I. Introduction

Officers for the year of this report (2006-2007) and beginning May 1, 2007 (2007-2008) are shown below:

<table>
<thead>
<tr>
<th></th>
<th>2006-2007</th>
<th>2007-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Kenneth Ramos</td>
<td>Dean Jones</td>
</tr>
<tr>
<td>Vice-President</td>
<td>Dean Jones</td>
<td>Gary Rankin</td>
</tr>
<tr>
<td>Vice-President Elect</td>
<td>Gary Rankin</td>
<td>Dennis Petersen</td>
</tr>
<tr>
<td>Secretary/Treasurer</td>
<td>Joan Tarloff</td>
<td>Joan Tarloff</td>
</tr>
<tr>
<td>Councilors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>Qin Chen</td>
<td>Terry Kavanagh</td>
</tr>
<tr>
<td>Junior</td>
<td>Terry Kavanagh</td>
<td>Brian Day</td>
</tr>
<tr>
<td>Graduate Student</td>
<td>Natalie Lassen</td>
<td>Lisa Ahern</td>
</tr>
<tr>
<td>Post-Doctoral</td>
<td></td>
<td>Lauren Aleksunes</td>
</tr>
<tr>
<td>Past President</td>
<td>Daniel Liebler</td>
<td>Kenneth Ramos</td>
</tr>
</tbody>
</table>

II. Committees for 2006-2007

A. Nominations Committee
   Kenneth Ramos (Chair)
   Dean Jones
   Gary O. Rankin
   Joan Tarloff

B. Carl C. Smith Graduate Student Awards
   Chair: Terry Kavanagh
   1. Abstract Screening Judges
      Dr. Patricia Ganey, Michigan State University
      Dr. James Kehrer, Washington State University
      Dr. Greg Reed, University of Kansas Medical Center
   2. Final Manuscript Judges
      Dr. Cecile Krejsa, Zymogenetics Inc.
      Dr. Howard Shertzer, University of Cincinnati
      Dr. Craig Thomas, Eli Lilly and Co.
C. **Merck Post-Doctoral Awards**  
Qin Chen (Chair)  
Kenneth Ramos, University of Louisville  
Gary Rankin, Marshall University  
Joan Tarloff, University of the Sciences in Philadelphia  
Nathan Cherrington, University of Arizona  

D. **Annual Officers and Business Meetings**  
Kenneth Ramos (Chair)  

III. **Activities**  

A. **Business Meeting Minutes**  

The Business Meeting of the Mechanisms Specialty Section was held Monday, March 26\(^{th}\) at the Charlotte Convention Center.  

The meeting was called to order by President Kenneth Ramos at 6:45 PM. He welcomed all in attendance and introduced the officers in attendance: Vice-President Dean Jones, Vice President Elect Gary O. Rankin, Secretary/Treasurer Joan Tarloff, Senior Councilor Qin Chen and Junior Councilor Terry Kavanagh.  

Secretary/Treasurer Joan Tarloff gave the Financial Report for the General Budget and Carl C. Smith Fund. For the Mechanisms General Fund, the balance on June 30, 2006 was $27,843 and the balance as of June 2007 was $29,218. Projected expenses from the meeting, plaques, non-labor expenses and miscellaneous expense was estimated at $5,250. The Mechanisms income at the end of the fiscal year should be ~$30,000. The Carl C. Smith fund beginning June 30, 2006 had a balance of $52,733 and has generated interest of $2,667 and current contributions of $615 for total of $56,016 as of June 1, 2007. The estimated cost for award checks and plaques is $1,800.  

Gary Rankin reviewed the symposia, workshops and Continuing Education courses sponsored by the Mechanisms Specialty Section at the 2007 Annual Meeting. We sponsored or co-sponsored 11 symposia, 5 workshops, and one roundtable. Gary reminded attendees of the April 30 deadline and indicated that officers are able to help people with the proposal submission process.  

Ken Ramos introduced the new officers for the Mechanisms Specialty Section who will assume their duties May 1, 2007. These officers are: Vice-President Elect Dennis Peterson; Junior Councilor Brian Day; Student Councilor Lisa Ahern; and Post-Doctoral Councilor Lauren Aleksunes. Ken noted that Lauren is our first post-doctoral councilor and we look forward to her fresh perspective.  

Qin Chen presented the Merck Postdoctoral Travel Award winners. There were six abstracts were screened and the three winners were determined based on merit. The judges and winners are listed below.
Terry Kavanagh noted that this marks the 25th year of the Carl C. Smith award. The panel of Screening Judges selected 12 applications to move forward. Following the submission of a full length manuscript, the applications were reviewed by a panel of Final Judges and the winners selected. Terry acknowledged the judges involved in the screening and final selection process. The panels of judges for screening and manuscript review and winners are listed below.

Joan Tarloff announced that in honor of the 25th anniversary of the Carl C. Smith award, former award winners started a contribution drive. This effort was spearheaded by Mark Hahn and has resulted in contributions of about $2000 thus far.

Bob Snyder, first president of the Mechanisms Specialty Section and unofficial historian, gave a brief account of the origins of the Carl C. Smith award and the specialty section.

No other business was brought forth, and the meeting was adjourned at 7:30 PM.

B. Carl C. Smith Award

First Place
Chirag Kariya, Mycoplasma pneumoniae Infection Increases Oxidative Stress by Inhibiting the Lung’s Glutathione Adaptive Response to Environmental Tobacco Smoke
Sponsor: Dr. Brian J. Day
Affiliation: Departments of Medicine, Immunology, and Pharmaceutical Sciences, University of Colorado Health Sciences Center and National Jewish Medical & Research Center

Second Place
Sarah N. Barnes, “Hepatic Mrp4 Induction Following Acetaminophen Exposure is Dependent on Kupffer Cell Function
Sponsor: Dr. José E. Manautou,
Affiliation: Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT

Third Place (tie)
Vishakha S Bhave, “Inhibition of COX-2 Aggravates Secretory Phospholipase A2-Mediated Progression of Acute Liver Injury in Rats”
Sponsor: Dr. Harihara M Mehendale,
Affiliation: Department of Toxicology, College of Pharmacy, University of Louisiana at Monroe

Hao Sun, “Dehydrogenation of Indoline by Cytochrome P450 Enzymes: a Novel “Aromatase” Process”
Sponsor: Dr. Garold S. Yost
Affiliation: Department of Pharmacology and Toxicology, University of Utah

Honorable Mention
(Listed Alphabetically)

**Lauren M Aleksunes**, in the lab of Dr. José E Manautou Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT
“Induction of Mrp3 and Mrp4 transporters during acetaminophen hepatotoxicity is dependent on Nrf2 transcription factor”

**Xiaomin Deng**, in the lab of Dr. Robert Roth, Departments of Biochemistry and Molecular Biology, and Pharmacology and Toxicology, Michigan State University
“Neutrophil interaction with the hemostatic system contributes to liver injury in rats cotreated with lipopolysaccharide and ranitidine”

**Jacqueline Heilman**, in the lab of Dr. Walter H. Watson, Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health
“Thioredoxin reductase is required for maximal NFκB-mediated gene expression.”

**Bo Jiang** in the lab of Dr. Tammy R. Dugas, Department of Pharmacology, Toxicology and Neuroscience, Louisiana State University Health Sciences Center
“HIV Antiretroviral Drug Combination Induces Endothelial Mitochondrial Dysfunction and Reactive Oxygen Species Production, But Not Apoptosis”

**Gilbert R. Kinsey**, in the lab of Dr. Rick G. Schnellmann, Department of Pharmaceutical Sciences, Medical University of South Carolina
“Role of Ca2+-Independent Phospholipase A2 in Ca2+-Induced Mitochondrial Permeability Transition”

**Timothy M. O’Brien**, in the lab of Dr. Kendall B. Wallace, Department of Biochemistry and Molecular Biology, Toxicology Graduate Program, University of Minnesota Medical School, Duluth
“Inhibition of the Adenine Nucleotide Translocator by N-acetyl Perfluorooctane Sulfonamides In Vitro”

**Yuhui Shi**, in the lab of Dr. James J. Pestka, Dept. of Food Science and Human Nutrition and the Center for Integrative Toxicology, Michigan State University
“Docosahexaenoic Acid Consumption Suppresses Multiple CREB Phosphorylation Pathways in Murine Peritoneal Macrophages”
C. **Merck Post-Doctoral Travel Award**

**Lamia Benbrahim-Tallaa**  
“Acquired Androgen Independence During Cadmium-Induced Malignant Transformation of Human Prostate Epithelial Cells.”  
Mentor: M.M. Webber and Michael P. Waalkes  
Affiliation: NCI at NIEHS, RTP, NC; Michigan State University, East Lansing, MI

**Marisa Covington**  
Mitochondrial Calpain 10 Regulates ATP Synthesis in Renal Proximal Tubule Cells  
Mentor: Rick G Schnellmann  
Affiliation: Medical University of South Carolina

**James Luyendyk,**  
Modulation of LPS-induced cytokine and tissue factor expression in macrophages by the PI3K-Akt pathway  
Mentor: Michael Tencati, Todd Holscher and Nigel Mackman  
Affiliation: Department of Immunology, The Scripps Research Institute, La Jolla, CA

D. **Symposia, Workshops, and Roundtables**

**Symposia**  
Application of Humanized Mouse Lines to Toxicological and Pharmacological Studies (Richard Pollenz and Daniel Nebert)

Non-Classical Mechanisms of Receptor-Mediated Transcription (Gary Perdew and Michael Gallo)

Mechanistic Biomarkers and Innovative Methodologies to Detect Acute Kidney Injury (Dean Jones and Vishal Vaidya)

Critical Roles of C-Activators and Co-Repressors During Transcriptional Activation by Xenobiotic Receptors (Richard Pollenz and Oliver Hankinson)

Emerging Technologies for Imaging for Toxicology (Craig Marcus and Jeffrey Peters)

The Vascular System as a Target of Metal Toxicity (Walter Prozialeck and Joshua Edwards)

Biliary Hyperplasia and Cholestasis: Relevance to Human Risk Assessment (Michael Santostefano and James Klaunig)
Epigenetic Regulation in Development, Reproduction and Disease: Implications for Toxicology (Dana Shuey and Rebecca Watson)

Cardiovascular Effects of Inhaled Ultra-fine and Fine Particles in Human Volunteers (Flemming Cassee and Robert Devlin)

Aging as a Modulator of Chemical Toxicity (Harihara Mehendale and Chris Corton)


**Workshops**

Methods for Investigating Skin Irritation (Mandip Sachdeva and James McDougal)

Advances and Challenges in Incorporation of Mode of Action in Human Health Risk Assessment (Nagu Keshava and Reeder Sams)

Advances in Causation and therapy of Parkinson and Parkinson-Like Movement Disorders: Views from Toxicologists and Clinicians (Wei Zheng and Gary Miller)

Can Species and Strain Differences in Dioxin Sensitivity be Explained by Differences in the AH Receptor? (J. Craig Rowlands and Timothy Zacharewski)

Target-Based Toxicity of Novel Pharmaceutical Targets (Glenn Cantor and Paul Ciaccio)

**Roundtables**

Beyond the Single Point: the Use of Dose and Time in Genomic Data for Mechanistic-Based Risk Assessment (Chris Corton and William Mattes)
IV. Financial Status (07/01/06-07/01/07)

The revenue figures are based on estimates. Exact figures are not available from SOT as the current financial posting is dated March 2007.

**Mechanisms Specialty Section**

**Estimated Revenue**

- Contributions (Merck) $1000
- Meeting Registration $3510
- Interest $1190
- Dues $3615

Total estimated income $9315

**Estimated Expenses**

- Executive meeting $157
- Annual Meeting Reception $4900
- Awards (3 Merck) $1500
- Plaques $369

Total estimated expenses $6926

Estimated revenue above expenses $2389

Net assets beginning 07/01/06 $29,235

**Estimated assets as of 07/01/07** $31,624

**Carl C. Smith Fund**

- Contributions $850
- Interest $2562

Total deposits $3412

Estimated expenses (awards) $2100

Estimated revenue above expenses $1312

Net assets beginning 07/01/06 $55,753

**Estimated assets as of 07/01/07** $57,065
V. Future Plans

In 2007-2008 Mechanisms Specialty Section will:

1. Promote excellence by the development of high quality symposia, workshops and CE courses for the upcoming annual SOT meetings.
2. Work to strengthen the support for the Carl C. Smith graduate student award from the membership of the Mechanisms Specialty Section and to increase student submissions for these awards.
3. Encourage more student involvement in the Mechanisms Specialty Section.
4. Continue to develop the web page for the Mechanisms Specialty Section.