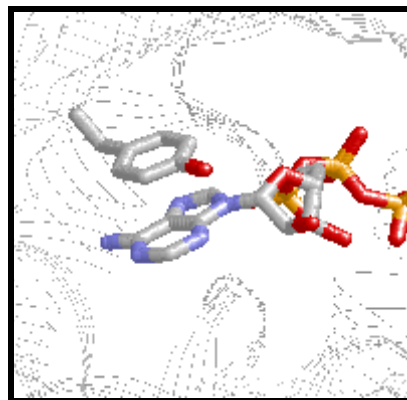
Dr. Cox's research interests are focused in two major areas. The first involves studying various aspects of aminoglycoside-modifying enzymes. These enzymes are largely responsible for the loss of antibacterial activity of aminoglycoside antibiotics, which used to be clinically important agents against pathogenic bacteria. Projects including inhibitor design and protein perdeuteration will shed light on the recognition of the aminoglycosides by the enzymes and lay a foundation for recapturing the clinical effectiveness of these antibiotics. Many of these enzymes are

ATP-dependent and exchange-inert metal-ATP analogs will be synthesized to study the mechanism of these enzymes.

The second focus of his research pertains to the area of π -interactions in proteins. One project in this area will include site-directed



mutagenesis and enzyme kinetics to quantitate the energetics of π -interactions in proteins. Computational biochemistry is being used to investigate the electrostatic nature of a variety of π -interactions between the adenine ring of ATP and NADH and the side chains of aromatic amino acids. Overall, students working in his lab are being exposed to a broad range of research experiences and techniques including protein purification, enzyme kinetics and computational methods.



Faculty Focus: Dr. Harry Fannin

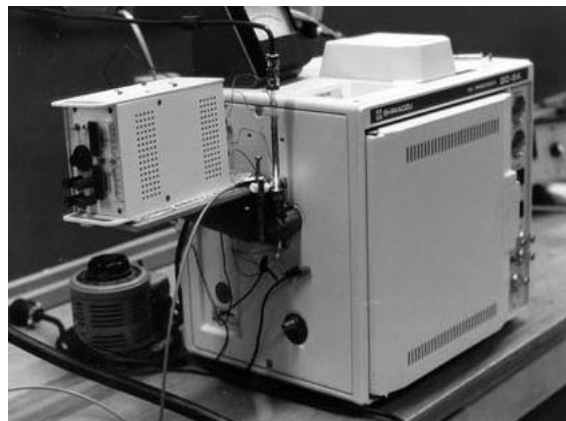


Our Research group focuses on three distinct areas of research involving Inductively Coupled Plasmas, ICP's. First is the investigation of basic discharge parameters, this primarily concerns the distribution of excited electronic atomic states of the support gas and analyte atoms. Our group has developed a quantum-statistical model invoking Fermi-Dirac counting statistics to describe the atomic state distribution utilizing a single temperature for a given volume region in the plasma. This model has been extended to examine the periodic variation of detection limits in the ICP based on simple equilibrium ideas.

Second, since 1993, our group has been involved in the development of alternative plasma sources for spectrochemical and mass spectrometric detection. These sources operate at reduced pressure and low powers, ~15W. They are quite compact consisting of a solid state oscillator and tank circuit incorporated on a pc board roughly the size of an index card.

In conjunction with Dr. Anderson's group at MSU this source has been utilized as an element specific detector for a variety of analytical instruments, TGA, GC, head space analysis, etc. It has been most successful as an inexpensive (less than \$100) element selective detector for GC.

Detection limits for this system for organohalogen is in the low pg/s range.
Reduced Pressure Plasma on the side of a GC



Additionally, in collaboration with Dr. J. A. Caruso's group at the University of Cincinnati this system has been evaluated as a soft ionization source for GC-ICP-MS. It has proved quite successful in the analysis of organotin and organobromine compounds.



Enlarged view of plasma

Lastly, our group is involved in the screening of potential bio-indicators for metals in aquatic environments by ICP-AES. Currently, we are examining seasonal variations of metal's in a colonial bryozoan, *Pectinatella magnifica*. This species is ubiquitously distributed and has not been extensively examined to date.

Faculty and Staff News



Dr. Harry Conley is supervising teacher interns in six schools currently.

Dr. Mark Masthay has kept busy with sponsoring the Student Affiliates group and his research this past year. Student involvement in both is up with a greater number of students joining SAACS and a research group of six undergraduates. He also received a \$2,500 grant from the Christian Scholars Foundation and has submitted an article to JACS which is currently in review.

He is continuing his collaborations funded by the NIH with Prof. D.M. Sammeth of New Mexico Highlands University and Prof. Roger V. Lloyd of the University of Memphis. The research is funded because of its relationship to age-related macular degeneration, the leading cause of blindness in the elderly.

Dr. McCreary's work on propellants is receiving recognition at higher levels. He was an invited speaker at the annual Pyrotechnic Guild International, Inc. meeting in August of this year. A large number of professional pyrotechnic manufacturers, vendors, and display operators from the United States and abroad attended the meeting.

Dr. McCreary presented seminars on "Composite Propellant" and "Composite Motor Construction", with attendance of about 170 people at each seminar. He commented to the audience that, "It's

gratifying to speak to an audience that isn't waiting for the words 'Class Dismissed!'"

Dr. Ratliff has two graduate students that will finish their degrees this May, Tiffany Devine and Je Chol Lee. She is also supervising five teacher interns this year. The interns she is supervising are at Mayfield Boys Youth Development Center and Lowes Elementary School in Mayfield, KY, Nortonville Middle School, James Madison Middle School and Madisonville North Hopkins High School in Madisonville, KY.

She has also added a French Bulldog to her household. His name is Chubby Checker and he visits the department from time to time.



Freshman Research in the Department of Chemistry

We asked freshmen who have started research projects why they have decided to get involved in this aspect of the department/college life at this time. Here are some of the responses.

Edward Musselman: Ed saw research as the best way to get actively involved in his major. By volunteering his time, showing his willingness to get as much from his education as possible, he believes professors who see this may be more willing to sacrifice their valuable time to support him. He also felt that it is never too early to start a good habit. By his senior year, when others are just beginning, research will merely be part of his daily routine.



During his first semester, he worked both with Dr. Conley and Dr. Cox. He experienced actual hands-on lab work for Dr. Conley and learned the functions of various laboratory equipment. Dr. Cox's research is geared toward organic chemistry, specifically protein structures. As a Pre-Medical student, this research will greatly impact his future studies in both biology and chemistry. Ed plans to continue with these projects as long as he can.

Ginny Gottschalk believes that research is an excellent way for her to expand her knowledge of chemistry. She is able to apply what she learns in the classroom to actual experiments in the lab. She says she enjoys seeing the principles of chemistry used in real life and finding out the limitless possibilities that chemistry offers. Though she is only a freshman, she is glad she is part of a research TEAM. She knows she will have four years to continually build on the foundation she has made.



Another benefit of research as Ginny sees it is the opportunity to meet professors and other chemistry students. She is currently working with Dr. Masthay who has been very helpful, as have the other team members.

Dustin Burnham is a freshman from Massac Co. High School in Metropolis, IL who expressed a desire to begin working on research during the first week of classes. He has begun working with Dr. Ratliff helping graduate student Tiffany Devine with the metals analysis of 200 well water samples. His research is primarily focused on the Atomic Absorption analyses of these elements and the computer assisted statistical interpretation of the data. He has chosen chemistry simply because he enjoys it. He isn't sure what he wants to do when he finishes school but he wants to do something in the chemical field, perhaps work in industry.



Junior and Senior Research Projects in the Chemistry Department



Natalie Meeks is a junior Chemistry Pre-med student majoring in both chemistry and biology from Paducah, KY. She is president of the Student Affiliates of the American Chemical Society and a research and teaching assistant in the department of chemistry. Upon graduation Natalie hopes to attend medical school at the University of Louisville or the University of Kentucky.

Natalie has been working on a research project with Dr. Muscio for two years now. Her research focuses on the nucleophilic substitution of aromatic compounds.

Although this reaction is generally considered to follow a stepwise process, Natalie's kinetic study suggests that nucleophilic substitution on certain pyridinium compounds may be concerted.

Melissa Baird is a senior Chemistry Area from Murray, KY. Melissa is a Presidential Scholar who has been working on a research project with Dr. Fannin for two years. She recently spent the summer working on lanthanide chemistry in Argonne National Labs in Chicago as well. Melissa's research at MSU is in the development and implementation of reduced pressure inductively coupled plasmas as detectors for gas chromatographic analyses.

Justin Legleiter is a senior Chemistry Area from Hays, KS. He has worked as an undergraduate research assistant for Dr. Harry Fannin for two years, and his research involves the study of *Pectinatella magnifica* as a possible biological indicator. *P. magnifica* is a freshwater bryozoan that lives in sessile colonies and feeds through filtering vast amounts of water. It is present in most fresh water ecosystems of North America. Each colony surrounds gelatinous goo, and they are affectionately referred to as snotballs. These colonies are present at the Hancock Biological Station, where they are sampled for this project. Each sample is first dried in an oven for several days to eliminate excess water. Then, the sample is digested. Once this is completed, the sample is analyzed for concentrations of metals using a Perkin Elmer ICP. Hopefully, the snotballs will prove to be an effective biological indicator.

Kosta Seaford is a junior Chemistry Area from Benton, KY. Kosta tutors chemistry in his spare time and has been working in the Chemical Services Lab as a research assistant for Dr. David Owen for two years now and is working on regional environmental sampling of toxic organic and inorganic pollutants (PCB's, halogenated organics, pesticides, butyl-tins, etc.).

Grants / Papers / Publications 1998

PRESENTATIONS

J.E.Anderson, J.B. Montgomery, H.B. Fannin, "A Low Power Inductively Coupled Plasma Emission Detector for Gas Chromatography"; The Pittsburgh Conference, New Orleans, Louisiana, March 1-5, 1998.

H. B. Fannin, J. W. Waggoner*, M. Belkin, and J. A. Caruso, "Organometal Speciation with Gas Chromatography and Low Power, Reduced Pressure ICP-MS"; 1998 Winter Conference on Plasma Spectrochemistry, #TP 28, Scottsdale Arizona.

H. B. Fannin, J. W. Waggoner*, M. Belkin, and J. A. Caruso, "Low Power/Reduced Pressure Helium Inductively Coupled Plasma Mass Spectrometry (LP/RP-He-ICP-MS) as a Species-Specific Detector for Organotin Compounds Separated by Gas Chromatography"; 29th Ohio Valley Chromatography Symposium, Hueston Woods, Ohio.

H. B. Fannin, J. W. Waggoner*, M. Belkin, K. Sutton, and J. A. Caruso, "A Low Power/Reduced Pressure Helium Inductively Coupled Plasma (LP/RP-He-ICP-MS) for the Analysis of Organohalogen Compounds"; F.A.C.S.S. XXV, Austin, Texas, 1998.

H. B. Fannin, "Aspects and Applications of Low-Power, Reduced Pressure ICPs"; Society for Applied Spectroscopy Local Section Symposium, Cincinnati, Ohio, 1998.

F. N. Lugemwa, invited seminar speaker at University of Mississippi-Oxford, 10/6/98.

M. B. Masthay, "Color Changes Induced by Pigment Granule Aggregation in Chromatophores: A Quantitative Model Based on Beer's Law"; 26th Annual Meeting of the American Society for Photobiology, Snowbird, Utah, July 11-15, 1998.

M. B. Masthay, C. B. Buckman, J. Chen, J. T. Kofron, and D. M. Sammeth, "Bacteriorhodopsin Monomers Do Not Form a Laser-Induced Blue State"; 26th Annual Meeting of the American Society for Photobiology, Snowbird, Utah, July 11-15, 1998.

M. B. Masthay, C. B. Buckman, J. Chen, J. T. Kofron, and D. M. Sammeth, "The Effects of Molecular Oxygen on the Bacteriorhodopsin Photocycle"; 26th Annual Meeting of the American Society for Photobiology, Snowbird, Utah, July 11-15, 1998.

M. B. Masthay, W. C. Spencer, T. Cullen, A. L. Trujillo, N. E. Sveum, "The Photodegradation of Beta Caroten in Chloromethane solvents"; 84th Annual Meeting of the Kentucky Academy of Science, Louisville, KY, 11/13/98. (Poster)

M. B. Masthay, J. Chen, B. B. Buckman, D. M. Sammeth, "The Influence of Molecular Oxygen on the Bacteriorhodopsin Photocycle", 84th Annual Meeting of the Kentucky Academy of Science, Louisville, KY, 11/13/98. (Poster)

J. R. Neale, B. G. Loganathan, J. Ratliff, J. B. Sickel, and D. A. Owen, "Organochlorine and Trace Element Concentrations in Sediment and Mussel Tissues from the Lower Tennessee River and Kentucky Lake"; 21st Annual Area Collegiate Chemistry Meeting, Martin, Tennessee, April 23, 1998, paper IA-3.

M. M. Whalen, B. G. Loganathan, T. Warren, and D. A. Owen, "Effect of in vitro Exposure to Individual and Mixtures of PCB's and Tributyltin Human Natural Killer (NK) Cell Function"; Toxicology Abstracts, 18th International Symposium on Halogenated Pollutants, Stockholm, Sweden, August 17-21, 1998, 37, 209-212.

B. G. Loganathan, J. R. Neale, J. B. Sickel, K. S. Sajwan, and D. A. Owen, "Persistent Organochlorine Concentrations in Sediment and Mussel Tissues from the Lowermost TN River and Kentucky Lake, U.S.A."; Ecotoxicology Abstracts, 18th International Symposium on Halogenated Pollutants, Stockholm, Sweden, August 17-21, 1998, 39, 121-124.

B. G. Loganathan, J. A. Baust, J. R. Neale, S. B. White, and D. A. Owen, "Chlorinated Hydrocarbons in Pine Needles: An Atmospheric Evaluation of Westernmost Kentucky, U.S.A."; Ecotoxicology Abstracts, 18th International Symposium on Halogenated Pollutants, Stockholm, Sweden, August 17-21, 1998, 39, 303-306.

B. G. Loganathan, J. R. Neale, K. S. Sajwan, L. Francendese, and D. A. Owen, "Distribution of Polychlorinated Biphenyl Congeners in Pine Needles Collected in and Around a Superfund Site Contaminated with Aroclor 1268"; Ecotoxicology Abstracts, 18th International Symposium on Halogenated Pollutants, Stockholm, Sweden, August 17-21, 1998, 39, 307-310.

B. G. Loganathan, J. D. Corser, K. S. Sajwan, and D. A. Owen, "PCB Congeners and Chlorinated Pesticides in Pine Needles Collected in Peregrin Falcon Breeding Territories in Northern New England, U. S. A."; Ecotoxicology Abstracts, 18th International Symposium on Halogenated Pollutants, Stockholm, Sweden, August 17-21, 1998.

Loganathan, B. G., Kannan, K., Senthikuma, K., Sickel, J. and Owen, D.A., "Butyltin Concentrations in Sediments and Mussel Tissues from the Lowermost Tennessee River and Kentucky Lake"; Abstracts, 84th Annual Kentucky Academy of Science Meeting, Louisville, KY, November 15, 1998, p. 10.

Owen, D.A. and Loganathan, B. G., "Advanced Inorganic Chemistry Laboratory, CHE 512 at Murray State University: A Capstone Course Featuring Modern Techniques, Instrumental Methods, and Experiment Sequences"; Abstracts, 84th Annual Kentucky Academy of Science Meeting, Louisville, KY, November 16, 1998, p. 13.

Tucker, A. B., Loganathan, B. G., Morton, J. D. and Owen, D. A., "Evaluation of Bamboo Leaves as Monitor of Atm. Chlorinated Hydrocarbon Pollutants in Westernmost KY"; Abstracts, 84th Annual KY Academy of Science Mtg., Louisville, KY, Nov. 15, 1998, p. 11.

A. Walker, N. Essner, and J. Ratliff, "Accumulation of Heavy Metals by KY Bluegrass, *Poa pratensis*"; Poster presentation, Area Collegiate Chemistry Meeting, April 25, 1998.

T. Devine and J. Ratliff, "Determination of Metals Contamination in Well Water in Calloway Co., KY"; Area Collegiate Chemistry Meeting, April 25, 1998.

A. Walker, N. Essner, and J. Ratliff, "Accumulation of Heavy Metals by KY Bluegrass, *Poa pratensis*"; Sigma Xi Poster Competition.

T. Devine and J. Ratliff, "Determination of Metals Contamination in Well Water in Calloway Co., KY";

Sigma Xi Poster Competition.

J. Ratliff, S. Collard, and J. Cornette, "Strontium Accumulation by the Ascidian, *Didemnum conchylatum*"; The 1998 Pittsburgh Conference, New Orleans, Louisiana, March 3, 1998.

N. Essner and J. Ratliff, "Phytoextractive Removal of Heavy Metals from Soil Within a Lifetime"; The 1998 Pittsburgh Conference, New Orleans, Louisiana, March 3, 1998.

J. Ratliff, "Teaching Science to Students with Disabilities, Elementary Education Science Teacher Presentation"; February 26, 1998 and November 4, 1998.

M. M. Whalen, C. B. Green, and J. D. Crews, "cAMP Elevation in Human Natural Killer Cells in Response to Lysis-sensitive Targets"; American Society for Biochemistry and Molecular Biology, May 16-20, 1998, Washington, D.C.

H. R. McDowell and M. M. Whalen, "Effect of the Environmental Contaminant, Tributyltin, on the Tumor Killing Ability of Human Natural Killer Lymphocytes"; Area College Chemistry Meeting, University of Tennessee at Martin, April 25, 1998, Martin, TN.

Cox, J. R. "The Role of NMR and Computational Chemistry in the Determination of the Structure and Dynamics of Aminoglycoside Antibiotics and Anthocyanins" Invited Seminar, UT Martin, Martin, TN, October 8, 1998.

Cox, J. R., Whittemore, N. A., Dougall, D. K., and Baker, D. C. *Abstracts of Papers*, 50th SE Reg. Mtg. of the ACS, Research Triangle, NC; ACS: Washington, DC, 1998; ORGN 375. "The Structure and Dynamics of Monacylated Anthocyanins as Revealed by Quenched Molecular Dynamics and NMR Spectroscopy".

PUBLICATIONS

H. B. Fannin, J. W. Waggoner, M. Belkin, K. L. Sutton, and J. A. Caruso, "Novel Low Power/Reduced Pressure ICP Ionization Source for Mass Spectrometric Detection of Organotin Species"; *Journal of Analytical Atomic Spectrometry*, 13(9), 879, 1998.

H. B. Fannin, L. J. Jerrell, M. R. Dunn, and J. E. Anderson, "An Inexpensive Low Power Inductively Coupled Plasma Source for Element Selective Atomic Emission Detection in Gas Chromatography"; *Applied Spectroscopy*, 53 (2), 245, 1999.

Loganathan, B. G., Neale, J. R., Sajwan, K. S., Francendese, L., and Owen, D.A., "Distribution of Polychlorinated Biphenyl Congeners in Pine Needles Collected in and Around a Superfund Site Contaminated with Arochlor 1268" *Biosphere*, 1999 (in press)

M. M. Whalen and C. B. Green, "Lysis-sensitive Targets Stimulate an Elevation of cAMP in Human Natural Killer Cells" *Immunology*, 93: 415-420.

Mohler, M., Cox, J. R. and Serpersu, E. H. "Aminoglycoside Phosphotransferase (3II)-IIIa (APH(3II)-IIIa)-Bound Conformation of the Aminoglycoside Lividomycin A Characterized by NMR" *Carbohydr. Lett.* **1998**, 3, 17-24.

GRANTS FUNDED

J.E. Anderson, "Detection of Chlorinated Hydrocarbons in Soils and Water"; 1998-99 CISR, \$1175.00

F. N. Lugemwa, "Selective Metal Ion Extraction by Carbohydrate-based Ethers"; 1998-99 CISR, \$2,700

M. B. Masthay, "Light-Induced Destruction of the Orange Plant Pigment β -Carotene: A Model for Light-Activated Herbicides"; 1998-99 CISR, \$1,800.00

M. B. Masthay, Selected as Elizabeth College Fellow, awarded \$400.

M. B. Masthay, "Ultraviolet-light Induced Photodegradation of Bacteriorhodopsin"; Marshall and Annette Gordon Fund, \$400, 2/98.

J. Baust, B. G. Loganathan, and M. B. Masthay, "Synergy II"; Council on Post-Secondary Education Dwight D. Eisenhower School Improvement Fund.

O. J. Muscio, "Nucleophilic Substitution of 2-Phenoxy-1-methylpyridinium Iodides by Phenoxides"; 1998-1999 CISR, \$1500 (extended to 6/30/99)

Owen, D. A., "Use of Native Bamboo (*Arundinaria gigantea* for Assessment of Annual Chlorinated Hydrocarbon Pesticide Pollution at the Field/stream Margin in Westernmost Kentucky"; 1998-1999 CISR, \$1800.

J. Ratliff, "Evaluation of Multiwavelength Detection in Electrochemiluminescence"; 1997-98 CISR, \$1400.00

J. Ratliff, H. Kobraei, L. Duobinis-Gray, T. Lough and L. Shelby, "A Mutli-Disciplinary Science Course for Elementary and Middle School Preservice Teachers"; KY Science and Technology Council, 1998, \$115,215.

R. F. Volp, "Effects of Chloropropane Metabolites on Glycolysis"; 1998-1999 CISR, \$2,100

M. M. Whalen, "Inhibition of the Tumor-Destroying Ability of Human Natural Killer Lymphocytes by an Environmental Contaminant, Tributyltin"; 1998-99 CISR, \$2,100.00.

M. Whalen, NIH AREA, "Target Cell Ind. Elevation of cAMP in Human NK Cells"; \$94,500.

J. R. Cox, "Molecular Visualization and Modeling in the Biochemistry Curriculum". Request for software to use in the Biochemistry laboratory, Georgia Southern University Academic Excellence Committee (11/3/98), \$200.

Alumni Anecdotes

Anonymous Professor:

Bill Koenecke remembers working as a student lab assistant in the Chemistry Department for Dr. Blackburn, Ms. Whitnah, and other professors while at Murray State. One summer in particular he was one of several students working for Dr. Blackburn in one of the chemistry labs. Dr. Blackburn was working with them, not an unusual occurrence, and a salesperson came into the lab looking for Dr. Blackburn. Needless to say, Doc (as most of them called him) was not dressed in a suit and tie! The salesperson thought that Doc was a custodian and asked if he had any idea where he could locate Dr. Blackburn. Doc wiped his hands on his pants, extended his right hand and said, "You just found him, I am Dr. Blackburn." Dr. Blackburn was a hands on leader who was not afraid to get his hands dirty and instilled a great deal of respect in his students for him as a teacher, administrator, and as a human being.

Qualitative Analysis:

Bill also remembers a Qualitative Analysis lab in the fall semester of 1964 with Dr. Howell Clark when he was lab partner with a student who scored a 99% on the class pretest. He was very happy to have such a smart lab partner till she accidentally caught her hair on fire with a Bunsen burner. She was a very bright student who later became a medical doctor but she did have a few setbacks in lab.

Physical Chemistry:

Stephen Belote remembers a Physical Chemistry class he had with Dr. Henley during the fall of 1971. During the first day of classes Dr. Henley found that somehow about 50 people had been registered for the first semester of Physical Chemistry. He only had 20 seats in the class. He noted to the class "Looks like we have a little problem here." Then announced that he would begin lecturing on Chapter 3 and in two weeks would have a test over Chapters 1, 2, and 3. About 30 people hit the door and there were just enough seats for everyone.

Scholarships

Chemistry Alumni Scholarships

Leslie Barger
Kendrick Turner

Walter Blackburn Scholarship

Spencer Chambers
Adam Farley
Jeffrey Health
Candice Lee

Department Scholarships

Tim Followell
Erica Cossey
Justin Linsman
Cara Watkins
Ginny Gottschalk

Melvin and Rita Henley Scholarship

Jeremy Krug
Josh Morton

Pete Panzera Scholarship

John Clayton
Lee Crider

Roberta Whitnah Scholarship

Kosta Seaford

Chemistry Scholarship Fund

Natalie Meeks
Carey Amanda Warren
Joseph Woods

Annual Chemistry Scholarship Tournament

Murray, KY - Twenty five high schools from three states were represented by team and individual participants in the 28th Murray State University High School Chemistry Scholarship Tournament, November 12, 1998.

A total of 100 students from high schools in Kentucky, Illinois and Tennessee participated in the activity sponsored by the MSU Department of Chemistry, in conjunction with Student Affiliates of the American Chemical Society.

The four top-scoring individuals were offered scholarships to Murray State and were presented cash awards and plaques, while the top-scoring teams were presented cash awards and plaques. Cash awards were also presented to the three highest scoring individuals currently in the first year of high school chemistry.

The four top-scoring individuals were: Ben Beaton, First Place, Paducah-Tilghman High School, Paducah, KY, Cara Blackmon, Sponsor; Jeff Heath, Second Place, Lone Oak High School, Paducah, KY, Tim Whitley, Sponsor; Philip Smith, Third Place, Paducah-Tilghman High School, Paducah, KY, Cara Blackmon, Sponsor; Adam Riley, Fourth Place, Daviess County High School, Owensboro, KY, Ann Koshy, Sponsor.

Winners in the Lower Division section were: Kellie Brandon, First Place, Murray High School, Murray, KY, Rebecca Fairbanks, Sponsor; Matt Allen, Second Place, Northside Baptist Christian School, Mayfield, KY, Amber Savells-Arb, Sponsor; Alissa Volp, Third Place, Murray High School, Murray, KY, Rebecca Fairbanks, Sponsor.

The school team winners were: First Place, Paducah-Tilghman High School, Paducah, KY, Cara Blackmon, Sponsor; Second Place, Hopkinsville High School, Hopkinsville, KY, Benna Kaler, Sponsor; Third Place, Daviess County High School, Ann Koshy, Sponsor; Fourth Place, Calloway County High School, Murray, KY, Yvette Pyle, Sponsor.

Alumni News:

(Dr. Ratliff used all of the information she had access to try to verify the accuracy of this section. If there are any errors, please let her know by calling her or writing to her at the Chemistry Department. (502) 762-6542 or judy.ratliff@murraystate.edu)

Graduates from 1990- 99:

Chris Allen (B.S. 1999) has recently gotten married and accepted a position teaching chemistry at Madisonville North Hopkins H. S.

Rebecca Elliott (B.S. 1999) is currently working for the KY State Police Forensic Lab in Madisonville, KY.

Jeff Hornak (B.S. 1999) and **Tammy Mae Hornak** (B.S. 1999) are expecting a child. Jeff is a chemistry and health teacher at Fairdale High School in Louisville, KY. e-mail: hornak@alltel.net

Steven Stroud (B.S. 1999) is in Law School in St. Louis, MO.

Blaine Buckman (Cx 1998) is working at Kemlite Corporation in Jonesboro, Arkansas.

Dustin Dunn (B. S. 1998) is currently working for ISP Chemicals in Calvert City.

Nicole Essner (B. S. 1998) is still working for Eli Lilly in Indianapolis, IN and married Alyn Brown at a beautiful ceremony this summer.

Mike Evans (M.S. 1998, B.S. 1996) Mike has just been promoted to Research and Development at Cargil Chemical Co. in Iowa.

Suzanne Franklin (B.S. 1998) is in Pharmacy school at the University of Kentucky.

Heather McDowell Ricketts (B.A. 1998) is attending the University of Illinois medical school. Her spouse is Lance Ricketts.

Roxanne Daugherty (B. S. 1997) and Brian Frost tied the knot recently in College Station, TX. Now they are headed for Aruba for 5 nights of rest and relaxation.

LaDonna Jerrell (B.S. 1997) is a compounder at

Plumley in Paris, TN; a division of Dana Corp.

Renea Cates Boggess (B.S. 1996) successfully completed her teacher internship year and has accepted a teaching position at Muhlenberg North High School - her old high school.

John Driver (M. S. 1996) and wife Mollie have a second child, Alex McLeod Driver , born 3/8/99.

Renee Higgins (B. S. 1996) is the President Elect of the Kentucky Lake Section of the American Chemical Society. She is currently employed by Estron Chemical Co. in Calvert City, KY.

Megan Jones (B.S. 1996) is in Pharmacy school at the University of Kentucky.

Marlena Swinford Mount (B.S. 1996) is a chemist at Elf-Atochem in Calvert City, KY.

Simone Whipple Parker (B.S. 1996) is a chemist at McCoy and McCoy Labs in Calvert City. She has returned to MSU this semester to earn her teacher certification.

Shawn Perkins (B.S. 1996) is the Quality Assurance Lab Supervisor at Huish Detergents in Bowling Green. He and his wife, Debbie are the parents of a baby girl born 9/4/99.

Phil Wells (B.S. 1996) is completing his Ph. D. at Ole Miss. He still stops by to visit periodically.

Greg Fisher (B. S. 1986, M.S. 1994) completed his Ph. D. at Purdue this summer, got married in July, then accepted a job as a science materials analyst at Mitre Corp. in Alexandria, VA.

Jennifer Harrison Kelley (B.S. 1994, M.A. Ed. 1997) is a chemistry teacher at Russelville High School.

Teresa Hix Lee (B. S. 1994) is a Quality Control Chemist at North Amer. Oxide in Clarksville, TN.

Shane Robinson (B.S. 1994) is a Lab Analyst at Allied Signal.

John Kind (B.S. 1993) is a Ph.D. candidate at the University of Georgia (expected Spring 2000).

J. Brent Montgomery (B.S. 1988, M.S. 1993) and his wife Michelle just had their first child, Alexander Brent in July of this year.

Margaret Tapp Siress (B.S. 1993) married Jeffrey Siress B.S 1987 (a chemist at Vanderbilt Chemical) and works at B.F. Goodrich.

Bruce Thurmond (B.S. 1993, M.S. 1995, Ph. D. 1998) has completed his Ph. D. at Washington University in St. Louis and is now working there at Monsanto.

Ricky Cox (M.S. 1992) and **Amy Walker Cox** (B.S. 1991; M.S 1993) left MSU in July of 1993 for Knoxville, TN. While there, Amy worked for Oak Ridge Research Institute and MK-Ferguson of Oak Ridge as a chemist and environmental specialist. Ricky obtained his Ph.D. in Biochem. in 1997. In 1998, after a year of postdoctoral study in the chemistry department at UTK, Ricky accepted an assistant professor position at Georgia Southern University. Amy also served in the chemistry department as an instructor and coordinator of advanced laboratories. In 1999, Ricky and Amy were excited to return home. Amy is currently working at EET Corporation in Paducah, KY as an environmental specialist, and Ricky has returned to the MSU Chemistry Department as an Asst. Prof. e-mail: ricky.cox@murraystate.edu

Michael Ellerbusch (B.A. 1992, M.D. 1996) is a doctor in Birmingham, AL.

Christina Thompson Thurston (B.S. 1991) is teaching chemistry at Reidland H. S. in Paducah.

Sue Ellen Stalions Morris (B.S. 1990, M.A. 1993) is a chemistry teacher in Hickman Co., KY.

Graduates from 1980- 89:

Keri Scott (B.S. 1988; M.S. 1989) is currently Laboratory Manager and Instructor at University of Mississippi. Keri is also the SAACS faculty advisor and is doing a wonderful job at giving Phil Wells a "hard time". Good Job Keri!!!

Beth Shadrick (B.S. 1989) is currently teaching chemistry at Graves Co. High School.

Jeff Cozart (B.S. 1985) is working for American

General Finance as a Business Systems Analyst. He and his wife Tracey have two children (Lindsey, 9 and Zacharay 5). e-mail: CozDude@AOL.com

Joan Cmarik Nelson (B.S. 1985) is employed in Biomedical research at the National Cancer Institute in Frederick, MD. She and her husband John (they were married in 1994) have a daughter, Samantha Rose, born September 1, 1997 (Labor Day!). e-mail: cmarik@ncifcrf.gov

Mark B. Lyles (M.S 1982; B.A. 1978) is employed at the University of Texas Health Science Center in San Antonio. In 1997, he was the winner of the Mind Science Foundation Imagineer Award.

Maurice Jett (B.S. 1980) Completed his Ph.D. in Chemical Engineering in 1990 at Rice University and is a consultant at Aspen Technologies in Houston, TX. His lovely wife, Cynthia McDowell Jett (B.S. 1979) is employed by Exxon in Houston.

Graduates from 1970- 79:

Cara Blackmon (B.S. 1979, MBA 1996) has accepted a position as the Assistant Principal at Paducah Tilghman High School in KY. She says she will miss teaching chemistry but is looking forward to this new challenge in her career.

Yvette Pyle (B. S. 1976, M.S. Ed. 1979) has accepted a position as the Assistant Principal at Calloway Co. High School in KY. She says she will miss teaching chemistry but is looking forward to this new challenge in her career. Her youngest daughter, Emily is currently a sophomore chemistry major at MSU and doing very well.

Richard Underwood (Cx 1977) is currently working for Callaway Chemical in GA as a polymer chemist in the pulp and paper industry. He has published several papers and received several patents.

Stephen Belote (B.S. 1973) is employed as Business Manager, Acetyl Chemicals at Eastman Chemical Company in Johnson City, Tennessee.

John Berry (M.S. 1972, B.S. 1963) taught chemistry at a community college in North Carolina then worked for twelve years in the chemical manufacturing industry. Now, he works with boilers and is an OJT engineer. He and his wife live in a small town in eastern North Carolina. They have 3

children - the youngest recently graduated from East Carolina University. He now has a granddaughter that is a little more than a year old.

Charles E. Morrow (B.S. 1970) is a Certified Industrial Hygienist for the Division of Education and Training of the Kentucky Labor Cabinet. Charles is a practicing Industrial Hygienist and an active member of the American Conference of Governmental Industrial Hygienist for the past 27 years. Diplomat of the American Academy of Industrial Hygiene and certified by the American Board of Industrial Hygiene in comprehensive practice since 1980. His son Andrew is a sophomore at Heath High School this year.

Graduates from 1960- 69:

William T. Parker (B.S. 1968) is Quality Systems Manager at Allegiance Healthcare in South Carolina. His wife, Karen is an elementary school teacher, and he has two children attending Clemson.

William H. Koenecke (B.S. 1967) has been a high school chemistry teacher, a grade school principal, high school principal, school superintendent, and a university professor in Illinois. However, now he owns Touched by Design Interior business in Bloomington, Illinois.

Robert Beard (B.S. 1966, Ph. D. 1970) is a career counselor at UT-Martin. He has also been rifle coach since 1992 and coordinator of career services since 1986. He operates farms in Henry Co. TN and Carlisle Co. KY. He also enjoys seeing Dr. Hussung at athletic activities. e-mail: touched@gte.net

E.L. "Tug" Baughn (B.S. 1964) retired as World-Wide Director of College Relations and Recruiting after 33 years with Phillips Petroleum Company. Fifteen of those years was spent as a chemist.

J. Rex Paschall (B.A. 1964) worked for 25 years in sales and management with the former BF Goodrich Company and M&T Chemicals/ Elf Atochem. Now, he has moved back to Murray to begin his third career and is employed by Sears in Paducah.

Jerry S. Patey (B.S. 1964) is a self employed medical doctor in Florida. He has been practicing internal medicine for the past 25 years.

Graduates from 1950- 59:

G.W. Walker (B.S. 1958) passed away June 11, 1999 at his residence of lymphoma cancer. G. W. was a chemist retired from Rail Services, Inc. in Calvert City, KY.

Carlton R. Bostic (B.A. 1957) majored in chemistry with minors in math and speech. Later, he earned his MS and Ph.D. from the University of Arizona. His wife, Jaqueline Davidson Bostic, attended Murray State University from 1951-1957. After working for Du Pont for 29 years, he retired in 1992. He currently teaches chemistry part-time at two community colleges and Western Carolina University. He also represented Murray State University at the inauguration of the new chancellor of Western Carolina University two years ago.

Chemistry Major Become Miss KY



Shanna Moore, a senior chemistry major from Marion, KY has just been crowned Miss KY. She was 1st runner up in the Miss KY pageant in June and therefore stepped up to the title when Miss KY became Miss America.

Shanna was in the middle of the first semester of her senior year when she was awarded the title. She has since withdrawn MSU and moved to Lexington, KY so that she may fulfill her duties as Miss KY but plans to return to MSU in the Fall of 2000.

Donations received from Alumni since the last *Periodic Cable*

(Every effort has been made to make sure the following information is correct, if you have been left out or an error has been made please let Dr. Ratliff know as soon as possible)

Adams Jr, James H
Agee, Connie J
Alexander, Tommy D.
Arterburn, Greg
Atkins, Ernest Eugene
Atkins, J Ernest
Aulick, Randy L
Bacon, Lisa Bell
Barnett, Clyde
Baughn, E L
Bazzell, Bobby D
Bea, Charles Eldon
Beale, Gregory Scott
Berry, George F
Berry, John M
Bertl, Mary C
Blackmon, Cara C
Bondurant, Maurice
Bragg, Nancy S
Brown, Robert M
Brubaker, Beth H.
Brumbaugh, Ernest H
Bugg, Alan K
Burton, Rose M
Byars, Raymond C
Byrd, Robert D
Cable, Joe W
Carey, Karen L
Carter, Roland
Chambers, James C
Chaney, Rita G
Chelin, Kimberly K
Childers, Jean E
Clark, Eugene G
Clark, Howell R
Clark, Teddy R
Cole, Brent T
Cole, Wayne C
Conley, Larry C
Cooper, Bobbie P
Curtis, Alan B
Dassani, Subhash D
Davis, Julia T
Davis, Kimber B
Davis, William Mike

Dietsch, Charles R
Doyle, R Larry
Drabb, Thomas W
Dunn, Dustin A
Dunn, Michael R
Dyer, Charles E
Edwards, Carrie L
Ellegood, James O
Elliott, Lal E
Estes, Michael L
Ethridge, Michael W
Evans III, John B
Fields, Donald W
Forberg, Charles D
Fuller, Roger L
Funk Jr, Edwin J
Gallimore, Tellus M
Garrett, Donald L
Goad, John T
Gordon, Marshall
Gourieux, David
Gourieux, Patricia A
Graves, Richard H
Green, Shayne
Green, Thomas L
Greenwell, Allan
Grogan, Edwin L
Hall, Alice M
Hall, Krista F
Hamm, Kenneth L
Harton, Nancy R
Henderson, Silva R
Hendon, Jerry E
Herndon, Gregory L
Hester, Howard
Hicks, Donald G
Higgins, Rene
Higgs, Anna M
Hill, Paula B
Holman, William A
Holshouser, Stephen
Howard, Amber W
Hudson, James H
Hughes, David E
Humphries, Larry S
Hutchinson, Larry D
Hyland, Robert W
Jackson, Billy G
Jett, Maurice & Cynthia J
Johnson, Jerry L
Johnson, Mickey C
Joiner, Beth C
Jolly, Kenneth B
Jones, Donal W
Jones, Lee
Jones, Tommy M

Kaelin, David L
Kazerani, Abdolamir
Kinion, Sandra S
Knight, Larry G
Koss, Peter P
Lankford, William A
Larimer, Merlin W
Lassiter, Thomas W
Laumer, Sharon M
Leonard, Chris
Liddle, Phillip W
Lyell, Mark S
Maciaszek, Joseph A
Maudru, Thomas D
Mayes, Lou Ann
Mc Clain, Keith S
Mc Cuiston, Stefani B
Mc Gregor, Ronald K
Mc Kee, David E
Melton, Tammy Janine
Menkhaus, Julie A
Miller, Kathleen J
Miller, Robert Brown
Montgomery, Brent
Montgomery, Robert R
Moon, Kathleen A
Moore, Ralph & Cynthia
Morgan, Stephen C
Morrow, Roy W
Murphy, William D
Mysinger, Monica R
Nason, Dale L
Nelson, Joan L
Noffel, Martha R
Oliver, William Ralph
Parker, Billy T
Perry, Rhonda S
Peyton Jr, Charles E
Phelan, Gayle M
Pruett, Roy L
Ramsey, Linda M
Ray, John J
Reid, Larry D
Reid Jr, Tommy
Reinehr, Lois D
Revlett, Gary H
Richard, Lois H
Riggs, Calvin D
Riley, Alfred D
Robertson, R D
Rodgers, Jessie W
Rogers, Don R
Rogers, Donna E
Rose, Jack D
Rose, John F
Rose, Kenneth R

Ross, Shawn K
Rutherford, Denise R
Ruttinger, Mary J
Ryan, William D
Sanderson, Clifton B
Sasse, Harold L
Scott, Kerri D
Selwitz, Stephen
Shearer, Loretta T
Shrewsbury, Walter B
Siress, Jeffrey D
Skees, James M
Smith, Dennis P
Smith, Harriette A
Smith, Richard R
Sneed, Robert L
Spiceland Jr, E. Henry
Stedelin, James R
Stinson, Kenneth B
Strubinger, Sandra D
Teitloff, Larry David
Theobald, Paula G
Thornsberry Jr, Willis L
Thorpe, W. Anthony
Thurmond, James D
Thurston, Christina L
Tolley, Harold B
Vincent, John B
Vitetow Sr, Frank H
Walker, G W
Wallace, David J
Wallis, Allen J
Wallis, Thomas Gary
Wargo, Joseph B
Washburn, Lee C
Westfall, Sandra W
White, Charles Y
White, Jana D
Willett, Samuel E
Williams, Michael J
Williams, Paul A
Williams, Stanley
Williamson, Betty R
Wilson, Alan K
Wilson, W Preston
Windrum, William A
Windt, Norman F
Womack, Mary S

Total Donations:

\$13,132.5

We kindly thank all those who contribute to the Chemistry Dept.

Do you know a good student who would qualify for one of the following scholarships?

Presidential Scholarship

Pays full tuition, 15 meal plan, residence hall room (semi-private) 4 years with 3.2 GPA following sophomore year, 3.5 after junior year

Candidates that may be considered:

1. National Merit Semi-finalist/finalist
2. Minimum 28 ACT top 5-10% of graduating class, strong leadership.

Selection is based on academic credentials; transcripts are reviewed for choice of curriculum, leadership all four years, quality of essay, strong recommendations.

School Relations selects approximately 85 candidates for the Honors Committee to review. The Honors Committee selects approximately 40 candidates to interview. Interviews are 15 minutes, questions are generally based on application material.

Requires an interview.

The Provost Scholarship

Will be offered to all students interviewed for the Presidential Scholarship, but are not selected. The award will cover full tuition, and \$1,000 for direct expenses only. NOTE: Students may not apply for this scholarship. Only students brought in for interviews for the Presidential Scholarship are awarded the Provost scholarship.

Regents Scholarship

Full tuition, no course fees, 4 years with 3.2 cumulative GPA after sophomore year, 3.5 after their junior year.

Candidates that will automatically be offered a Regents scholarship:

1. National Merit Semi-finalists/finalists*
2. Governor's Scholars*
3. Other potential candidates should have a minimum 28 composite ACT, rank in the top 10% of their senior class

*To qualify for this scholarship students must have a completed application on file by February 1.

John W. Carr Scholarship

\$1000 per year, renewable for 4 years with 3.0 cumulative GPA. This award will cover direct expenses only. **Direct expenses are defined as tuition, university housing, and/or meal plan.**

Candidates that will be eligible:

1. Governor's School for the Arts Participants
2. Valedictorians

ALUMNI INFORMATION

If you would like to share your e-mail address or any news with your fellow alumni please send this to either one /or all of the faculty or staff.

If you do not have access to e-mail please mail the information to us or call Gail at (270)762-2586.

You could also fill out the form on our web page for alumni. The very long address assigned to us for this purpose is given below, however if you go to our web page you should have no trouble:

http://www.mursuky.edu/qacd/cos/che/alumni_reg.htm

To help us better display this information please give us the following information:

Name (include maiden name if applicable):

MSU Degree: BS, BA, MS, etc..:

Date(s) of the above degree(s):

Your Current Address:

Occupation/Employer:

Spouse:

Spouse's Occupation/Employer:

News:

ALUMNI INFORMATION

Please fill in and return to us if you so desire.

G Check here if this is a new address.

Name(include maiden name if applicable) _____

MSU Degree: BS BA MS MA Other _____ Degree Earned in 19_____

Address _____

e-mail Address _____

Occupation/Employer _____

Spouse _____

Spouse Occupation/Employer _____

Spouse MSU Graduate? Yes No If yes; Year of Graduation and Degree _____

News: _____

Please send the above information to the following address:

**Department of Chemistry
Murray State University
456 Blackburn Science
Murray, KY 42071-3346**

If you wish you can e-mail the information to us at: gail.raspberry@murraystate.edu,
ricky.cox@murraystate.edu or judy.ratliff@murraystate.edu

Future Periodic Cables

Please send us an e-mail or a note in the mail if you have any news you would like to share with us and/or your classmates. In the next issue we would like to publish e-mail addresses for all of our alumni who wish theirs published - please send them to us if you would like to be included. Please state clearly that you do not mind having your information/phone number/address/e-mail address published in the *Periodic Cable* otherwise we can not include those items.

I like to include **memories** from alumni in the Periodic Cable. If you have a **funny story** about a lab or professor or classmate that you would like to share please send those to Dr. Ratliff. We will try to use several for each *Periodic Cable* that we publish in the next few years. Please keep in mind that some of the stories might need to be cleaned up a little since Dr. Ratliff and some of our readers embarrass easily.

Periodic Cable is on the Web

If you misplace your copy of this or future issues - we are putting it on the Web. Just go to the Murray State Web page and to chemistry then choose the Periodic Cable.

MSU Chemistry Faculty/Staff E-Mail Addresses

Dr. Jeff Anderson	(270)762-2587
jeff.anderson@murraystate.edu	
Ms. Beth Brubaker	(270)762-6390
beth.brubaker@murraystate.edu	
Dr. Harry Conley, Jr.	(270)762-6472
harry.conley@murraystate.edu	
Dr. J. Ricky Cox	(270) 762-6543
ricky.cox@murraystate.edu	
Ms. Barbara Darnell	(270)762-6490
barbara.darnell@murraystate.edu	
Dr. Harry Fannin	(270)762-4490
harry.fannin@murraystate.edu	
Dr. Melvin Henley	(270)762-6626
mbhwky@writemail.com	
Dr. Mark Masthay	(270)762-6540
mark.masthay@murraystate.edu	
Dr. Terry McCreary	(270)762-6499
terry.mccreary@murraystate.edu	
Dr. Oliver Muscio	(270)762-6597
oliver.muscio@murraystate.edu	
Dr. David Owen	(270)762-6699
david.owen@murraystate.edu	
Ms. Gail Raspberry	(270)762-2586
gail.raspberry@murraystate.edu	
Dr. Judy Ratliff	(270)762-6542
judy.ratliff@murraystate.edu	
Dr. Robert Volp	(270)762-6598
robert.volp@murraystate.edu	
Conference Room:	(270)762-6541
Chemical Services Lab:	(270)762-6544
FAX:	(270)762-
6474	