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Michigan Regional Chapter of the Society of Toxicology



NEWSLETTER

Volume 25

Number 2

October, 2007

Editor: Lawrence H. Lash

Associate Editor: Randall J. Ruch

President's Message

(submitted by Dr. Sue Marty)

Greetings to all Members of the Michigan Regional Chapter of the Society of Toxicology (SOT)! It was with great anticipation and enthusiasm that I began working as the president of Michigan SOT in May of this year and I am truly enjoying my term as president. I would like to thank the out-going president, Ali Faqi, for his service to the Society and his numerous contributions during his tenure as Chapter President. His continued assistance as a Michigan SOT Councilor is greatly appreciated. I would also like to welcome our new officers, Brad Upham (President-Elect), Roseann Vorce (Secretary/Treasurer), Tom Kocarek (Councilor), and Erica Sparkenbaugh (Student Representative), and

acknowledge their willingness to donate their time and energy to our Society. Your efforts are greatly appreciated.

In June of this year, I attended the Regional Chapter Leadership Meeting in Chicago, IL. This meeting was hosted by the national Society of Toxicology and was designed to improve communication and networking between the national SOT and regional chapters. The national SOT has emphasized its support for regional chapter priorities, including graduate student/postdoctoral education and career development, membership enhancement (membership retention and improved attendance at regional meetings) and undergraduate education in toxicology. In support of these goals, we are investigating the logistics of hosting a teleseminar for Michigan SOT members this year. Please feel free to suggest a topic or speaker for this event.

I would like to encourage all Michigan SOT members to attend our Fall meeting on "Lipidomics," which will be held on Friday November 9, 2007 at the Kellogg Center at Michigan State University. Lipidomics is an emerging area of research and its application to toxicology promises to improve our understanding of the mode of action of a variety of toxicants. The Michigan SOT Program Committee has done a great job in arranging an interesting and timely program. As is our tradition during the Fall meeting, Michigan SOT will present awards for the best poster presentations in the graduate student and postdoctoral/research staff categories. These cash awards are intended to be applied toward travel to the national SOT meeting in Seattle in 2008. Interested participants should review the poster competition rules later in this Newsletter and on the Michigan SOT website (<http://www.toxicology.org/isot/rc/michigan/misot.html>).

I am looking forward to my year as the Chapter President. It is a great opportunity

for me to meet other toxicologists in Michigan and to learn about their activities and challenges in the field of toxicology. This interaction between Michigan SOT members is the most valuable contribution of regional chapters, so I hope you will join me and participate in this exchange in East Lansing in November. Thank you for your continued support.

Sue Marty, Ph.D., D.A.B.T.
2007-2008 President Michigan SOT

*Fall 2007 MISOT Meeting
November 9, 2007*

"LIPIDOMICS"

Preliminary Agenda

- | | |
|-------------|--|
| 8:00-8:45 | Registration and Coffee |
| 8:45-9:00 | Welcome: Sue Marty,
President, Michigan Regional
Chapter of the Society of
Toxicology |
| 9:00-9:45 | Dr. Julia Busik, Michigan
State University: TBA |
| 9:45-10:30 | Dr. Gavin Reid, Michigan
State University: "Global
Lipid Profiling of Whole Rat
Retina by Complementary
Precursor Ion and Neutral
Loss Scan Mode Tandem
Mass Spectrometry" |
| 10:30-10:45 | Break |
| 10:45-11:30 | Dr. Brian Cummings,
University of Georgia:
"Application of Lipidomics
for Toxicological Studies" |

11:30-12:15	Dr. Narasimham Parinandi, Ohio State University: “Lipidomics of Phospholipases and Cells Facing Oxidative Stress and Toxic Insults - Implications in Vasculotoxicity and Cardiovascular Diseases”
12:15-1:45	Lunch (provided) and Posters
1:45 – 2:30	Dr. Michael Mayer, University of Michigan: “Lipid Membrane Chips”
2:30 – 3:15	TBA
3:15 – 3:45	Chapter Business
3:45 – 4:00	Close

Format and Rules for the Michigan SOT Poster Competition

Abstracts can be submitted and Posters presented on any topic by anyone registered for the meeting.

To be included in the awards competition, the posters must be presented by a Student or a Postdoctoral Fellow/Research Associate who has had a major role in the work being presented and is in attendance.

To be eligible for the competition, abstracts must be received *at least* seven days prior to the meeting. Abstracts for posters will be accepted for presentation without being in the competition up until two days before the meeting.

There will be two divisions within the competition based on the career stage of the presenter: a) Students enrolled in degree-granting academic programs; and b)

Postdoctoral Fellows and Research Associates from academia or industry. The presenter of the poster that is judged as the best within each of the two categories will receive a First Place award.

There must be a minimum of three award-eligible posters in a division for a “First Place” award to be made in that category. If less than three submissions are made for either division, those submissions will be eligible only for the “Honorable Mention” awards. In the event that only one “First Place” award is made the judges have the option to make a third “Honorable Mention” award.

All posters that are eligible for judging and that have not been designated as “First Place” will be entered into a pool from which two presenters will be selected for “Honorable Mention” awards.

Judges will consider both the abstract and the presented work in reaching decisions regarding awards.

Spring Meeting Review – May, 2007 (submitted by Ali Faqi)

I am glad to inform you that the spring meeting of the Michigan chapter of the Society of Toxicology was successful and very well attended. The meeting was held on May 18, 2007 at the Brook Lodge in Augusta, Michigan. The topic of the meeting was Stem Cells in Toxicology. Approximately 60 scientists from academia, industry, as well as graduate students attended the meeting. We had nationally recognized speakers from industry and academia including Dr. Gary Smith from University of Michigan, Dr. Daniel Rappollee from Wayne State, Dr. Steven Strom from University of Pittsburg, Dr. Ivan Rich from HemoGenix, Inc.; and Dr. Elmer Clarke from StemCell Technologies, Inc. The presentations covered the latest scientific breakthroughs of stem cells in the field of Toxicology as well as the emerging use of stem cells as screening tools in toxicology. Overall the feedback received was very positive.

Michigan Society of Toxicology Registration Form

LIPIDOMICS – November 9, 2007

Deadline for registration and abstract submission is November 2, 2007

Name: _____

Affiliation (Company, University, etc): _____

Address: _____

City, State, Zip: _____

E mail: _____

Poster Presentation: Yes No

If yes: Please provide an abstract of no more than 250 words, including, title of poster, authors and affiliations. These abstracts should be sent via email to: Roseann.Vorce@pfizer.com. Please include in the body of the message whether you are a student or a Postdoctoral Fellow/Research Associate. Format and rules for the poster competition can be found at <http://www.toxicology.org/isot/rc/michigan/misot.html>

Registration Fee:

- Member (\$50.00)
 Student (member or non-member) (\$25.00)
 Non-member (\$75.00)

Payment Type: Money Order _____ Check _____ Credit Card (type) _____

Credit Card # _____ Exp date _____

Name on Card _____

Membership applications can be obtained at:

Michigan Chapter: <http://www.toxicology.org/isot/rc/michigan/misot.html>

Please make registration checks payable to: The Society of Toxicology

Please send registration form to:

Registrations can be sent by Fax to:
734-622-1710, Attention Roseann Vorce

Roseann L. Vorce, PhD
Pfizer Global Research and Development
Drug Safety Research and Development
2800 Plymouth Rd
Ann Arbor, MI 48105

Questions or credit card registrations can be submitted to: Roseann.Vorce@pfizer.com

If you require Hotel accommodations contact The Kellogg Center: (800) 875-5090
When making reservations please say you are attending the Michigan SOT meeting. A limited number of rooms are available at a discounted rate of \$89.00 (double occupancy). These rooms are only available for Thursday November 8, 2007.

**Joint Meeting of the
North Central Chapter of the Health
Physics Society
and the
Northland Chapter of the Society of
Toxicology
Friday, October 19, 2007
University of Minnesota Landscape
Arboretum, Chanhassen, Minnesota**

A former Russian KGB agent speaks critically about human rights abuses and corruption in the current Russian Federal Security Service. Suddenly he falls ill with strange and severe symptoms. Nothing doctors do can save this man. In days he is dead.

In a story that seems directly lifted from the pages of a Tom Clancy or Robert Ludlum novel, London's public health organization must respond to a radiation poisoning event. Join the North Central Chapter of the Health Physics Society and the Northland Chapter of the Society of Toxicology in a day-long meeting devoted to understanding the events that unfolded following the November 2006 poisoning of former Russian KGB agent Alexander Litvinenko.

Learn about the toxicology and radiobiology of radioactive polonium-210. Hear first-hand about the radiological response from a member of the UK's Health Protection Agency, Dr. Michael Bailey. Share the memories of individuals involved with manufacturing and using industrial devices using radioactive polonium-210.

Register now to attend this full day meeting on Friday, October 19, 2007, at the University of Minnesota Landscape Arboretum in Chanhassen, Minnesota.

Contact NLSOT Secretary/Treasurer Catherine Jacobson at cfjacobson@mmm.com or 651-736-5932 by Monday, October 15 to register for the meeting.

The \$15 registration fee (paid at the door) includes refreshments and lunch.
<http://www.hps1.org/chapters/ncc/events.htm>
<http://www.toxicology.org/isot/rc/northland>

This meeting was made possible through generous contributions from Mayo Clinic, Nuclear Management Company, 3M, and MGI Pharma.

A very special thanks to our Affiliate Sponsors! Global Dosimetry, Landauer, Inc., Image Technology, and Philotechnics

7:30AM Registration

8:00AM Welcome and Introductory Remarks - Mike Lewandowski, NCCHPS President-elect; Anthony Kiorpes, NLSOT President; David Paulu, U of M

8:15AM Radiobiology and Toxicology of Polonium - Dr. Richard Toohey, Oak Ridge Associated Univ.

9:00AM Chronology of Polonium Poisoning Event and the Health Protection Agency's Response - Dr. Mike Bailey, Radiation Protection Division, Health Protection Agency

10:30AM Break

11:00AM Summary of the Centers for Disease Control and Prevention Response to the Polonium Poisoning Event - Paul Schmidt, Radiation Protection Section, WI DHFS

11:15AM Health Physics Society Response to the Polonium Poisoning Event - Kelly Classic, HPS Media Liaison

11:45AM Lunch

12:45PM Reflections on the Manufacture and Use of Industrial Devices Containing Polonium - Duane Hall, 3M (retired); Fred Entwistle, 3M

1:15PM The Minnesota Citizens Corps: Building Community Preparedness, One Resident at a Time - Dennis Walter, Homeland Security and Emergency Management, MN Dept. of Public Safety

1:45PM Break

2:15PM Why No One Believes Us: Cognitive Neuroscience and Radiation Risk - Dr. Richard Toohey, HPS President-Elect

3:15PM NCCHPS Business Meeting (Snyder Auditorium) - Daniel McGrane, NCCHPS President
NLSOT Business Meeting (Tea Room) - Anthony Kiorpes, NLSOT President
4:15PM Adjourn

National Association for Biomedical Research

September 26, 2007

(submitted by Rebecca Elish-Stengle, MISMR)

PeTA Requesting IACUC Information:

It has been brought to our attention that many institutions have been contacted by a representative claiming to be from PeTA and requesting information about the institutions' IACUC members. Based upon the information we have received, we do not believe institutions are required to respond to these requests unless such requests are covered by the relevant state open record or freedom of information law governing the operation of IACUC committees within their institution. If you receive one of these letters, we suggest you contact your office of general counsel or outside counsel before responding to these letters.

Animal Care Policy Manual Comment Period Extended to November 8, 2007

APHIS has extended the public comment period for the Animal Care Policy Manual. If you would like a copy of NABR's draft comments, please contact info@nabr.org <<mailto:info@nabr.org>>. You may borrow freely from NABR's comments or submit an endorsement of NABR's comments. Regardless, we encourage you to submit comments as it is important that APHIS hear from the scientific community on this important document.

You may find the announcement here:

APHIS 2007-0110 Animal Care Policy Manual Open for Comment period EXTENDED through November 8, 2007 <<http://www.regulations.gov/fdmspublic/component/main?main=DocumentDetail&d=APHIS-2007-0110-0001>>

Member Abstracts:

Pharmacokinetics and bioavailability of diisopropanolamine (DIPA) in rats following intravenous or dermal application

S.A. Saghir *, S.W. Frantz, M.W. Spence, R.J. Nolan, E.R. Lowe, D.L. Rick, M.J. Bartels
The Dow Chemical Company, Midland, MI
Food Chem. Toxicol. 45:2047-2056 (2007)

This study was conducted to determine the relative dermal bioavailability (absorption), distribution, metabolism, and excretion (ADME) of diisopropanolamine (DIPA), an alcohol amine used in a number of industrial and personal care products. Groups of 4 female Fischer 344 rats received either a single bolus iv dose of 19.0 mg/kg ¹⁴C-DIPA in water or a dermal application of 19.5 mg/kg ¹⁴C-DIPA in acetone to an area of 1 cm² on the back and covered with a bandage. Time-course blood and excreta were collected and radioactivity determined. Urine was analyzed for DIPA and monoisopropanolamine (MIPA). Following iv administration, DIPA was rapidly cleared from the plasma and excreted into urine in a biexponential manner (t_{1/2}α, 0.4 h; t_{1/2}β, 2.9 h). The levels of radioactivity in plasma dropped below the limit of detection 12 h post-dosing. A total of 97±4% of the dose was actively excreted in urine by kidney, most (~71%) within 6 h of dosing, virtually all as parent compound; renal clearance exceeded the glomerular filtration rate. Following dermal application, ~20% of the dose was absorbed in 48 h with the steady-state penetration rate of ~0.2%/h. Most (14.4%) of the applied radioactivity was excreted in urine at a relatively constant rate due to the presence of large amount of the ¹⁴C-DIPA at the application site. Fecal elimination was <0.2% of the dose. The absorbed DIPA did not accumulate in tissues; only ~0.1% of the administered dose was found in liver and kidney. The absolute systemic dermal bioavailability (dose corrected AUC_{dermal}/AUC_{iv}) of ¹⁴C-DIPA was 12%. The ADME of DIPA contrasts that of its

diethanol analogue, diethanolamine, which displays a broad spectrum of toxicity in rats and mice. Toxicologically significant concentrations of DIPA are unlikely to be achieved in the systemic circulation and/or tissues as a result of repeated dermal application of products containing DIPA due to slow absorption from the skin, rapid unchanged elimination in urine, and majority of the products contain $\leq 1\%$ DIPA.

Preparation, Characterization, and Scale-up of Ketoconazole with Enhanced Dissolution and Bioavailability

E. J. Elder, J. C. Evans, B. D. Scherzer, J. E. Hitt, G. B. Kupperblatt, S. A. Saghir and D. A. Markham

The Dow Chemical Company, Midland, MI
Drug Development Indus. Pharmacy 33:755-765
(2007)

Many new molecular entities targeted for pharmaceutical applications face serious development challenges because of poor water solubility. Although particle engineering technologies such as controlled precipitation have been shown to enhance aqueous dissolution and bioavailability of poorly water soluble active pharmaceutical ingredients, the data available are the results of laboratory-scale experiments. These technologies must be evaluated at larger scale to ensure that the property enhancement is scalable and that the modified drugs can be processed on conventional equipment. In experiments using ketoconazole as the model drug, the controlled precipitation process was shown to produce kg-scale modified drug powder with enhanced dissolution comparable to that of lab-scale powder. Ketoconazole was demonstrated to be stable throughout the controlled precipitation process, with a residual methanol level below the ICH limit. The modified crystalline powder can be formulated, then compressed using conventional high-speed tableting equipment, and the resulting tablets showed bioavailability more than double that of commercial tablets. When appropriately protected from moisture, both the modified powder and tablets prepared from the modified powder showed no change in dissolution performance for at least 6 months following storage at accelerated conditions and for at least 18 months following storage at room temperature.

JANUARY ISSUE PREVIEW

The January, 2008 Issue of the Newsletter will feature a review of the Fall meeting and other items of interest to our members.

Please submit any member news or ideas for the newsletter to your local contact person or directly to the editors. Material for the January newsletter should be submitted no later than January 10, 2008.

BENEFITS OF MEMBERSHIP

Don't forget that your membership to the Michigan Regional Chapter of the SOT includes:

- Discounted registration fees for chapter meetings
- Newsletter with chapter and regional news
- Free listing in the newsletter of training and employment opportunities
- Free listing in the newsletter of positions desired

POSITIONS AVAILABLE

Postdoctoral fellowships, research assistantships, government positions, and industrial positions can be advertised in this space. Submissions to the editor should include a brief description of the position and contact information. This service is free to members!

We are seeking an **Associate Toxicologist II** for our Toxicology Services group to support NSF's **green chemistry** programs; compile, review, interpret, and process chemical and toxicological information submitted in support of applications for certification and/or registration.

NSF International, The Public Health and Safety Company™, a not-for-profit, non-governmental organization, is the world leader in standards development, product certification, education, and risk-management for public health and safety. For 60 years, NSF has been committed to public health, safety, and protection of the environment. While focusing on food, water, indoor air, and the environment, NSF develops national standards, provides learning opportunities through its Center for Public Health Education, and provides third-party conformity assessment services while representing the

interests of all stakeholders. The primary stakeholder groups include industry, the regulatory community, and the public at large.

NSF is widely recognized for its scientific and technical expertise in the health and environmental sciences. Its professional staff includes engineers, chemists, toxicologists, and environmental health professionals with broad experience both in public and private organizations.

NSF has earned the Collaborating Center designations by the World Health Organization (WHO) for Food and Water Safety and Indoor Environment.

Serving manufacturers operating in 80 countries, NSF was founded in 1944 and is headquartered in Ann Arbor, MI USA. The NSF Mark is recognized for its value in international trade around the world and is respected by regulatory agencies at the local, state, and federal levels.

DESCRIPTION

PRINCIPAL ACCOUNTABILITIES:

- Review the chemical composition of materials to determine appropriate chemical extraction testing.
- Collaborating with Chemistry, Exposures and other physical lab staff prior to testing, inspecting samples, and reviewing the extraction process when deemed necessary, to ensure proper product evaluation.
- Manage and/or support the other business units as a toxicology consultant in relation to regulatory compliance, product safety, risk assessment, and risk management.
- Represent the company at technical meetings and trade shows.
- Communicate with customers on technical issues relating to product compliance.
- Develop chemical action levels by reviewing, summarizing and interpreting toxicology studies to assess potential human health risks.
- Interact with internal and external customer representatives to resolve issues related to product compliance.

- Author and revise standard operating procedures.
- Attend and actively participate in industry forums.
- Understand and apply the requirements of NSF ANSI Standards for products submitted for certification.
- Perform other duties as requested.

ADDITIONAL REQUIREMENTS

REQUIRED QUALIFICATIONS:

- Master's degree in toxicology or related science or Bachelor's degree with 5 years work experience in toxicology.
- Background in toxicology and knowledge of basic chemistry.
- Ability to identify, collect, and summarize pertinent toxicological data
- Ability to perform multiple tasks and meet deadlines in a goal-oriented atmosphere
- Ability to work independently with minimal supervision
- Effective written, oral, and presentation skills.
- Strong interpersonal skills.
- Attention to detail.

PREFERRED QUALIFICATIONS:

- MS degree in health-related science or equivalent.
- Experience in conducting and/or evaluating toxicology studies.
- Experience with computer-based statistical analyses.

CLOSING

Apply online at www.nsf.org
No phone calls, faxes or postal mail please.
Smoke free work environment
NSF is an EO/AA employer - we welcome and encourage diversity in our workplace

POSITION DESIRED

*Individuals seeking positions in the region can advertise in this section. Submissions to the editor should include a brief description of research interests, experience, education, type of position desired, and geographical location desired. **This service is free to members!***

This newsletter is published three times a year (January, April, and September) by the Michigan Regional Chapter of the Society of Toxicology. Send material for newsletter one month in advance by phone, fax, or e-mail to either:
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