

CENTRAL STATES REGIONAL CHAPTER

ANNUAL REPORT: 2021-2022

May 1, 2021 to April 30, 2022

I. Officers/Committees:

<u>Officers</u>	<u>2021-2022</u>	<u>2022-2023</u>
President:	Pallavi B. Limaye, PhD, DABT <i>Sekisui XenoTech (KS)</i>	Udayan M. Apte, PhD, DABT <i>University of Kansas Medical Center (KS)</i>
President-Elect/Vice President:	Vacant	Rodrigo Franco Cruz, PhD <i>University of Nebraska-Lincoln (NE)</i>
Secretary-Treasurer:	Michele Pritchard, PhD <i>University of Kansas Medical Center (KS)</i>	Jeffery Klein, PhD <i>SciLucent, Inc. (MO)</i>
Past President:	Anup Ramachandran, PhD <i>University of Kansas Medical Center (KS)</i>	Pallavi B. Limaye, PhD, DABT <i>Sekisui XenoTech (KS)</i>
Councilor:	Iván L. Csanaky, MD, PhD. DABT <i>Children's Mercy Research Institute Kansas City (MO)</i>	Iván L.Csanaky, , MD, PhD. DABT <i>Children's Mercy Research Institute Kansas City (MO)</i>
Councilor:	Rodrigo Franco Cruz, PhD <i>University of Nebraska-Lincoln (NE)</i>	Isaac Sundar, PhD <i>University of Kansas Medical Center (KS)</i>
PDA Representative:	Kendra L. Clark, PhD <i>University of Nebraska Medical Center (NE)</i>	Laura Dean <i>University of Iowa (IA)</i>
Grad Student Representative:	David Umbaugh, MS <i>University of Kansas Medical Center (KS)</i>	Giselle Sanchez-Guerrero <i>University of Kansas Medical Center (KS)</i>
Committees:	None	

II. **2021 Membership total:** 61

III. **Key Outcomes in 2021-2022:**

A. **CSSOT Regional Chapter Annual Meeting**

Meeting overview. Sixty three participants attended the virtual Central States Regional Chapter of the Society of Toxicology (CSSOT) annual meeting on October 21 – 22, 2021. Sekisui XenoTech in Kansas City, KS hosted the meeting virtually while SOT provided WebEx as our virtual meeting platform and technical support. The keynote themes were: **Gene and cell therapy in drug development** and **Developmental programming**. On Thursday, October 21, the keynote talk was given by Dr. Patricia Ryan (AstraZeneca) titled 'An introduction to cell and gene therapy'. On Friday, October 22, Dr. Kartik Shankar (University of Colorado) presented the keynote talk titled 'Developmental programming associated with nutritional and environmental stressors'. Aside from these excellent keynote lectures, we had eight short platform presentations (15 minutes each) selected from abstracts submitted by trainees and 19 poster flash talks (5 min each), including all remaining abstracts submitted by trainees. Overall, the annual meeting was a success.

Awards administered.

1. John Doull Award. One CSSOT member was nominated for the 2021 John Doull Award, which was presented to Dr. Hans-Joachim Lehmler (University of Iowa). He presented the award lecture titled 'PCB Metabolism and Neurotoxicity: Highlights from a Transatlantic Journey' on October 22, 2021.

2. Dr. Partha Kasturi Memorial Undergraduate Research Award. This award is established honor the late Dr. Partha Kasturi to recognize scientific research achievements in toxicology at the undergraduate level. The award totaled \$100 and was sponsored by CSSOT. This award also came with a personalized certificate mailed to the awardee. This year's award winner was Yifan Yu (University of Kansas Medical Center).

3. Short platform presentation awards. Three graduate student awards were given recognizing the top presentations at the CSSOT annual meeting. These were sponsored by MRIGlobal and were \$100 each. Each award came with a personalized certificate mailed to the awardee. This year's winners were:

Graduate student short platform presentations awardees:

1st Place: David Umbaugh, MS (University of Kansas Medical Center)

2nd Place: Nga Nguyen (University of Kansas Medical Center)

3rd Place: M M Hasibuzzaman (University of Iowa)

4. Poster flash-talk presentation awards. Three graduate student and one postdoctoral fellow awards were given recognizing the top poster flash talk presentations at the CSSOT annual meeting. These were sponsored by Sekisui XenoTech and were \$100 each. Each award came with a personalized certificate mailed to the awardee.

Graduate student flash talk poster presentations awardees:

1st Place: Dakota Robarts (KUMC)

2nd Place: Manasi Kotulkar (KUMC)

3rd Place: Natalie Eppler (KUMC)

Postdoctoral flash talk poster presentation awardee

Kendra Clark, PhD (University of Nebraska Medical Center)

CSSOT RC Regional Chapter Annual Meeting Budget

Venue (virtual by SOT via WebEx): \$0

Catering: \$0

Trainee (undergraduate and graduate students, postdoctoral fellow) awards: \$800

Speakers: \$0

IV. Activities:

A. 2021 SOT Virtual Annual Meeting Activities (e.g., courses, scientific sessions, or virtual receptions): Several CSSOT members attended the meeting virtually and in-person.

**Virtual Central States Regional Chapter of the Society of Toxicology Annual Meeting
October 21st and 22nd, 2021**

Thursday, October 21, 2021

8:30 AM – 8:40 AM **CSSOT 2021 Meeting Kickoff**
Pallavi Limaye, PhD, DABT, Sekisui Xenotech, LLC, CSSOT President
Welcome Remarks
Darren Warren, PhD, President and Chief Executive Officer,
Sekisui Xenotech, LLC

Keynote Lecture

8:40 AM – 9:20 AM Patricia Ryan, PhD, AstraZeneca
An introduction to cell and gene therapy

9:20 AM – 9:30 AM **Discussion**

9:35 AM – 10:35 AM **Trainee Short Platform Presentations (selected from abstracts)**

9:35 AM – 9:50 AM Laura Gosse, 5th year graduate student, University of Iowa
Exploring the role of the aryl hydrocarbon receptor (AhR) in the modulation of gene expression by 3,3',4,4',5-pentachlorobiphenyl (PCB126) with emphasis on energy homeostasis and sex differences

9:50 AM – 10:05 AM Rachel Crawford, 5th year graduate student, University of Iowa
Characterization of the 3,4-dihydroxyphenylacetaldehyde adduct with L-cysteine reveals its potential as a biomarker of catecholaminergic stress

10:05 AM – 10:20 AM Kendra Clark, PhD, 3rd year post doc, University of Nebraska Medical Center
Perfluorooctanoic acid (PFOA) exposure differentially alters the cell cycle and promotes follicle growth in neonatal mouse ovaries

10:20 AM – 10:35 AM Forkan Ahamed, 4th year graduate student, University of Kansas Medical Center
Nuclear receptor SHP promotes M2-like macrophage polarization through posttranscriptional regulation of PPAR γ

10:45 AM – 11:45 AM **Trainee Flash Talk Poster Session I**

11:45 AM **Meeting Day 1 adjourned**

Friday, October 22, 2021

8:30 AM – 8:35 AM **Remarks**
Pallavi Limaye, PhD, DABT, Sekisui Xenotech, LLC; CSSOT President

Keynote Lecture

8:35 AM – 9:15 AM Kartik Shankar, PhD, DABT, University of Colorado
Developmental programming associated with nutritional and environmental stressors.

9:15 AM – 9:25 AM **Discussion**

9:35 AM – 10:35 AM **Trainee Short Platform Presentations (selected from abstracts)**

9:35 AM – 9:50 AM David Umbaugh, 4th year graduate student, University of Kansas Medical Center
An interactive tool to explore the hepatic transcriptomic landscape after an acetaminophen overdose using single-cell RNA sequencing

9:50 AM – 10:05 AM Alexandra Crook, 4th year graduate student, University of Nebraska, Lincoln
Mitochondrial metabolism in astrocytes is essential for their survival against neurotoxic electrophile exposure

10:05 AM – 10:20 AM Nga Nguyen, 5th year graduate student, University of Kansas Medical Center

- Recovered hepatocytes promote macrophage apoptosis through CXCR4 after acetaminophen-induced liver injury in mice*
- 10:20 AM – 10:35 AM M. M. Hasibuzzaman, 4th year graduate student, University of Iowa
Microparticle delivery of IL-1 α reduces systemic inflammation and toxicity in a syngeneic mouse model of HNSCC
- 10:45 AM – 11:30 AM **Trainee Flash Talk Poster Session II**
- 11:40 AM – 12:25 PM **John Doull Award presentation and talk**
CSSOT 2021 Recipient – Hans-Joachim Lehmler, PhD, University of Iowa
PCB metabolism and neurotoxicity: highlights from a transatlantic journey
- 12:30 PM – 1:00 PM **Undergraduate, graduate, and postdoctoral trainee awards**
- 1:00 PM **Meeting adjourned**

B. 2021 CSSOT Annual Meeting Awards Information:

Graduate student short platform presentations awardees:

- 1st Place: David Umbaugh, MS (University of Kansas Medical Center)
2nd Place: Nga Nguyen (University of Kansas Medical Center)
3rd Place: M M Hasibuzzaman (University of Iowa)

Graduate student flash talk poster presentations awardees:

- 1st Place: Dakota Robarts (University of Kansas Medical Center)
2nd Place: Manasi Kotulkar (University of Kansas Medical Center)
3rd Place: Natalie Eppler (University of Kansas Medical Center)

Postdoctoral flash talk poster presentation awardee

Kendra Clark, PhD (University of Nebraska Medical Center)

Dr. Partha Kasturi Memorial Undergraduate Research Award

Yifan Yu (University of Kansas Medical Center)

John Doull Award recipient:

Hans-Joachim Lehmler, PhD, University of Iowa

PCB metabolism and neurotoxicity: highlights from a transatlantic journey

C. Other Educational Activities Conducted (e.g., webinars, in-person meetings): Due to the SARS-CoV-2 pandemic, in-person meetings could not be held. Two keynote webinars were included in the annual meeting.

D. Communication Activities:

1. Newsletter publication frequency: None
2. New or Significant Announcements/blogs: CSSOT RC meeting announcement, Call for John Doull Award nominee announcement, Call for Dr. Partha Kasturi Memorial Undergraduate Research Award announcement.
3. Highlight of Website enhancements: We updated the CSSOT website for overall accuracy, additional information and have added a new tab with job listings from regional chapter universities and companies.

- E. Mentoring activities: Judges for the CSSOT Regional Chapter annual meeting provided constructive feedback to each trainee they evaluated. This information was sent to each presenter after the meeting.
- F. (Regional Chapters only) Activities supporting undergraduate students: CSSOT established a new annual award to honor the late Dr. Partha Kasturi (University of Kansas Medical Center) in 2020 which recognizes scientific research achievement in toxicology at the undergraduate level. This year's award recipient was Yifan Yu (University of Kansas Medical Center). In addition, CSSOT sent one nomination for SOT's RC4 Undergraduate Research Award and

V. Feedback and Ideas:

- A. In what ways is your group fostering and maintaining an inclusive environment?

CSSOT has reached out to regional scientists (academia and industry) in Kansas, Missouri, Iowa, and Nebraska encouraging them to become members of the SOT and CSSOT and to get them interested in leadership opportunities.

- B. How might SOT better support your group's activities (perhaps something the Society should be doing that we currently do not do, or do not do effectively, that would be of importance/benefit to the members of your component group?):

Note: If funding is listed, please provide detail on the membership need that the funding would support.

Recruiting members. We would like to increase membership in the CSSOT. Would it be possible to automatically assign SOT members to their regional chapters when they become SOT members or when they renew their memberships? This way, regional chapters can grow membership and engage SOT members who live in the territory of each chapter. This would include emeritus and retired members, who do not pay membership fees otherwise.

Virtual meeting support. We appreciate the support we received from the SOT to conduct the last CSSOT annual meeting virtually through Webex. It would be helpful to enable applause, emojis, etc. so that the audience can participate in recognizing the achievements of the fellow attendees during future virtual conferences.

- C. What is one thing that the Society is currently doing that impacts your component group that should be changed (e.g., stopped, modified, etc.)?

Website revisions. If at all possible, we would appreciate it if the modernization of the CSSOT website could occur in the coming year.

- D. What changes do your component group anticipate making in the way in which it operates in the coming year?

We are planning on conducting a career workshop for the students in our region.