

TOX QUARTERLY

The Official Publication of UCR Mini-ETOX GSA



Tox Quarterly Newsletter Editors: My Hua, Victoria McGruer, and ETOX Mini-GSA Members
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Danielle Stevenson Competes in Grad Slam Finals

by ETOX Mini-GSA

On March 3, 2020 from 3 PM to 6 PM the UCR Grad Slam Finals will be hosted at the Culver Center of the Arts in Downtown Riverside. UCR ETOX PhD Student, Danielle Stevenson, will be talking about the effects of Arbuscular Mycorrhizal fungal (AMF) inoculants and their mechanisms of adsorbing metals in agricultural soils to optimize restoration of degraded and metal contaminated agricultural soils and limit metal uptake into food crops.

Grad Slam is an annual UC-wide public speaking competition in which graduate students must describe their research and its value in 3 minutes.

Come support Danielle this evening!



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Inland Empire Science Olympiad

Compiled by Mini-ENTX GSA Members

The Inland Empire Science Olympiad 2020 is calling for volunteer at the event on Saturday, March 14th. The test for the 3D Protein Modeling is already provided, and needs people to proctor and grade the test. Also, volunteers are needed to help write and proctor the test for Food Science.

Please contact Jin Chen jchen137@ucr.edu for details



UCR ENTX Faculty in the News!

1. Vaping lung injury symptoms have been reported online for at least seven years

Read more: <https://news.ucr.edu/articles/2020/01/06/vaping-lung-injury-symptoms-have-been-reported-online-least-seven-years>

2. America's most widely consumed oil causes genetic changes in the brain: Soybean oil linked to metabolic and neurological changes in mice

Read more: <https://news.ucr.edu/articles/2020/01/17/americas-most-widely-consumed-oil-causes-genetic-changes-brain>

3. Agricultural area residents in danger of inhaling toxic aerosols: Overuse of selenium-heavy fertilizers creates airborne, lung-damaging particles

Read more: <https://news.ucr.edu/articles/2020/02/03/agricultural-area-residents-danger-inhaling-toxic-aerosols>

4. New commuter concern: cancerous chemical in car seats: Airborne pollutant emanates from the inside

Read more: <https://news.ucr.edu/articles/2020/02/06/new-commuter-concern-cancerous-chemical-car-seats>

Grants Awarded to ENTX Faculty

- **Research conducted by Dr. John Jefferson Perry's lab** was recently highlighted in the UCR news. He received a grant from the Congressionally Directed Medical Research Programs, or CDMRP, of the U.S. Department of Defense to develop a novel lead compound to treat breast cancer, the second most commonly diagnosed cancer among American women. Read the article online: <https://news.ucr.edu/articles/2019/10/02/research-focus-small-molecule-can-help-fight-breast-cancer>
- **Research conducted by Drs. John Jefferson Perry and Ernest Martinez** was recently highlighted in the UCR news. The professors received more than \$1.2 million in grants to support breast cancer research. Read the article online: <https://news.ucr.edu/articles/2020/01/08/two-projects-receive-nih-grant-breast-cancer-research>
- **Dr. Maurizio Pellecchia** has received a \$2.2 million grant from the National Cancer Institute of the National Institutes of Health that will help researchers target critical oncogenes of the B-cell lymphoma 2, or Bcl-2, family of proteins that regulate all major mechanisms of cell death, or "apoptosis." Read the article online: <https://news.ucr.edu/articles/2020/01/17/doubling-down-cancer-causing-genes>

GSA General Announcements

by Madeline Vera

- GSA President John Haberstroh has been meeting with UCR Administrators to help secure affordable housing for graduate students in the new North District.
- The GSA Sustainability Committee is launching a new program to promote sustainability throughout graduate departments.

ENTX Program Student and Faculty Publications

1. Baggio C, Udompholkul P, Gambini L, Salem AF, Jossart J, Perry JJP*, & Pellecchia M. (2019). Aryl-fluorosulfate-based Lysine Covalent pan-Inhibitors of Apoptosis Proteins (IAP) Antagonists with Cellular Efficacy. *Journal of Medicinal Chemistry*. Epub September 24, 2019. doi: 10.1021/acs.jmedchem.9b01108.
2. Baggio, C, Udompholkul P, Gambini L, Jossart J, Salem A.F., Hakansson M, Perry JJP*, Pellecchia M. N-locking stabilization of covalent helical peptides: Application to Bfl-1 antagonists. (2020) *Chemical Biology & Drug Design*. ePub. 02 January 2020.
3. Michael J. Bentel, Yaochun Yu, Lihua Xu, Hyuna Kwon, Zhong Li, Bryan M. Wong, Yujie Men, Jinyong Liu*. Degradation of Perfluoroalkyl Ether Carboxylic Acids with Hydrated Electrons: Structure–Reactivity Relationships and Environmental Implications. *Environmental Science & Technology, Articles ASAP*. DOI: 10.1021/acs.est.9b05869
4. Dasgupta, S., Reddam, A*, Liu, Z., Liu, J., Volz., D (2019) High-Content Screening in Zebrafish Identifies Perfluorooctanesulfonamide as a Potent Developmental Toxicant. *Environmental Pollution*. <https://doi.org/10.1016/j.envpol.2019.113550>
5. Dennis, TN, Jossart, JJ, Perry JJP*. Mitochondrial Dysfunction Affecting the Peripheral Nervous System in Diabetic Neuropathy and Avenues for Therapy. *Handbook on Mitochondrial Dysfunction*. Editor: Shamim I. Ahmad. CRC Press, Taylor & Francis Group. Boca Raton, FL 33487-2742. Accepted (2019).
6. Gambini L, Baggio C, Udompholkul P, Jossart J, Salem AF, Perry JJP*, Pellecchia M. Covalent Inhibitors of Protein-Protein Interactions Targeting Lysine, Tyrosine or Histidine Residues. *J Med Chem*. 2019 May 29. doi: 10.1021/acs.jmedchem.9b00561.
7. He X, Zhu Y, Lin YC, Li M, Du J, Dong H, Sun J, Zhu L, Wang H, Ding Z, Zhang L, Zhang L, Zhao D, Wang Z, Wu H, Zhang H, Jiang W, Xu Y, Jin J, Shen Y, Perry J*, Zhao X, Zhang B, Liu S, Xue SL, Shen B, Chen CW, Chen J, Khaled S, Kuo YH, Marcucci G, Luo Y, Li L. PRMT1-mediated FLT3 arginine methylation promotes maintenance of FLT3-ITD(+) Acute Myeloid Leukemia. *Blood*. 2019 Jun 19. doi: 10.1182/blood.2019001282. [Epub ahead of print] PubMed PMID: 31217189.

ENTX Program Student and Faculty Publications (cont.)

8. Kumar, GB, Nair BG, Perry JJP*, Martin DBC. Recent insights into natural product inhibitors of matrix metalloproteinases. (2019) MedChemComm. epub Oct 7th 2019. doi: 10.1039/c9md00165d.

9. Reddam, A*, Tait, G., Herkert, N., Hammel, S., Stapleton, H., Volz, D (2020) Longer commutes are associated with increased human exposure to tris(1,3-dichloro-2-propyl) phosphate. Environmental International. <https://doi.org/10.1016/j.envint.2020.105499>

10. C.M. Sabbir, Y. Cui, A.L. Frie, A. Burr, R. Kamath, J.Y. Chen*, A. Rahman, T.M. Nordgren, Y.-H. Lin*, R. Bahreini*, Exposure to dimethyl selenide (DMSe)-derived secondary organic aerosol alters transcriptomic profiles in human airway epithelial cells, Environ. Sci. Technol., doi: 10.1021/acs.est.9b04376, 2019

11. Sunilkumar D, Drishya G, Chandreskharan A, Shaji eSK, Bose C, Jossart J, Perry JJP*, Mishra N, Kumar GB, Nair BG. Oxyresveratrol drives caspase-independent apoptosis-like cell death in MDA-MB-231 breast cancer cells through the induction of ROS. Oxyresveratrol drives caspase-independent apoptosis-like cell death in MDA-MB-231 breast cancer cells through the induction of ROS. (2019) Biochemical Pharmacology. ePub. 20 November 2019. doi: 10.1016/j.bcp.2019.113724



Have any news for our **Spring 2020 Edition**? Please email My (Crystal) Hua (mhua002@ucr.edu) or Victoria McGruer (vmcgr001@ucr.edu) and share any ENTX-related news/events.