



Nucleus

SCHOOL OF PHARMACY, OFFICE OF RESEARCH

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SPECIAL POINTS OF INTEREST:

- **SOP's NIH Rankings**
- **Dr. Mehvar Recognized**
- **Dr. Klein: citation analysis & impact factor**
- **New ABRI Program**
- **Graduating Students**

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SOP Moves Up in NIH Rankings

According to the 2004 NIH rankings posted by the American Association of Colleges of Pharmacy, the TTUHSC SOP moved

up in overall ranking to number 38, an improvement over last year's ranking of 45. In 2003, the School reported total NIH fund-

ing in the amount of \$682,240. In 2004, that amount increased to \$1,515,906. This represents a 122% increase over just one year.

Dr. Reza Mehvar Recognized

Reza Mehvar, Pharm.D., Ph.D. was recognized throughout the entire Texas Tech University System for receiving the Chancellor's Council Distinguished Teaching Award. As one of only two recipients of the teaching award (an additional two faculty members received the research awards), Dr. Mehvar serves as an exemplary representative of the School of Pharmacy.

This is not the first award Dr. Mehvar has received. He has also been recognized with the President's Excellence in Teaching Award (presented September 2004). Within the School, the P2s have selected him from among their other instructors for the last five years, and he was previously named Teacher of the Year at the College of Pharmacy and Health Sciences at Drake University. The American Association of Colleges of Pharmacy has awarded Dr. Mehvar three Innovation in Teaching Awards for his work in the pharmacokinetics course. Dr. Mehvar's interactive, problem-based approach to the course and his use of computer-based technology

have engaged and excited his students, who are exceedingly complimentary of Dr. Mehvar's teaching skills.

Dr. Mehvar is also an accomplished researcher, having recently received an NIH ROI grant, which goes into effect this month. His grant, "Local Immunosuppression for Liver Transplantation" was ranked with one of the highest scores any investigator at the TTUHSC SOP has received.

This grant will enable Dr. Mehvar to pursue his laboratory's current focus on the pharmacokinetic-based delivery approaches for liver diseases, including liver ischemia-reperfusion damage and transplantation, and the role of liver in the disposition of xenobiotics.

Because of potent immunosuppressive drugs and improvements in surgical and preservation techniques, liver transplant recipients now live significantly longer than before. Ironically, because of their significant toxicity, the same drugs that have increased the



survival rates are now the major causes of morbidity in long-term survivors of liver transplantation. The toxicities of these agents are either related to their immunosuppressive activity (e.g., life-threatening infections and malignancies) or arise from their direct effects on organs not related to immune system (e.g., nephrotoxicity and neurotoxicity). Therefore, new strategies that improve current immunosuppressive protocols will have a significantly positive impact on the outcome of liver transplantation.

Dr. Mehvar's laboratory studies an alternative approach in targeted delivery of immunosuppressants to the liver (for liver

“Dr. Mehvar’s laboratory studies an alternative approach in targeted delivery of immunosuppressants to the liver (for liver transplantation) by using a macromolecular delivery system based on dextran polymers.”



Jochen Klein, Ph.D.

Dr. Mehvar (continued from page 1)

transplantation) by using a macromolecular delivery system based on dextran polymers. Neutral dextrans have been used clinically for more than five decades for plasma volume expansion. Therefore, their safety

profile in clinical use has been established. A targeted delivery of immunosuppressants using this method may afford administration of smaller doses, resulting in prolonged local effects in the liver, without significant toxicity

to other organs and sudden death observed with the current methods.

Our congratulations to Dr. Mehvar for his excellence in both teaching and research.

Dr. Klein Presents Seminar

Jochen Klein, Ph.D., presented the research seminar “Citation Analysis and the Impact Factor: Uses and Misuse” on February 14.

Dr. Klein began by explaining the current relevance of this topic. More and more universities are utilizing citation analysis and impact factors to evaluate faculty performance, to screen potential new hires, and to determine departmental accomplishments. When selecting schools, graduate students often consider faculty publication impact factors, and granting entities often analyze applicant citations when awarding funding. Clearly, research is being evaluated, and the need for an objective evaluation system is clear.

The system used today evolved over time and was heavily influenced by the availability of the Science Citation Index, which was developed by the Institute for Scientific Information (ISI). The SCI is now searchable online but requires a subscription. By utilizing these indices, researchers can conduct citation analyses.

Dr. Klein identified some benefits to researchers of citation analysis :

- Tracking the histories and interconnectedness of sub-

specialties.

- Identification of “hot topics” currently receiving attention and funding support.
- Examining which researchers (in what areas of specialty) cite your article. This might lead to new approaches/directions for future work.

Impact factors were designed as an attempt to objectively assign quality to journals. The calculations are essentially based on the ratio between the number of times articles appearing in the journal are cited elsewhere and the total number of articles published in the journal.

Dr. Klein cautioned that while citation analysis and impact factors can be very useful, there are also some pitfalls and things to remember:

- What is actually considered a citation, (abstracts, editorials, news, essays, letters, etc.)? (Books are rarely referenced.)
- With hundreds of thousands of journals worldwide, many are not included.
- The focus on English-speaking journals is heavy.
- Error rates are high: author names and journal titles are

often incorrect/misspelled.

- Because only articles published within the last two years are included, only articles cited immediately are rated highly.
- Authors in some fields simply cite more often than in others, so comparing across specialties and fields is difficult.
- Typically only “hot fields” are included. Because of that, editors of journals often select articles to publish based not on the quality of the articles, but on what they expect to be frequently-cited hot topics, to increase or maintain their journals’ impact factors.
- Only a few highly-cited articles determine journal impact factor.
- Calculations for awarding credit to each author are often discussed and disputed in the scientific community.
- The impact of an individual article is not determined by the impact factor of the journal in which it is published. Not all quality, high-impact articles appear in journals with high impact factors. Many articles that receive high citation rates are either reviews or

Dr. Klein's Seminar (continued from page 2)

method-oriented publications.

Dr. Klein warned of a trend in the scientific community to rely too heavily on citation analysis and journal impact fac-

tors when conducting evaluations, promoting or awarding tenure, hiring new faculty, and awarding grant monies. Non-specialists create these indices, so the result is only a pseudo-objective

evaluation of research.

Citation analysis adds just one objective tool to evaluate research and should be done by individuals who know its limitations.

ABRI Program Launched Summer 2005

The Office of Research is launching a new initiative: the Amarillo Biomedical Research Internships (ABRI) program. The mission of the ABRI program is to foster interest in the graduate program at the School of Pharmacy among promising and gifted students considering graduate studies leading to Ph.D.s and research careers in biomedical sciences.

Eligible applicants will have completed at least their first year toward a bachelors degree or their first year toward a professional degree. Students interested in the internship will apply to the Office of Research, and preference will be given to third- or fourth-year students.

The Office has publicized this new program to area schools: TTU, WTAMU, WBU, Amarillo College, Clarendon College, and Frank Phillips College. The

response has already been promising, with many potential interns already identified. Selected interns will each be placed with a graduate faculty member with an ongoing research program who is willing to support ½ of the \$3,000 stipend provided to the intern. The Office of Research will cover the remaining \$1,500 of each stipend. Faculty members interested in participating in this summer program should contact the Office of Research.

Interns will work 10 weeks (beginning the fourth week in May and ending the last week in July) in the laboratory, gaining valuable one-on-one, intensive research experience. Interns will be expected to develop and conduct investigator-initiated research in consultation with the faculty mentor, participate in

other research activities at the School (i.e. attend research seminars, group meetings, etc.), complete the research project within the timeframe, and present their work/findings at the School's Annual Research Days event.

If you know of students who might be interested in participating in this new program, please direct them to our website at: <http://www.ttuhsu.edu/sop/research/abri.aspx> or encourage them to contact Melissa Lockman, Research Administrator, at 806-356-4000, 326, melissa.lockman@ttuhsc.edu.

The deadline for student applications is fast approaching. Completed applications are due to the Office of Research **by 5 p.m. on Friday, April 29.**

“The mission of the ABRI program is to foster interest in the graduate program at the School of Pharmacy.”

2005 Annual Wendy & Stanley Marsh Endowed Lectureship

The 2005 Wendy & Stanley Marsh 3 Endowed Lectureship in Pharmacology & Neurochemistry of Substance Abuse/Addiction was held March 16-17, 2005.

In spite of inclement weather, School of Medicine Match Days conflicts, and spring break for AISD, CISD, WT, and AC students, this year's event was very well-attended and widely-praised by a diverse group of audience members, including not only School of Pharmacy attendees, but also other TTUHSC and TTU faculty members, local physicians, mental health professionals, healthcare providers, and Amarillo College stu-

dents.

Thomas R. Kosten, M.D. presented both a research-oriented lecture entitled “Neurobiology of Stimulant Dependence” and the clinically-oriented Grand Rounds “Pharmacotherapy of Substance Dependence.”

Those who were provided the opportunity to visit with Dr. Kosten were highly complimentary. Many faculty members were reluctant to end their office visits with him, and students praised his accomplishments and friendliness. An excellent speaker, Dr. Kosten was com-

mended for his presentations. A pharmacy student leaving the lecture exclaimed, “I actually understood that entire talk!”



Dr. Kosten's visit generated enthusiasm that will only serve to enhance the future research at the School of Pharmacy.

Dr. Kosten is the Deputy Chief of Psychiatry Research at the VA Connecticut Healthcare System and a Professor in the Department of Medicine and Yale Graduate School, Investigative Medicine Program in West Haven, CT.

What's Next for Graduating Students?

Ragini Vuppugalla will soon be Dr. Ragini Vuppugalla, after having earned her Ph.D. in Pharmaceutical Sciences.

Ragini arrived at Texas Tech School of Pharmacy in 2001 and began the graduate work that resulted in her recently-defended dissertation, "Effects of Nitric Oxide on Cytochrome P450-Mediated Drug Metabolism." Over the course of her studies, she examined the effects of large amounts of nitric oxide on altering the disposition of drugs metabolized by Cytochrome P450 enzymes. She illustrated that continuous exposure of livers to nitric oxide inactivates P450 enzymes, leading to alterations in concentrations of the drugs metabolized by these enzymes. This effect can potentially have serious clinical implications for drug metabolism in anginal patients undergoing therapy with nitrates or in liver transplant patients, as huge concentrations of nitric oxide were detected in the plasma of these patients.

Ragini credits much of her success here to her mentor, Dr. Mehvar. "The discussions that we had with him were invaluable. He was always with us, helping whenever we needed him." With Dr.

Mehvar's instruction and thanks to the overall education she received at the School of Pharmacy, Ragini feels well-prepared for her next endeavor: a new job at Bristol-Myers Squibb in Princeton, New Jersey.



Ragini Vuppugalla When attending the AAPS conference, Ragini submitted her CV and was called for follow-ups by representatives at Bristol-Myers Squibb. After

three interviews, including an all-day on-site visit, the company found Ragini to be a good match for their open position, and she was offered the job.

Ragini will be working in the drug metabolism and pharmacokinetics division under the supervision of Dr. Zhang. Her section will focus on diabetic drugs and on pharmaceutical candidate optimization. She looks forward to working hard to maximize drug efficacy and expects that her new job will present her with many new challenges. She will now be supervisor to a technician who specializes in using the LC-MS/MS. Going from being a student herself to now directing the work of another person will be a change, but when speaking of the new responsibilities she will acquire and the expectations that will be placed on her, Ragini's determination to do well became apparent. She is committed to working hard and settling into her new role at Bristol-Myers Squibb.

In addition to the exciting job opportunity she will be pursuing, she will also be moving closer to a sister in Detroit. She also plans to see more of her sister in California, and it might become easier for her to see her parents, in India.

While Ragini is excited to take this next step in her life, she does not leave Amarillo behind. "Amarillo is full of kind, helpful people." Her appreciation to the people she has met, studied with and learned from is clear, and she hopes to maintain contacts here. While she does not yet have her new contact information, she hopes to share that with everyone soon. She will also be coming back for her graduation in May.

Prasad Chimalakonda will also be graduating, after successfully defending his dissertation entitled, "Pharmacodynamics of liver-targeted dextran prodrug of methylpredni-

solone."

Like Ragini, Prasad also came here in 2001 and worked under Dr. Mehvar. While Ragini's work centered on drug metabolism, Prasad's work focused on developing drugs that would be liver-specific. Many drugs exist to prevent rejection after liver transplantation, but those drugs are toxic and do not target the liver. Under Dr. Mehvar's mentorship, Prasad worked to develop carriers which would deliver the drugs directly to the liver. The animal models they studied showed great promise: drug optimization and effective selective targeting of the liver.

Bristol-Myers Squibb has also recognized Prasad as an asset to the company, and he will be beginning his new job as a scientist for the company in Wallingford, Connecticut. Prasad's job offer was unexpected. He had also attended the AAPS conference at which Ragini interviewed with the company. Prasad was standing in the hall, waiting for Ragini to finish her interview, when they came out. The interviewer asked Prasad for his background, and that fortuitous encounter led to Prasad's own interviews and job offer with Bristol-Myers Squibb.

Prasad was deemed a good match for the metabolism and pharmacokinetics division, which will focus on studying various drugs to test efficacy. He will be supervising masters level research associates, and his boss is actually from Texas. Prasad sees it as a good sign that Bristol-Myers Squibb hired two Texas Tech School of Pharmacy graduates and hopes that this hiring pattern will only increase, as more people become more familiar with our School.

Prasad attributes his success to Dr. Mehvar, who spent a lot of time teaching him the nuances of pharmacokinetics. Prasad says that Dr. Mehvar always taught by example and was a perfect role model for him, espe-

Graduating Students (continued from page 4)

cially with regard to time management and multi-tasking.

While Prasad was more focused on gaining employment with one of the top ten pharmaceutical companies than any other consideration, he was also very interested in moving to the East coast, where he will be closer to his family. Most of his cousins live within just a few hours of where he'll be working, and it will also be easier for him to visit his other family members in India. He looks forward to staying in that area of the country, and while he is enthusiastic about starting his new work in drug metabolism and pharmacokinetics, he acknowledges that if the op-

portunity were to present itself, he might be interested in pursuing clinical applications. Bristol-Myers Squibb allows for much freedom in changing divisions and areas of research.

As he begins his new life, Prasad wanted to comment that "Texas Tech is a good place. There's a small-town atmosphere. That helped me know everybody. Here, it's a family type of thing. Everybody knows everybody, and we're all close." Prasad has wonderful memories of the School where he started and thanks Dr. Mehvar and many others for all of the guidance and support he received.

As this newsletter is published, Ragini and Prasad are already off to start their new jobs. Our congratulations to both of them! We are proud to have known two such fine graduates of our School.



Prasad Chimalakonda

In July 2005 Nucleus: Departing Residents

In the next issue of this newsletter, please look for features on the departing residents: Chris Amaya, Luvy Amaya, Jack Armstrong, Grace Chon, Justin Hooper, Sunghyun Kim,

Darego MacLayton, Erik Maki, Kari McCracken, Molly Mullin, Michael Peeters, Leticia Villela, Morkisha Dobard, and Tangela Johnson.

These residents will be completing their work at TTUHSC on June 30, so please don't wait to say your farewells.

Faculty Publications (January-March 2005)

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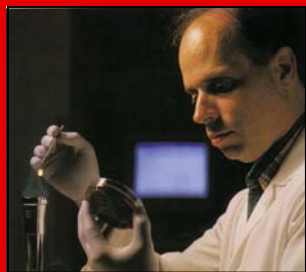
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Mark Lyte, PhD, MS, MT

New Faculty Researcher

Mark Lyte, Ph.D., MS, MT (ASCP) is a new professor in the Department of Pharmacy Practice.

Dr. Lyte is an NIH-funded investigator coming to

TTUHSC from the Minneapolis Medical Research Foundation.

Dr. Lyte will be located on the Lubbock campus and will begin working for TTUHSC on Monday, May 2, 2005.

In the next issue of this newsletter, please look for additional information on our newest faculty researcher.

And welcome to TTUHSC, Dr. Lyte!

Research Seminars (January-March 2005)

Every Monday, faculty and graduate students present research seminars. The Office of Research sponsors one of these monthly presentations, which is healthnetted, and the other seminars are provided by the Pharmaceutical Sciences Department. Below is a sum-

mary of the seminars that took place in the last few months.

1/24/05-Celestin Youan, PhD, Assistant Professor, Pharmaceutical Sciences.

“Chronopharmaceutical Drug Delivery Systems: Current Status and Future Prospects.”

1/31/05-Tom Abbruscato, PhD, Assistant Professor, Pharmaceutical Sciences.

“Nicotine alters brain endothelial response to stroke conditions.”

2/7/05-Peter Toth, PhD, Research Associate Professor,

Research Seminars (continued from page 6)

Molecular Pharmacology and Biological Chemistry, Northwestern University. "Regulation of CXCR4 receptor dimerization."

2/10/05 (Thursday)-Varshal K. Dave, Life Sciences Group Molecular Devices Corporation. "DNA/Proteomic Chip Analysis: Principles and Potentials."

2/11/05 (Friday)-Kathleen Curtis, PhD, Associate in Research, Psychology and Program of Neuroscience, Florida State University. "Sex differences in body fluid regulation."

2/14/05-Jochen Klein, PhD, Assistant Professor, Pharmaceutical Sciences. (Please see page 2 of this newsletter for feature article on Dr. Klein's presentation.)

2/18/05 (Friday)-Karen Borges, PhD, Pharmacology Instructor, Emory University. "Epileptogenesis: Do Astrocytes Play a Role?"

2/21/05-Ko Young Tag, Graduate Student, Pharmaceutical Sciences. "A New Liposomal Formulation for Systemic Delivery of Decoy Oligodeoxynucleotides."

2/21/05-Vaughn Wittman, Graduate Student, Pharmaceutical Sciences. "Consequences of Stimulation of T cells via a Recombinant Receptor."

3/7/05-Jagan Parepally, Graduate Student, Pharmaceutical Sciences. "Brain drug delivery. Studies using NSAIDs and an albumin knockout animal."

3/7/05-Joachim Hartmann, Graduate Student, Pharmaceutical Sciences. "Cholinergic neurochemistry in the Acetylcholinesterase-knockout mouse."

3/21/05-Alamdar Hussain, Graduate Student, Pharmaceutical Sciences. "Inhalable dry powder insulin: Preformulation and absorption studies."

3/21/05-Julie Gaasch, Graduate Student, Pharmaceutical Sciences. "Iron-induced cell death in subarachnoid hemorrhage."

3/28/05-Ronda Akins, Assistant Professor and Vice Chair of Research, Pharmacy Practice. "Staphylococcal heterogeneity: Effects on antimicrobial susceptibility."

Upcoming Events

The Office of Research is proud to offer programming year-round. The following events are coming to Amarillo soon. Please mark your calendars and plan to attend!

- 4th Annual Research Days, Thursday, July 28-Friday, July 29.
- This semester, the Research Seminar Series is being offered from 12-1 p.m. on

every last Monday of the month. These seminars are offered through healthnet to all campuses.

Upcoming NIH Deadlines

Institutional National Research Service Awards—Cycle II May 10; Cycle III September 10.

New Research Grant, Conferences, FIRST, and Research Career Awards. ALL Program Project and Center Grants— Cycle II June 1; Cycle III October 1.

Competing Continuation, Supplemental, and Revised Grants—Cycle II July 1; Cycle III November 1.

All AIDS-Related Grants—Cycle I May 1; Cycle II September 1; Cycle III January 2.

Scientific Merit Review—Cycle I June-July;

Cycle II October-November.

Advisory Council Review—Cycle I September-October; Cycle II January-February; Cycle III May-June.

Earliest Project Starting Date—Cycle I December; Cycle II April; Cycle III July.

OFFICE OF RESEARCH

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