

Newsletter: 2021

Drug Discovery Toxicology Specialty Section (DDTSS)

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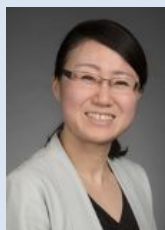
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President's Message

Welcome to the Drug Discovery Toxicology Specialty Section newsletter!

Dear Colleagues, Dear members,

It has been over 2 years the pandemic has affected our freedom to operate and today it is still holding our attention. Families are still struggling to visit each other, parents wonder how long their kids will be able to attend school, and most of us are still working part or full time from home. While it is certainly not over yet, vaccination rates are increasing and borders are slowly starting to open up. The dream of having an in-person SOT conference seems to become possible and we are all looking forward to seeing you in San Diego, in March, 2022!

Originally founded in 2005, the Drug Discovery Toxicology Specialty Section (DDTSS) has created an environment where discovery toxicologists from all career stages can connect. It provides a platform where emerging technologies are shared and the incorporation of predictive and integrative toxicological approaches early in drug discovery and development are discussed. A well developed and strong discovery package is key to identify potential liabilities and provide the necessary perspective to help reduce drug attrition due to safety during development.

Although over the course of the pandemic we have successfully adapted our way of working and have developed the ability to really connect virtually, the importance of networking, meeting new people and opportunistic in-person discussions remains.

That is why this year we would like to give our members the possibility to all come together during our reception and enjoy a true networking opportunity.

Personally the DDTSS has been my home away from home for 6 years now. It has been a privilege to work with all the DDTSS officers. If you would like to join the leadership team I would really encourage you to submit your application. It has been an amazing experience that I will treasure forever. Please find open positions on page 9!

This Specialty Section can only grow and improve with the help of its members so if you have any ideas, as crazy as they may seem, please reach out to us. Speak up! We want to hear from you.

I wish you all a safe and healthy end of 2021 and cannot say loud enough how happy I am to be able to reconnect with all of you in March!



**DDTSS President
Marie Lemper**

DDTSS SOT 2021 Activities and Competitions



Our virtual acknowledgement and congratulations!!

Thank you for your service!

President

Zoe Zhong



Councilor

Pankajini Mallick



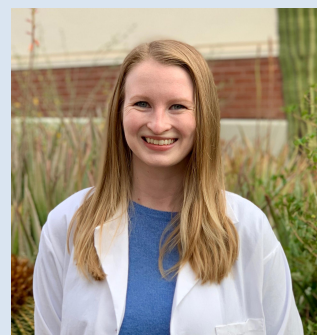
Postdoctoral Representative

Monica Langley



Graduate Student Representative

Siennah Miller



2021 Drug Discovery Toxicology Paper of the Year Award

Nonclinical Safety Assessment of AMG 553, an Investigational Chimeric Antigen Receptor T-Cell Therapy for the Treatment of Acute Myeloid Leukemia

Karbowski, C., Goldstein, R., Frank, B., Kim, K., Li, C., Homann, O., Hensley, K., Brooks, B., Wang, X., Yan, Q., Hernandez, R., Adams, G., Boyle, M., Arvedson, T., and Lebec, H.
TOXICOLOGICAL SCIENCES, 177(1), 2020, 94–107

T-cell therapeutics targeting cell surface antigens such as FLT3 may provide benefit for AML patients. This manuscript discusses the nonclinical safety assessment of AMG 553, an investigational chimeric antigen receptor (CAR) T-cell therapeutic targeting FLT3. A combination of studies including FLT3 transcript and protein assessment, exploratory toxicology studies in cynomolgus monkeys, and in vitro assessment of cell killing along with complementary data from toxicology studies with FLT3-targeting T-cell engagers were utilized to establish the nonclinical safety profile of AMG 553.

DDTSS SOT Annual Meeting Poster Awards (2021)

Graduate student Winners



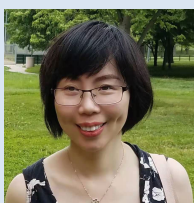
1st Place: Shengjie Xu, Rutgers Institute for Translational Medicine & Science, New Brunswick, NJ.

Poster title *"Inhibition of Glycolysis Attenuates Excitation Contraction Coupling in Human Airway Smooth Muscle Cells"*.



2nd Place: Kayla L. Frost, Department of Pharmacology & Toxicology, University of Arizona, Tucson, AZ

Poster title *"Renal Transporter Expression Changes in Rodent Models of Nonalcoholic Steatohepatitis"*.



3rd Place: Minhong Huang, Department of Biomedical Sciences, Iowa State University, Ames, IA

Poster title *"Mitochondrial Dysfunction Induces Epigenetic Dysregulation by H3K27 Hyperacetylation to Perturb Active Enhancers in Parkinson's Disease"*



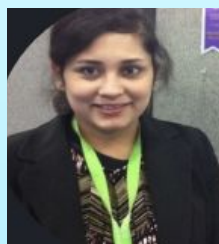
3rd Place: Durgesh Dwivedi, Department of Pharmacology and Toxicology, National Institute of Pharmaceutical Education and Research (NIPER), India.

Poster title *"Pharmacological Intervention of Glibenclamide and Dimethyl Fumarate Against Thioacetamide-Induced Liver Fibrosis in Mice: Comparative Study with MCC950 and 4 Octyl Itaconate"*



1st Place: Preeti S Chauhan, Department of Food Science and Human Nutrition, Michigan State University, MI

Poster title *"Rapid pulmonary ectopic lymphoid neogenesis in lupus-prone NZBWF1 mice following acute intranasal exposure to crystalline silica"*.



2nd Place: Nivedita Banerjee Chakrabarty, Department of Pathology, University of Texas Medical Branch, Galveston, TX

Poster title *"Aberrant expression of microRNAs in TCE-mediated autoimmune response"*.



3rd Place: Kumaravel Mohankumar, Department of Veterinary Physiology and Pharmacology, Texas A&M University, College Station, TX

Poster title *"Flavonoids are Nuclear Receptor 4A1 (NR4A1, Nur77) Ligands that act as Inhibitors of Endometriosis"*.

Postdoctoral Winners

Your voice at the DDTSS virtual reception (2021)

Most challenging aspects of 2021

- Staying connected to the broader scientific community
- Scientific brainstorming with colleagues spontaneously
- Missing the unexpected spontaneous idea
- Too little separation between home and work

Most grateful aspects of 2021



Looking forward to in 2022



Our proposal at the DDTSS reception (2022)

Most of the challenges people have faced over the past year are related to connection and interaction with colleagues, friends, family, but also the wider scientific community. When we look at the word cloud made from the comments shared during the 2021 reception a lot can be achieved by holding an informal DDTSS networking reception where the focus will be to reconnect with our colleagues and the broader discovery toxicology community. So please **join us on Wednesday March 30 for some fun, food, drinks and networking!**



I WANT YOU

.....to submit your ground-breaking drug discovery toxicology publications for...

Our Annual Science Competition! – Drug Discovery Toxicology Paper of the Year Award!

We are pleased to announce that for the **fourth** year running we will be awarding a prize for the drug discovery toxicology 'Paper of the Year'. The winner will receive a plaque of recognition and a financial award at the 2022 SOT Drug Discovery reception. There will also be an opportunity for this work to be presented at the reception. Application is open to all DDTSS members. You must be senior or first author and the paper must be accepted or published between January 1-December 31, 2021. Papers for consideration can be submitted at any time before the **15th December 2021 deadline** to Connie Wu (wu.kai@gene.com). Please feel free to encourage students and/or postdocs and to reach out to colleagues to make them aware of this new and exciting opportunity to share their work.

...and to submit your outstanding research for...

The 2021 DDTSS Student and Postdoctoral Fellow Poster Competition and Emil A. Pfitzer Travel Award!

Abstracts should describe original research with high relevance for the field of drug discovery and investigative toxicology. All abstracts will be evaluated for scientific merit and relevance and a selected set of student and postdoc finalists will be invited to present their posters for judging at the SOT meeting in San Diego. First, second and third place winners will be announced at the DDTSS reception and cash prizes will be awarded from the Emil A. Pfitzer Endowment fund for winning entries. Abstracts should be submitted to Saurabh Vispute (saurabh.vispute@pfizer.com) no later than **29th December 2021**.



CE course

DDTSS will host CE at 2022 SOT annual meeting!

Safety Evaluation Strategies in Drug Discovery: From Target Assessment to Identification of Drug Candidates (Sunday, March 27th)

- Target Safety Assessments: Knowledge is Power (Ruth Roberts, Apconix)
- Chemical series and compound de-risking: – what do we focus on and why? (Nigel Greene, AstraZeneca)
- Pharmacokinetics as an integral part of early drug development (Sabrina Crouch, Neurocrine Biosciences)
- Early in vivo pilot toxicology studies in drug discovery: study designs, strategies, and objectives (Jonathan Maher, Theravance Biopharma)
- Discovery Toxicology case studies – interactive session (Nardos Tassew, Genentech & Qin Wang, Takeda)

Mentoring luncheon

We will be holding mentoring luncheon for students and postdocs at the 2022 SOT Meeting in San Diego. Members of the DDTSS leadership committee will be available to discuss careers in pharmaceutical drug discovery toxicology and to answer any questions. More info to come. Anyone wishing to attend can already contact Satoko Kiyota (kiyota.satoko@gene.com)

DDTSS Reception

Wednesday, March 30th from 6 - 7:30 PM

Please join us for our DDTSS reception. This year our reception will focus on CONNECTION. We hope to see you there!

Recent DDTSS sponsored webinar
“Nonclinical Safety Assessment of AMG 553, an Investigational Chimeric Antigen Receptor T-Cell Therapy for the Treatment of Acute Myeloid Leukemia”

Organized by Dr Kai Connie Wu, Genentech and Dr Brandon Jeffy, Takeda

Speaker: Dr Christine Karbowski, Amgen

Wednesday October 27
10 - 11 am PT/ 12 - 1 pm CT/ 1 - 2 pm ET

Past DDTSS sponsored webinar
“Understanding Neurotoxicity Assays and Interspecies Differences to Address Attrition in Drug Discovery”

Speaker: Dr Nigel Green, Director, Head of Data Science and Artificial Intelligence, Drug Safety and Metabolism at AstraZeneca

Thursday April 15
2-3 pm ET

Stay Tuned — More to Come!!!

Engage Undergraduates in the Pursuit of Toxicology Career!

HELP US RECRUIT EMERGING TOXICOLOGISTS!

SOT ToxScholar program supports presentations to increase awareness of toxicology as a science and as a career field.

At institutions that are

- Primarily undergraduate
- With a high proportion of undergraduates from underrepresented groups
- In developing countries



We need YOU to be a ToxScholar. [Apply for funding.](#)

Faculty United for Toxicology Undergraduate Recruitment and Education (FUTURE) Committee

List of Past Presidents

Zoe Zhong	2020
Dinah Misner	2019
Howard Mellor	2018
Peter Newham	2017
Ray Kemper	2016
Dan Kemp	2015
Andrew Olaharski	2014
Yvonne Will	2013
John Wisler	2012
Craig Thomas	2011
Cindy Ashfari	2010
John Davis	2009
Kyle Kolaja	2008
Drew Badger	2004-2007

DDTSS leadership positions that will be open in this coming year's election:

- Vice President-Elect (4-year commitment)
- Secretary/Treasurer (2-year commitment)
- Councilor (2-year commitment)

If you're interested in becoming part of the leadership team please submit your Biosketch asap to marie.lemper@ucb.com. Self-nominations are welcome. Deadline to receive nominations is **November 14th, 2021**

See you in San Diego 2022!

To do list:

1. Don't forget your submission for the paper of the year and poster award.
2. Check out [ToxScholar Outreach Grants](#)
3. Make sure to attend:
 - **CE course:** *Safety Evaluation Strategies in Drug Discovery: From Target Assessment to Identification of Drug Candidates (Sunday, March 27th)*
 - **DDTSS Reception** (Wednesday, March 30th)
 - **DDTSS Mentoring luncheon:** More info to come!