Arab Toxicologists Association

ATA Est. 2019

of the Society of Toxicology

Special Interest Group Reception

March 23, 2021

Social Media:

#2021SOT

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Arab Toxicologists Association
of the Society of Toxicology

ATA Est. 2019

❖Reception Agenda

- Welcome
- Introduce ATA officers
- ATA Mission
- Awards
- Opportunities at ATA
- Upcoming event
- Student and Post-Doctoral Representatives
- Newsletter
- Website
- Financial Support
- Membership Benefits
- Direct Contact information- Survey
- Opening Discussion with All Attendees
- Reception closing- Hold-on for the Virtual Picture!

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Welcome
ATA First Reception!

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Arab Toxicologists Association

- 2021 is the first year for the Arab Toxicologists Association (ATA) reception
- Members to date
  - 50 including the executive members
- Not too late to join the ATA!
  - Spread the word!
  - Go to ATA- SOT website https://www.toxicology.org/groups/sig/ATA/join-us.asp
  - Contact any of executive members

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2020-2021 ATA Officers

ATA SOT Est. 2019
Arab Toxicologists Association

- Executive Committee:
  - President: Hasan Falah Alghetaa, University of Baghdad
  - Past President: Mohamed Abou-Donia, Duke University
  - Vice President: Hanan Ghantous, FDA
  - Vice President Elect: Salah Ahmed Soliman, Alexandria University
  - Secretary/Treasurer: Nabila Saber Ahmed, Alexandria University
  - Councilors:
    - Hadil Al Muhisen(1 year), Texas A&M University
    - Amira Mohammed (2 year), University of Baghdad
    - Saif A. Alharthy (2 year), St. John's University
  - Graduate representative
    - Noor Aly, Texas A&M University

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2021-2022 New ATA Officers

ATA SOT Est. 2019
Arab Toxicologists Association

- Executive Committee:
  - President: **Hanan Ghantous, FDA**
  - Vice President: **Burhan Ghanayem, NIEHS-NIH Retired**
  - Vice President Elect: **Nabil Al-Humadi, FDA**
  - Past President: Hasan Falah Alghetaa, University of Baghdad
  - Secretary: **Nabila Saber Ahmed, Alexandria University**
  - Treasurer: **Amira Mohammed, University of Baghdad**
  - Councilors:
    - Hadil Al Muhisen(2 year), Texas A&M University
    - Saif A. Alharthy (2 year), St. John's University
    - **lyden Mohammed (1 year), University of Baghdad**
  - Graduate representative
    - Noor Aly, Texas A&M University
  - Postdoc representative
    - **Mohamed Ghorab, US Environmental Protection Agency**

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Meet ATA New Officers 2021-2022

ATA SOT Est. 2019
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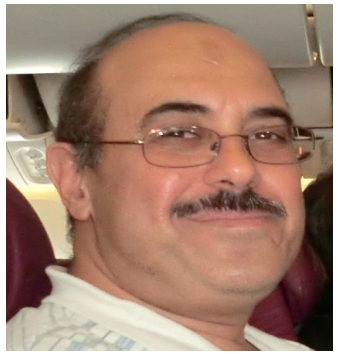
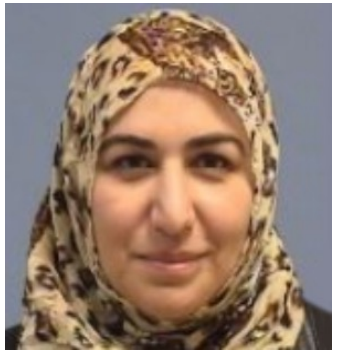
President
Hanan Ghantous, Ph.D., FDA

Vice President
Burhan Ghanayem, Ph.D., NIEHS/NIH, Retired



Vice President Elect
Nabil Al-Humadi, Ph.D. FDA

Secretary
Nabila Saber, PhD



Treasure
Amira Kamil Mohammed, VMD, MSc, PhD.

Councilor
Hadil Almuhisen, MSc

Councilor
Saif A. Alharthy, MSc., PhD Candidate

Postdoc representative
Iyden Mohammed, PhD.
University of Baghdad

Postdoc representative
Mohamed Ghorab, Ph.D, USEPA

Graduate Student Representative
Noor Aly, MSc

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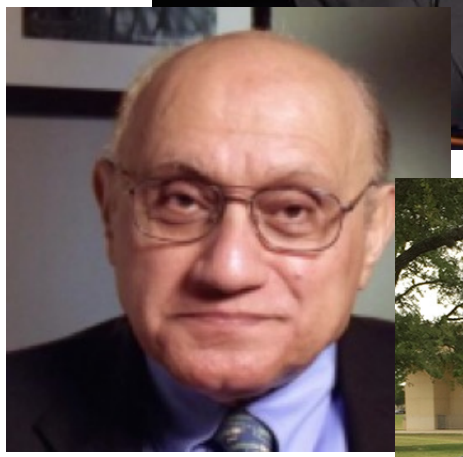
ATA-Who Are We?

ATA SOT Est. 2019
Arab Toxicologists Association

- The Arab Toxicologists Association (ATA) was founded by professionals of Arab origin with experts in various areas of toxicology working in Arab countries and all over the word.

- ATA was established in 2019 as a Society of Toxicology Special Interest Group.

Salah Soliman,
Alexandria University



Mohamed Abou-Donia,
Duke University

Ziad Naufal,
Chevron Corporation

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Our Mission

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Arab Toxicologists Association

- To establish a Special Interest Group of Toxicologists from the Arab World with a major goal to effectively communicate toxicological ideas and support its members to succeed and achieve excellence in toxicology in the United States and worldwide.
- To address current toxicological issues that affect Arab nations and increase awareness of the involvement of toxic substances in causing diseases.
- To promote the development of marginalized branches of toxicology in Arabic nations.
- To serve as an educational guide for Arabic studies in toxicological science.
- To promote the establishment of regional toxicology societies and of a Pan Arab toxicologist association to be an umbrella for all toxicology associations in all Arab countries.

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How To Learn More About the ATA

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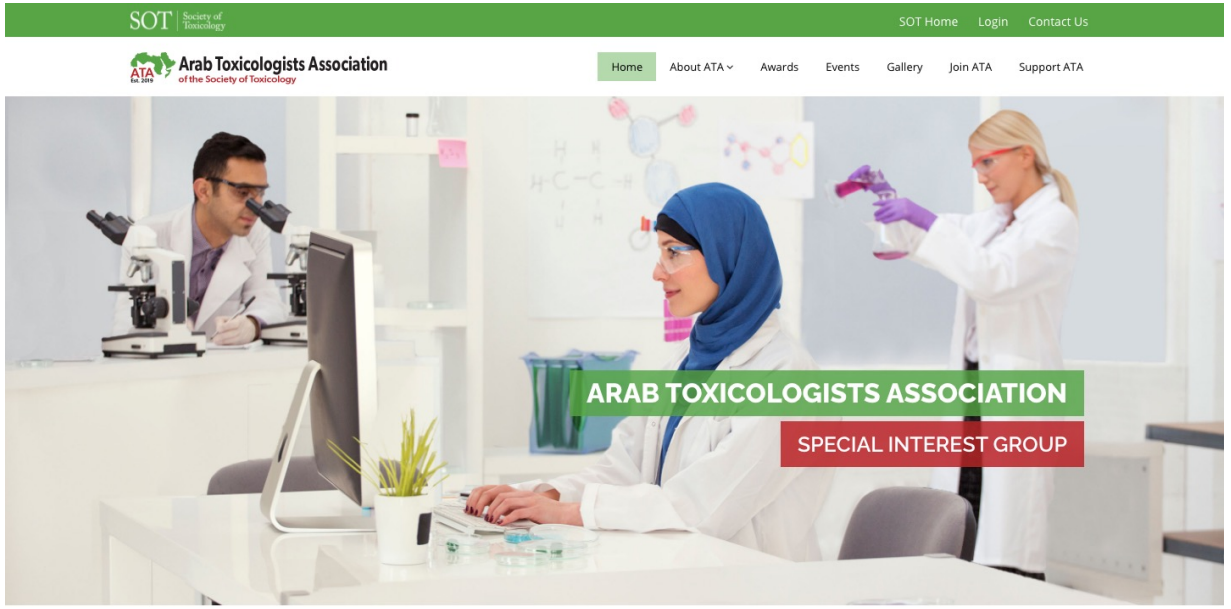
- We are available on ATA-SOT Website
  - https://www.toxicology.org/groups/sig/ATA/index.asp



- By-laws and 3-year plan
  - Available on the ATA-SOT website

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Awards Committee

- Interested in serving on the ATA Awards Committee?
  - Contact Amira Mohammed
    - Dr.amirakamil@covm.uobaghdad.edu.iq
  - Lots of work to do!
    - **Funding for awards**
- ATA Awards
  - Graduate Student Best Abstract
  - Distinguished Scientific Presentation
  - Best Publication
  - Outstanding Professional Award
- Future ATA Awards
  - Student Travel Award

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ATA Awardees 2021

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Best Publication Award

Congratulation

Saeed Alqahtani

Ph.D. Student

School of Health Sciences,
Purdue University

frontiers in Immunology

ORIGINAL RESEARCH
published: 07 May 2020
doi: 10.3389/fimmu.2020.00818

Exacerbation of Nanoparticle-Induced Acute Pulmonary Inflammation in a Mouse Model of Metabolic Syndrome

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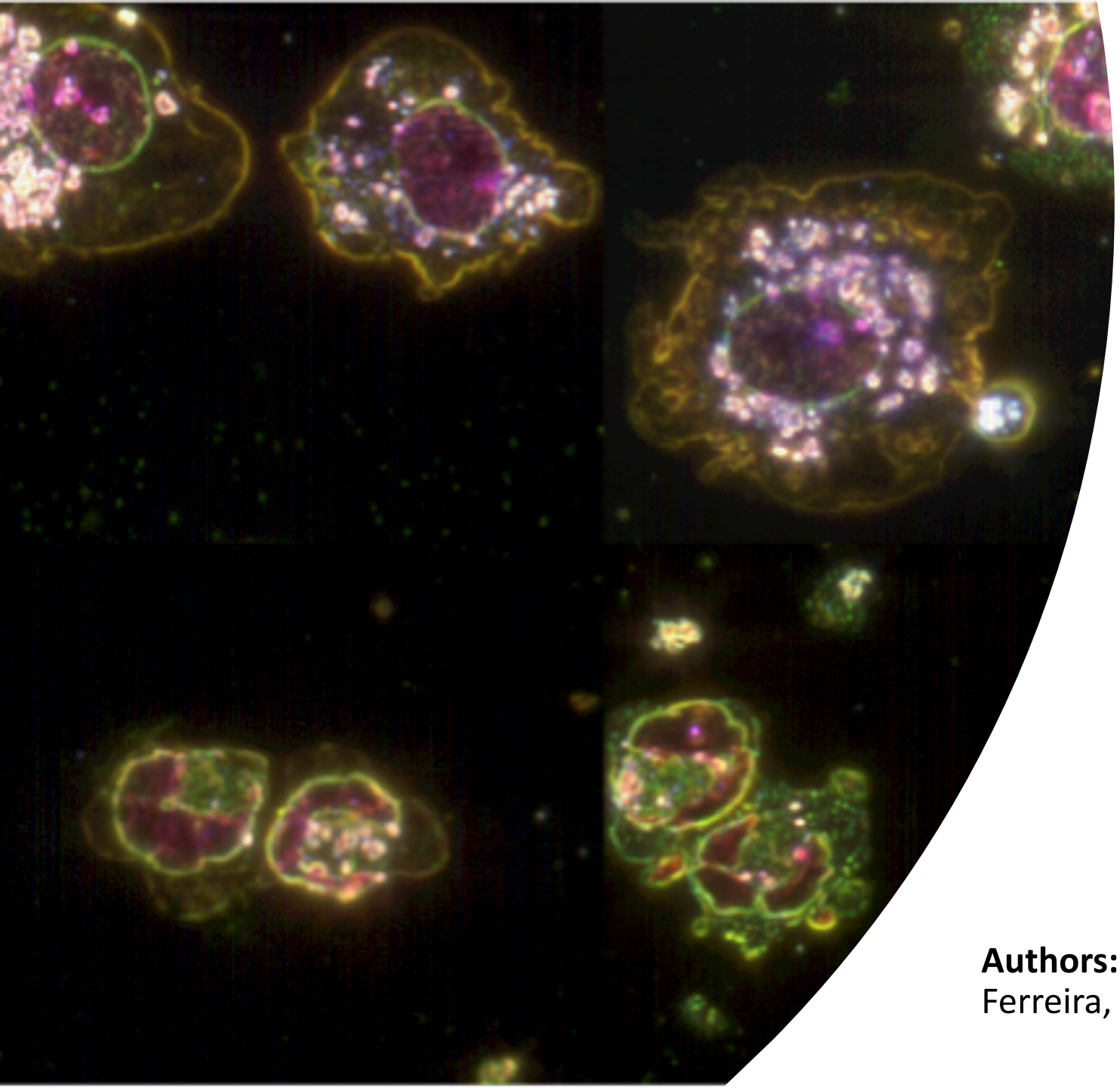
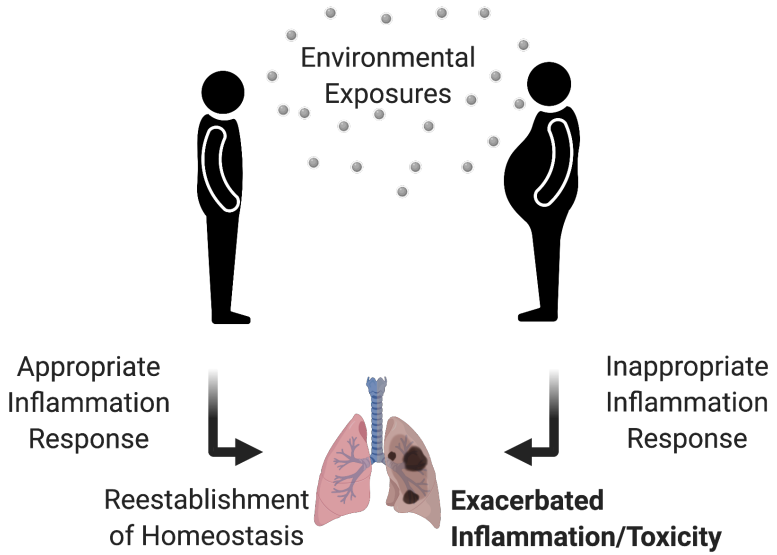


Exacerbation of Nanoparticle-Induced Acute Pulmonary Inflammation in a Mouse Model of Metabolic Syndrome

Published in Frontiers in Immunology 2020

Authors: Saeed Alqahtani, Lisa Kobos, Li Xia, Christina Ferreira, Jackeline Franco, Xuqin Du, Jonathan Shannahan

Rationale



Hypothesis: Metabolic syndrome enhances pulmonary disease susceptibility to inhaled AgNPs due to enhanced inflammatory responses associated with dysregulation of lipid signaling.

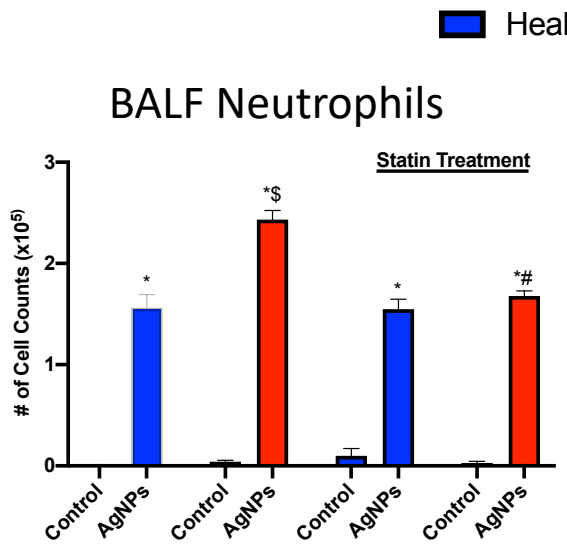
Experimental Design

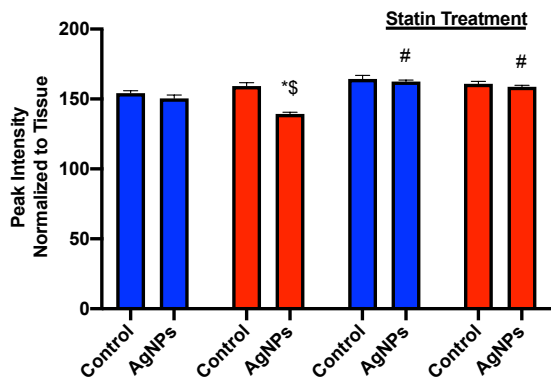
Healthy or High Fat Western Diet

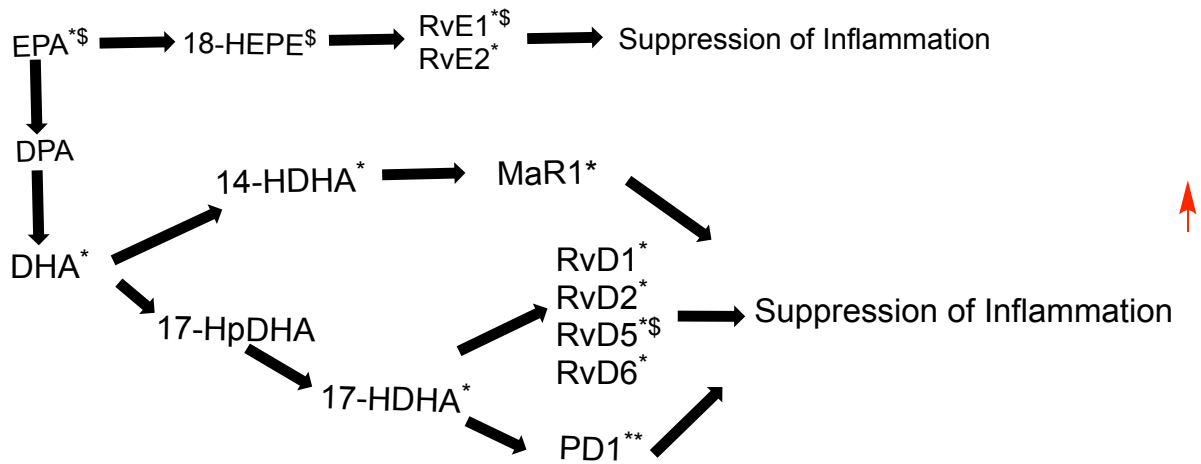
No Statin or Statin

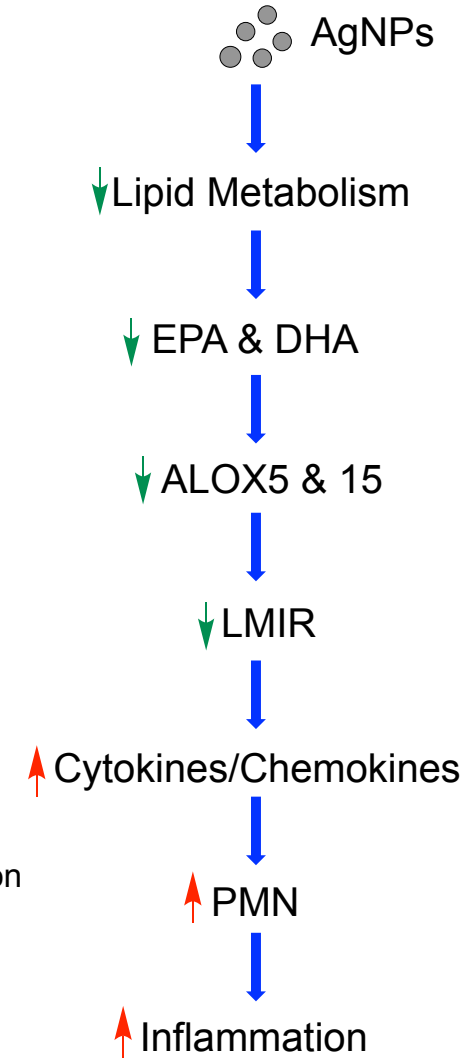
20 nm AgNP Exposure

Metabolic Syndrome and Acute Inflammation









Funding Acknowledgement: NIEHS R00/ES024392

ATA Awardees 2021

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Outstanding Professional Award

Congratulation

Mohamed Ghorab

Research Toxicologist

Office of Chemical Safety and Pollution Prevention (OCSPP), US EPA

Published 21 research articles, received many awards from outstanding organizations, very active in scientific societies, has been selected as mentor in the Toxicology Mentoring and Skills Development Training Program

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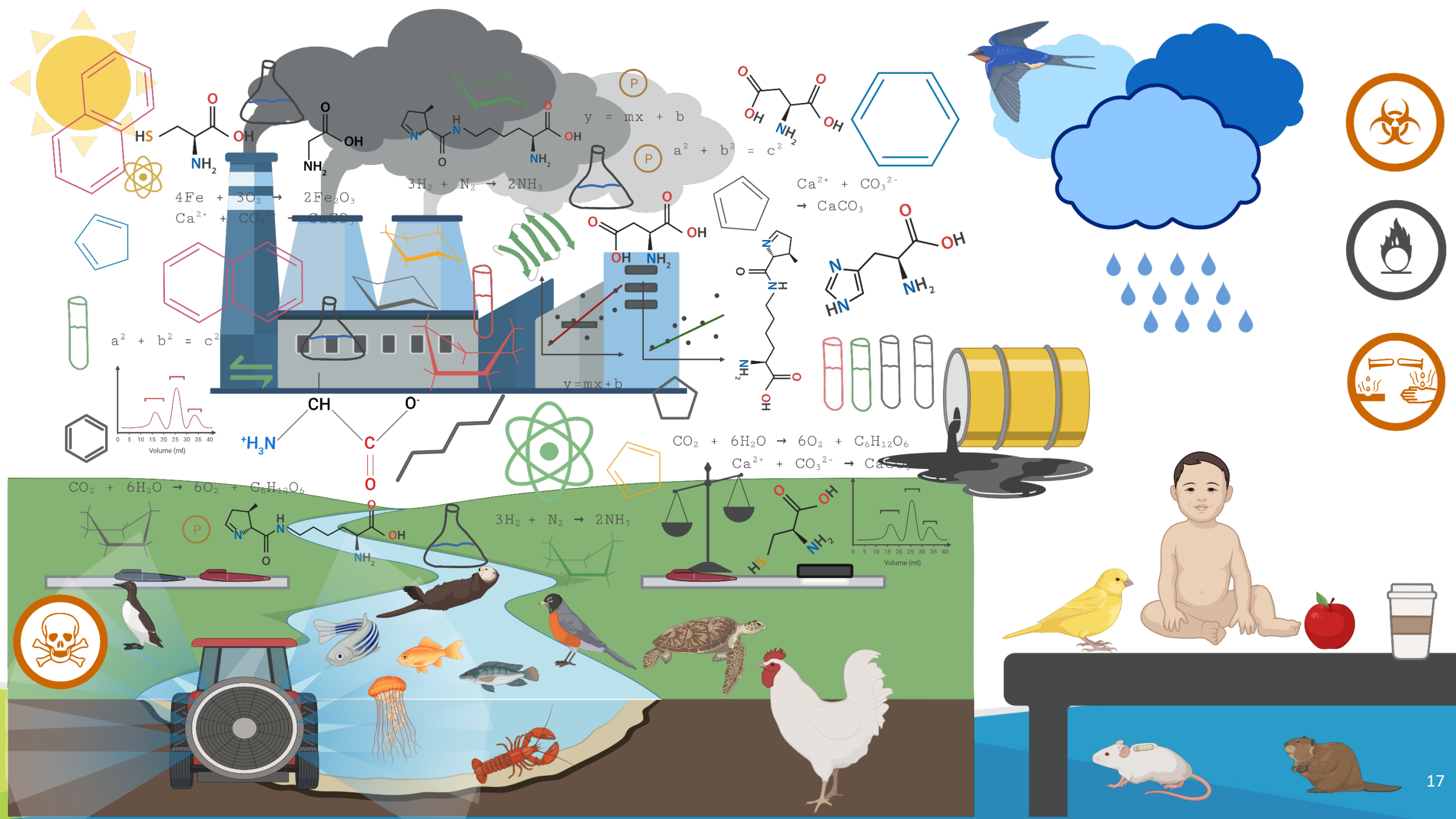
Disclaimer

The Views in this Presentation are those of the authors and may not represent their Agency or Organization policy.

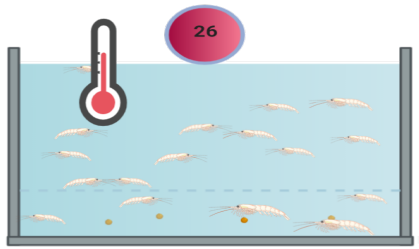

4Fe + 3O2 → 2Fe2O3
Ca2+ + CO32- → CaCO3
3H2 + N2 → 2NH3
y = mx + b
a2 + b2 = c2
CO2 + 6H2O → 6O2 + C6H12O6
Volume (ml)

Materials & Methods

A Culture Maintenance

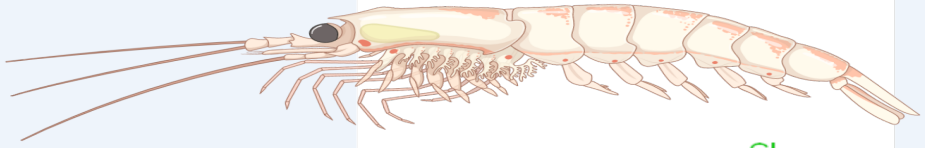
Environmental Chamber or equivalent facility with temperature control (26 ± 1 °C)

Mysids are fed <24-hr old Artemia nauplii (newly hatched brine shrimp) twice daily.



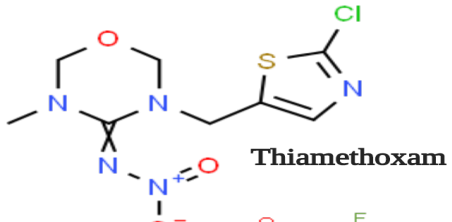
Saline test and dilution water -- The salinity of the test water must be in the range of 20‰ to 30‰. The salinity should vary by no more than ± 2‰ among the chambers on a given day

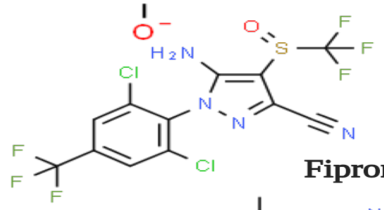
B Exposure toxicity test

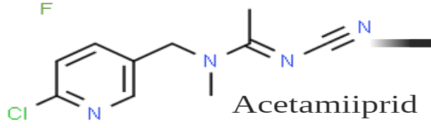


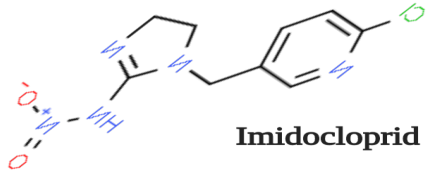
- 24 hr
- 48 hr
- 4-D
- 7-D
- 14-D

C Use Pesticides



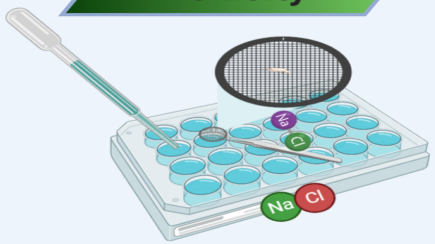






D The Acute & Chronic Test

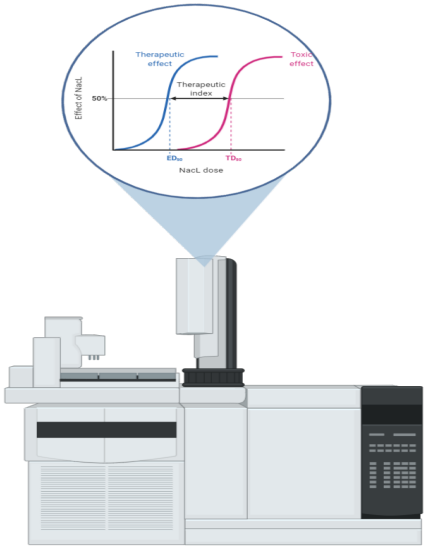
- Survival
- Growth
- Fecundity Test
- Sub-Chronic Toxicity



E Pesticide residues

Samples collected for analyzing the pesticide Residues

The LC_{50} and $IC_{10\ \&\ 25}$

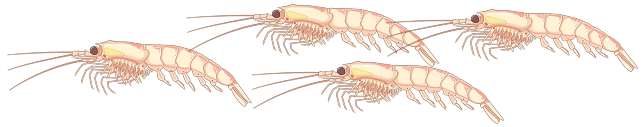


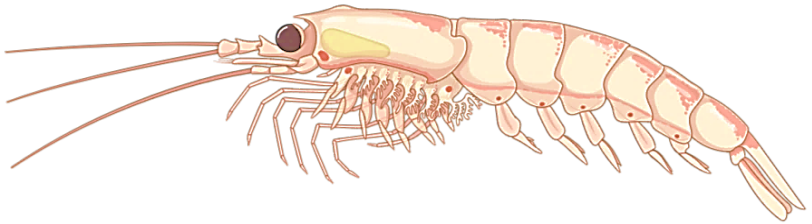
➢Mysid, *Americamysis bahia* toxicity tests

Pesticide system exposure to embryonic and juvenile Mysid

Acute Toxicity Test

Chronic Toxicity Test





0hr, 4hr, 24hr, 48hr, 72hr, 96hr, 7-D, 13-D, 14-D

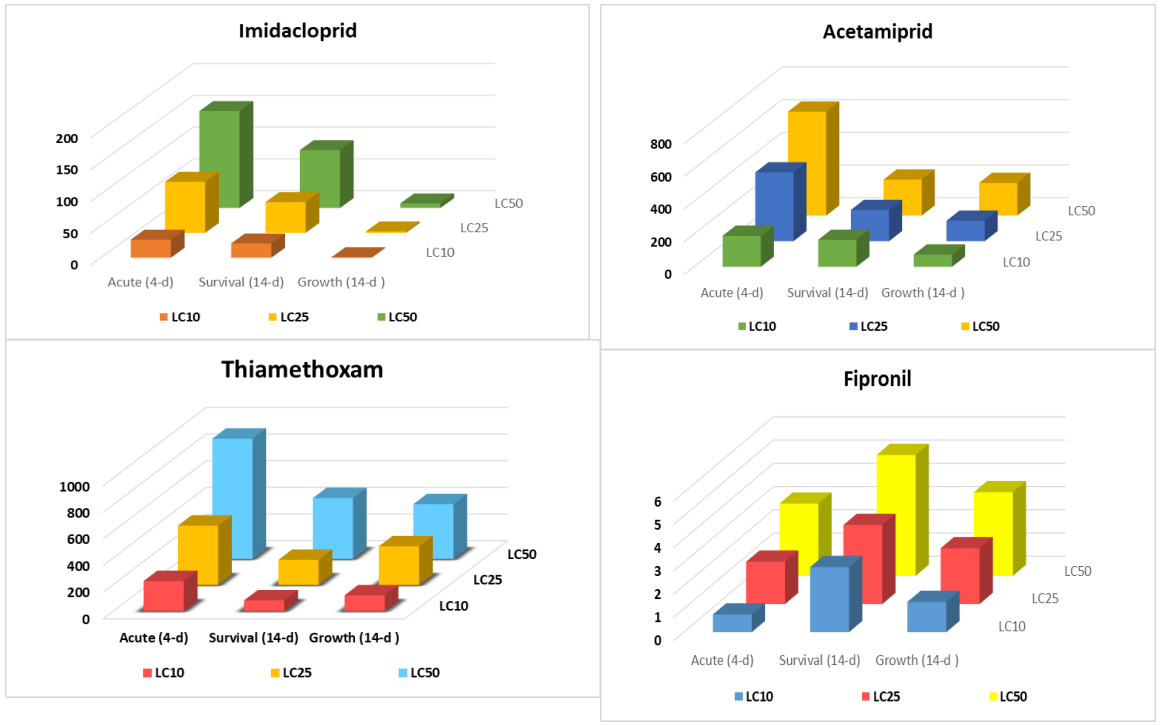
LC_{50} test

Sub-Chronic test

Chronic test

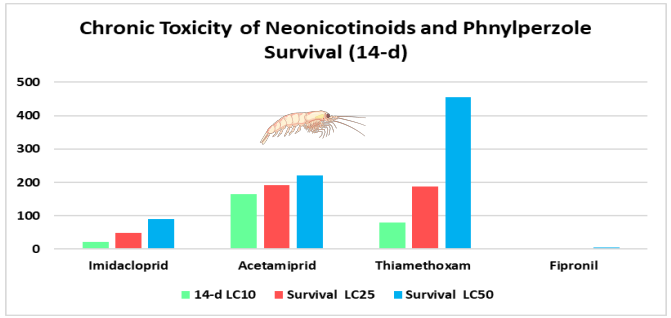
Results & Discussion

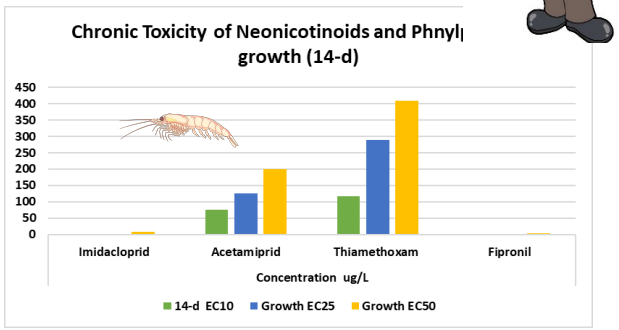
Acute Toxicity And Adverse Effects To The Juvenile And Adult Mysid shrimp

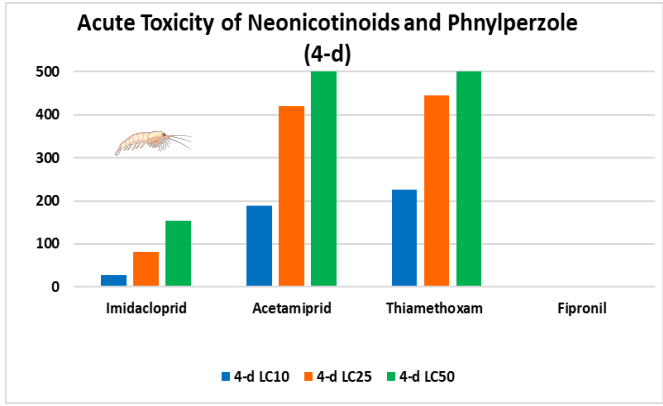


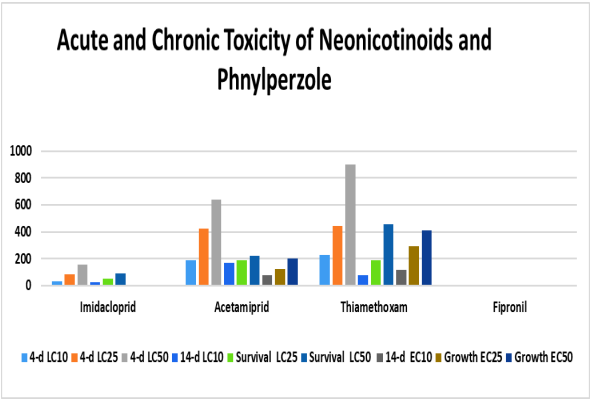
Survival of Mysids after acute (96-h) and chronic (14-d), static-renewal toxicity tests with neonicotinoid and fipronil insecticides was assessed. X-axes show nominal concentrations ug/l. Different represent different experiments. Controls are data points on the y axis. Dashed lines are the nonlinear regression models used to calculate toxicity endpoints

Toxicity impact of Neonicotinoids and Phenylperzole insecticides to acute (4-d) survival and growth of Mysid









Growth of Mysids after chronic (14-d), static-renewal, water-only toxicity tests with neonicotinoid and fipronil insecticides. X-axes are nominal concentrations. Different insecticides represent different experiments. Controls are data points on the y axis. Dashed lines are the nonlinear regression models used to calculate toxicity endpoints.

Collaborators

Dr. Ahmed Abdelmoneim,
Assistant Professor,
Louisiana State University

Dr. Helal Hetta
College of Medicine,
University of Cincinnati

Dr. Mohamed Khalil
Agricultural Research Center,
Central Agricultural Pesticides Laboratory

Dr. John Newsted
Adjunct Professor,
Michigan State University

Dr. Abdelfattah Saad,
Professor of Pesticide Chemistry&Toxicology
Alexandria University

Dr. James Lazorchak,
Office of Research and Development,
U.S. Environmental Protection Agency

Dr. Matthew Zwiernik,
Professor and Director of WTL,
Michigan State University

Sponsor Laboratories

EPA

www.epa.gov

Retrospective analyses of aquatic freshwater species sensitivity using reference toxicant testing data.

James Lazorchak[1*], Roy Martin[1] , Herman Haring[2], William Thoeny[3] and Mohamed Ghorab[3]

[1] U.S. EPA Office of Research and Development Cincinnati, Oh. [2]Formerly Pegasus-Currently SVL Analytical, [3] Pegasus c/o U.S. EPA ORD Cincinnati

This poster presents a retrospective analyses of reference toxicant testing and culture performance to ass
reference toxicants that have been used across 7 test species, *Pimephales promelas*, *Daphnia magna*, *Cer*
developed for the first 20 tests, middle 20, last 20 tests and over each species period of record. In additic
for all species indicate that the sensitivity was within +/- 2 standard deviation of the mean LC50 for all cor
SD. Each of the other species showed at least one occurrence outside the +/- 2 SD for the 3 sets of contro
should be considered reliable and also reproducible.

EPA United States Environmental Protection Agency

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Science Inventory

You are here: EPA Home » Science Inventory » Generating ecotoxicity information on microcystins and prymnesins: A different approach (2020 SETAC)

Generating ecotoxicity information on microcystins and prymnesins: A different approach (2020 SETAC)

Citation:

Lazorchak, Jim, H. Haring, W. Thoeny, Mohamed Ghorab, J. Jones, N. Dugan, Joel Allen, T. Sanan, C. Nietch, AND Da
and prymnesins: A differ
Meeting, Virtual, Novemb

Contact

applied sciences

MDPI

Review

Biogenesis, Biologic Function and Clinical Potential of Exosomes in Different Diseases

Amany Magdy Beshbishy [1,*,†], Saad Alghamdi [2], ThankGod E. Onyiche [3,4], Muhammad Zahoor [5], Nallely Rivero-Perez [6], Adrian Zaragoza-Bastida [6], Mohamed A. Ghorab [7,8,9], Ahmed Kh. Meshaal [10], Mohamed A. El-Esawi [11], Helal F. Hetta [12,13] and Gaber El-Saber Batiha [14,†]

MICHIGAN STATE UNIVERSITY Founded 1855

Determination, Distribution and Toxicity of Pesticide Residues in Water, Sediment and Fish From Mariout Lake and their Health and Environmental Risk Implications

Abdelfattah S. Saad[1], Magdy A. Massoud[1], Ranya A. Amer[2,3], Laila M. Abdelfattah[4], Mohamed A. Ghorab[4,5,6*] and Matthew J. Zwiernik[5],

[1] Pesticide Chemistry and Toxicology, Plant Protection Department, Faculty of Agriculture-Saba Basha, Alexandria University, Egypt
[2]Environment and Natural Materials Research Institute (ENMRI), City of Scientific Research and Technology Applications (SRTA City), Alexandria, Egypt
[3]Genetic Engineering and Biotechnology Research Institute, City for Scientific Research and Technology Applications, Alexandria, Egypt
[4]National Institute of Oceanography and Fisheries (NIOF), Environmental Toxicology Laboratory, Central Laboratories Unit (CLU), Alexandria, Egypt
MI, USA
Cincinnati, OH, USA

Alexandria University

Add sticky note (Ctrl+6)

MICHIGAN STATE UNIVERSITY

Acute and chronic toxicity of systemic insecticides; neonicotinoids and phenylpyrazole fipronil, in embryonic and juvenile zebrafish *Danio rerio*

Mohamed A. Ghorab[1,2], John L. Newsted[1], Ahmed Abdelmoneim[3], Mohamed S. Khalil[4], and Matthew J. Zwiernik[1]

[1] Department of Animal Science, Wildlife Toxicology Laboratory, Michigan State University, East Lansing, MI, 48824,USA
[2]Pesgasus Technical Services c/o U.S. Environmental Protection Agency (EPA), Office of Research and Development (ORD), Cincinnati, OH 45268, USA
[3]Department of Food Science, Cornell University, Ithaca, NY 14853, USA, [4]Central Agricultural Pesticides Laboratory, Agricultural Research Center (ARC), EL-Sabaheya, Alexandria, Egypt

MICHIGAN STATE UNIVERSITY WILDLIFE TOXICOLOGY

THANK YOU!

ATA Awardees 2021

ATA SOT Est. 2019
Arab Toxicologists Association

Graduate Student Best Abstract

Congratulation

Christiana Awada

Master Student

School of Medicine,
New York University

Abstract Number/Poster Board number: 2739/ P205

E-cigarette exposure during fetal development alters protein transporter and gene expression activity in neural pathways associated with obesity in mice.

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E-Cig Exposure During Development Alters Proteins in the Hypothalamus Associated With Obesity

Christina Awada[1,2]; Ortiz,Angelica, PhD[,2]; Jason Blum, PhD[,2]; Judith Zelikoff, PhD[,2]

[1]New York University , [2] New York University Langone Health

NYU Langone Health

Hypothesis

- Prenatal exposure to e-cig aerosols, with and without nicotine, alter s transcriptional and inflammatory activity in known metabolic pathways in the hypothalamus that are associated with obesity.

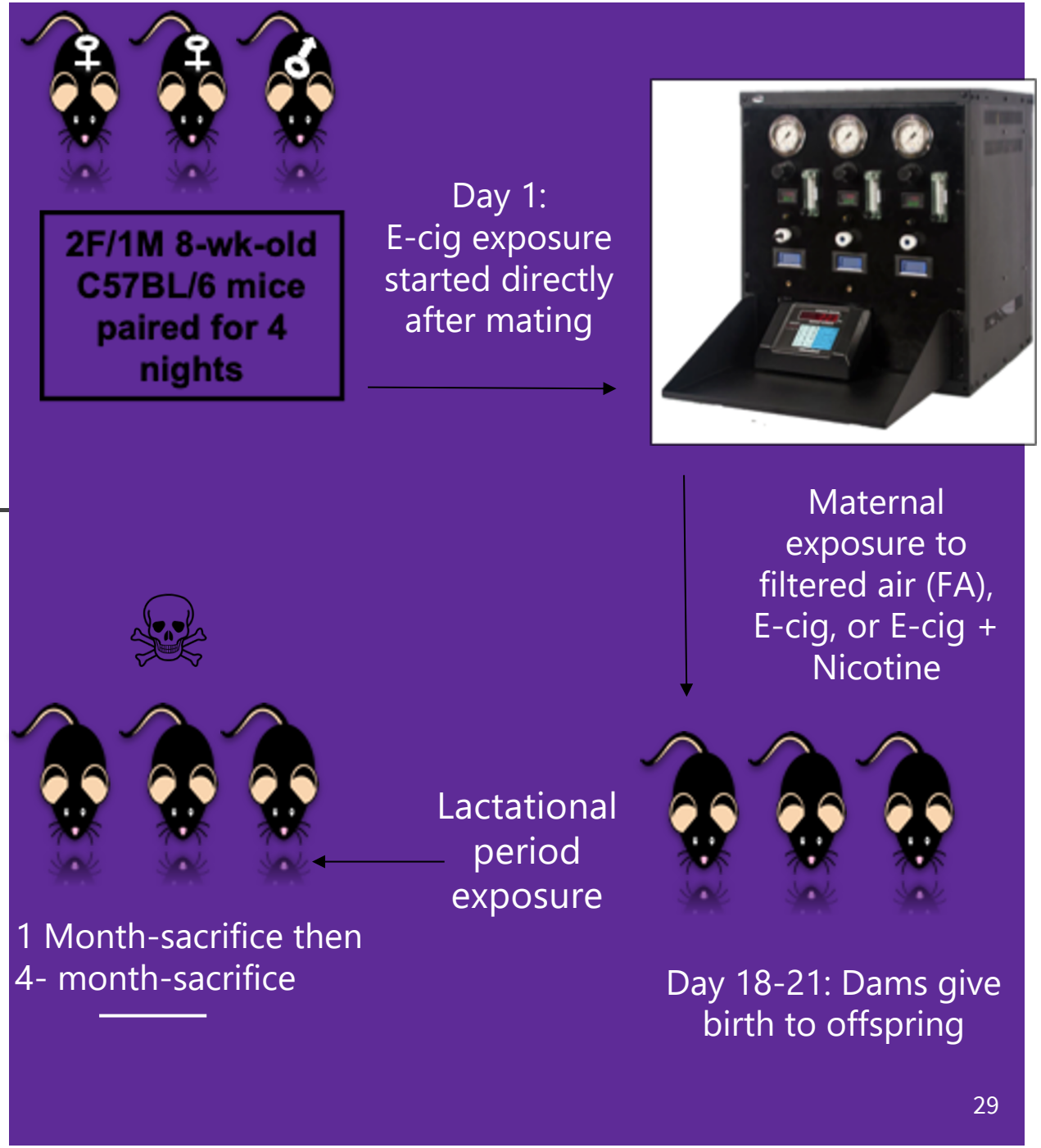
Introduction

The prevalence of electronic cigarette (e-cig) use, also called vaping, has reached epidemic proportions, specifically in young adults and adolescents

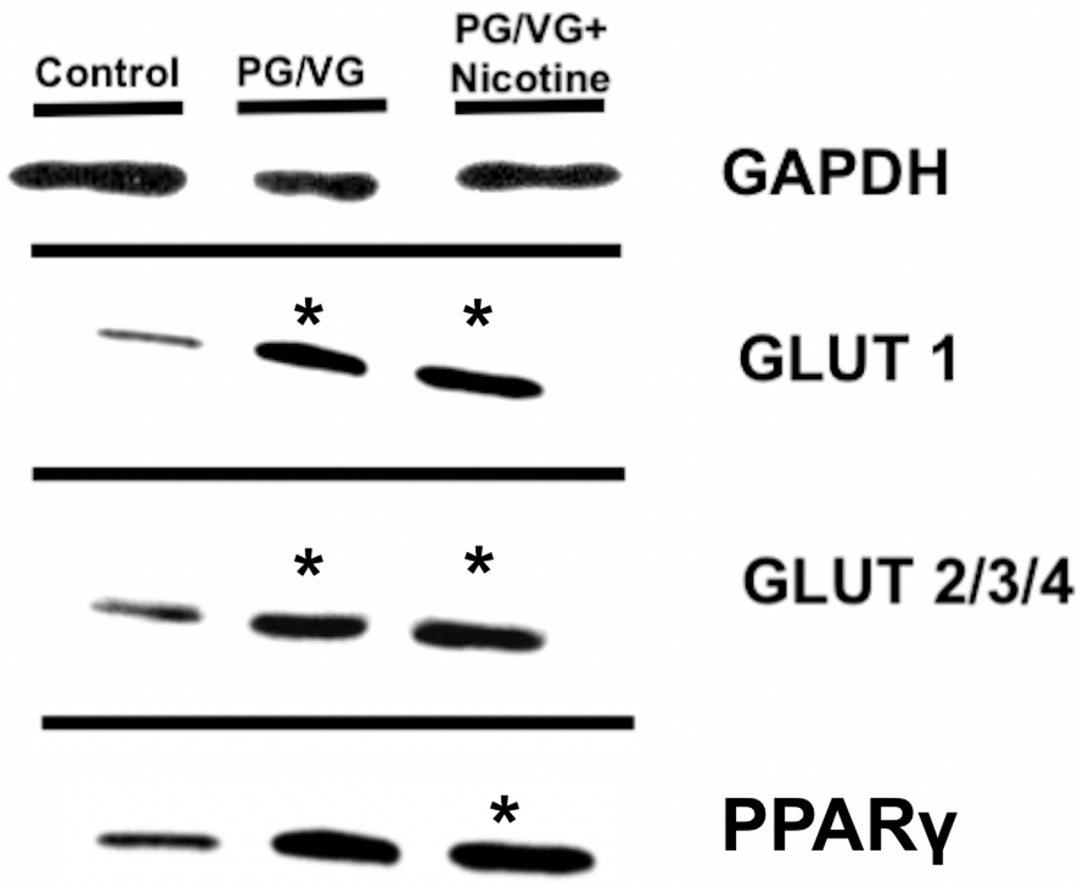
- ➔ **Maternal e-cig exposure during pregnancy**
- ➔ **Obesity pathways in the hypothalamus**
- ➔ **Investigating association**

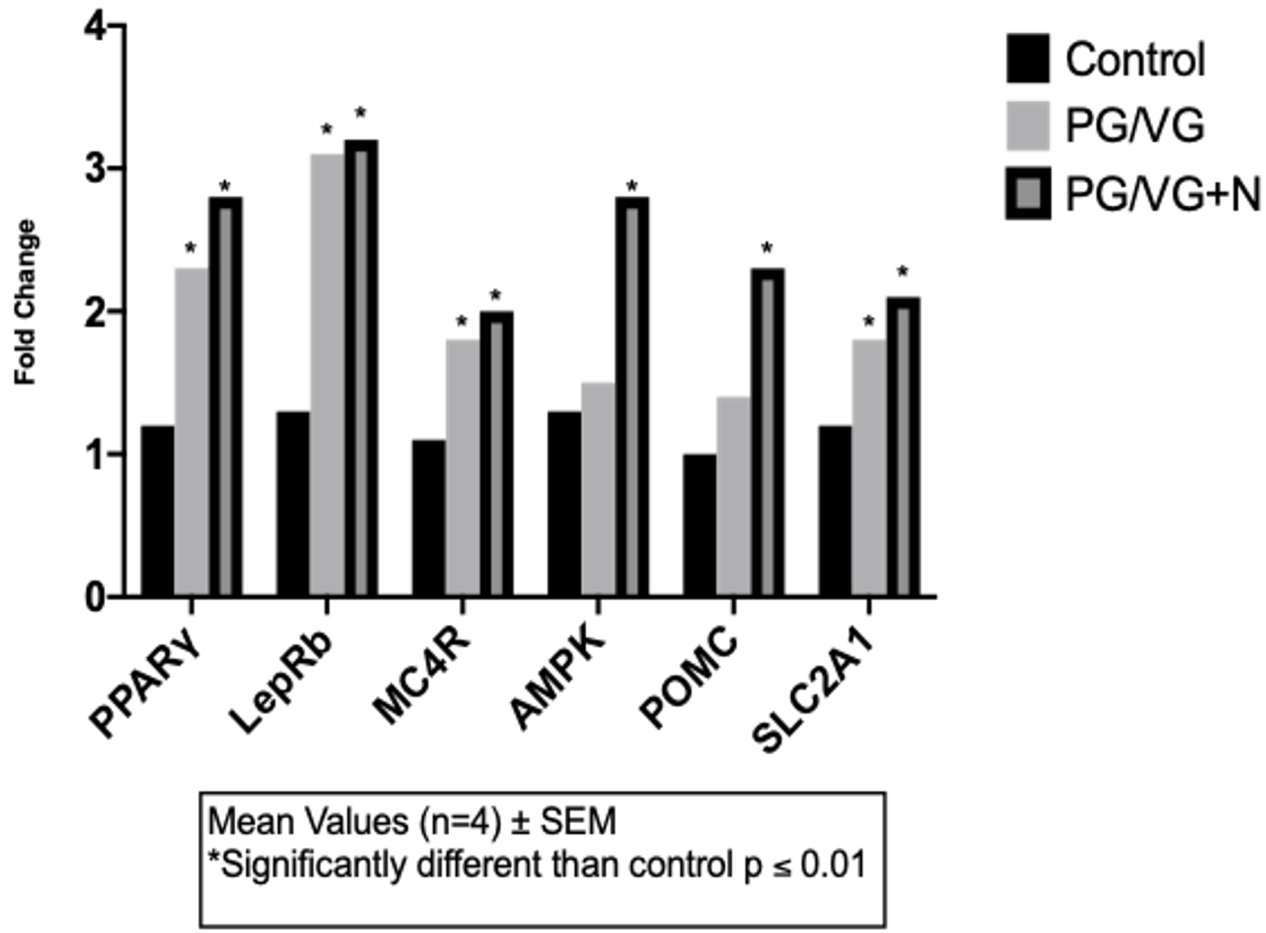
Experimental Design

- Female C57BL/6 mice housed in polycarbonate cages and paired for 4 nights (2F/1M) at 8 weeks of age
- Females (2/cage) were exposed to e-cig aerosols
  - (with or without nicotine) or filtered air (control)
  - 3hr/d;5d/wk
  - Via whole-body inhalation
  - 3 separate 1m³ flow-through exposure chambers.



Results: Significant Increase in Expression with and without nicotine





Mean Values (n=4) ± SEM
*Significantly different than control $p \leq 0.01$

Conclusion

- Development of the hypothalamic circuits that control metabolism can be easily influenced by modifications and certain environmental exposures, such as e-cigs.
- The increased expression of GLUT-1,2,3,4 reveals an overall enhancement of hypothalamic capacity to metabolize and transport glucose.
- Glucose levels regulate systemic metabolism via Glucose Transporter-2, which is expressed in hypothalamic astrocytes and is critical in central glucose sensing and regulation of food intake.
- Maternal and neonatal environmental exposures can affect metabolic functions in the offspring and and later in life.

Acknowledgments

- Dr. Judith Zelikoff!
- Zelikoff Lab!
- Dr. Catherine Klein
- Arab Toxicologist Association Special Interest Group

This study was supported by NYUNIEHS P30ES000260-55.

Opportunities at ATA

ATA SOT Est. 2019
Arab Toxicologists Association

- There are several opportunities to get involved in ATA!
  - Committees positions
    - Award Committee
    - Program Committee
    - Newsletter Committee
  - Website
  - Newsletter
  - SOT Blogs
  - Mentoring
- Sign-up by filling out the survey!
- Sign-up right away!

Social Media:
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#ATA_SOT

ATA Program Committee

ATA SOT Est. 2019
Arab Toxicologists Association

- Proposals needed for ATA sponsored:
  - **Symposia**
  - **Continuing education courses (CE)**
  - **Workshops**
  - **Webinars**
- Consider the most recent and hot topics
- Submit your ideas to ATA for reviewing by **April 16th, 2021**!
- Proposal deadlines for 2022 SOT program by **May 17th, 2021 at 11:59 pm (EST- NY time)**
- Contact:
  - Hanan Ghantous, Hino1951@Live.com

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ATA Program Committee

ATA SOT Est. 2019
Arab Toxicologists Association

- Network and talk with others
- Guidelines and tips are available on 2022 SOT webpage https://www.toxicology.org/events/am/AM2022/proposal/preparing-proposals.asp
- Don't hesitate to reach out and ask ATA officers and members
- Authors of the proposal will receive feedback by **April 26th, 2021**
- Proposal deadlines are restricted by SOT program committee
- Don't forget 2022 SOT program by **May 17th, 2021 at 11:59 pm (EST- NY time)**

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ATA Upcoming Webinar

- Joined webinar with American Association of Chinese in Toxicology (AACT)
- The upcoming AACT-ATA webinar event will be posted on the website and SOT social media.
  - Event title: "**Overview of Non-Clinical Safety Assessment for Vaccines and Antiviral Drug Development**."
  - Date and time: **May 26th , 2021; 9:00 am (EST-NY time)**

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Student and Post-Doctoral Representatives

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- "There shall be a student and a postdoctoral representative……"
  - Interact with toxicologists with established careers in the Arab world
  - Learn about career paths for toxicologists in the Arab world
  - Provide support to the discipline of toxicology
  - Establish foundation for participation on other SOT committees

- Want more information, seek for session to fulfill your needs, or have an idea for under/grad students, contact our Student and Post-Doctoral Representatives
  - Student Representative: Noor Aly, naly@cvm.tamu.edu
  - Post-Doctoral Representative: Mohamed Ghorab, ghorabmo@msu.edu

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Newsletter

- Interested in supporting the Website and/or Newsletter?
  - Ideas for content include:
    - Current hot topics
    - Job postings, Publications, Meetings
    - Workshops and Webinar Events
    - What's happening with ATA:
      - Awards
      - Finances
  - Newsletter: contact Saif Alharthy, saif.alharthy14@my.stjohns.edu
  - Newsletters are issued annually; Submitting due **Aug 31st, 2021**
    https://www.toxicology.org/groups/sig/ATA/newsletters.asp

Social Media:
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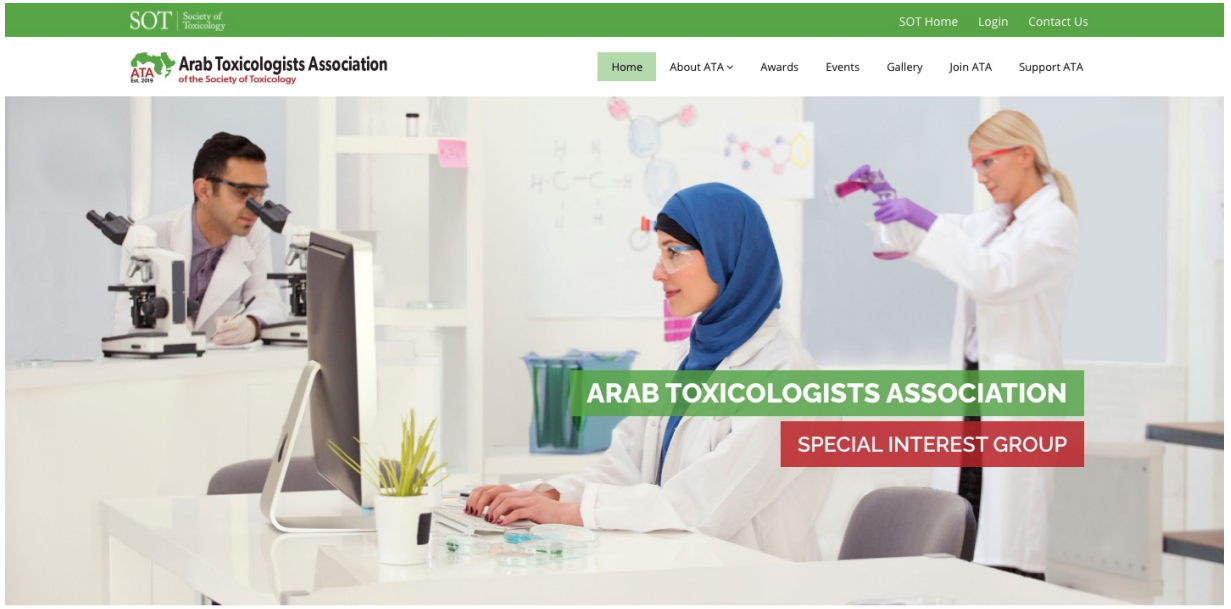
Website

- Interested in supporting the Website and/or Newsletter?
  - Ideas for content include:
    - Sites of Interest
    - Current and previous events
    - Annual reports
    - Photo gallery
    - ATA sponsors
    - ATA Awardees
  - Website: contact Hadil Almuhisen, hadilm@tamu.edu



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Financial Support

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Arab Toxicologists Association

- Our assets at the end of 2020 are **3254$**
- ATA needs financial support from members and industries
  - To promote the ATA mission
  - To support ATA members on their achievements
- ATA support submitted directly to SOT by filling out the form on the website https://www.toxicology.org/groups/sig/ATA/support.asp
- Industries will be acknowledged in all ATA events and on the ATA-SOT website

- If you need more information or you wish to create endowments funds in recognition of a contributor scientist in such a field contact:
  - Hasan Alghetaa fatosh_2001@yahoo.com
  - Hadil Al Muhisen hadilm@tamu.edu

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Membership Benefits

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- SOT Job Bank
  https://jobbank.toxicology.org/
- Career development webinars
- SOT Continuing Education Courses Online
  https://www.toxicology.org/education/ce/onlineCourses.asp#courses
- ATA SIG members have diverse interest and global experts
  To join https://www.toxicology.org/groups/sig/ATA/join-us.asp
- Connect ATA members with other Arab and non-Arab toxicologists experts
- SOT offers a discount for members from developing countries
  https://www.toxicology.org/groups/membership/types.asp
- Meet new (and old!) friends

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Keep It In Your Mind

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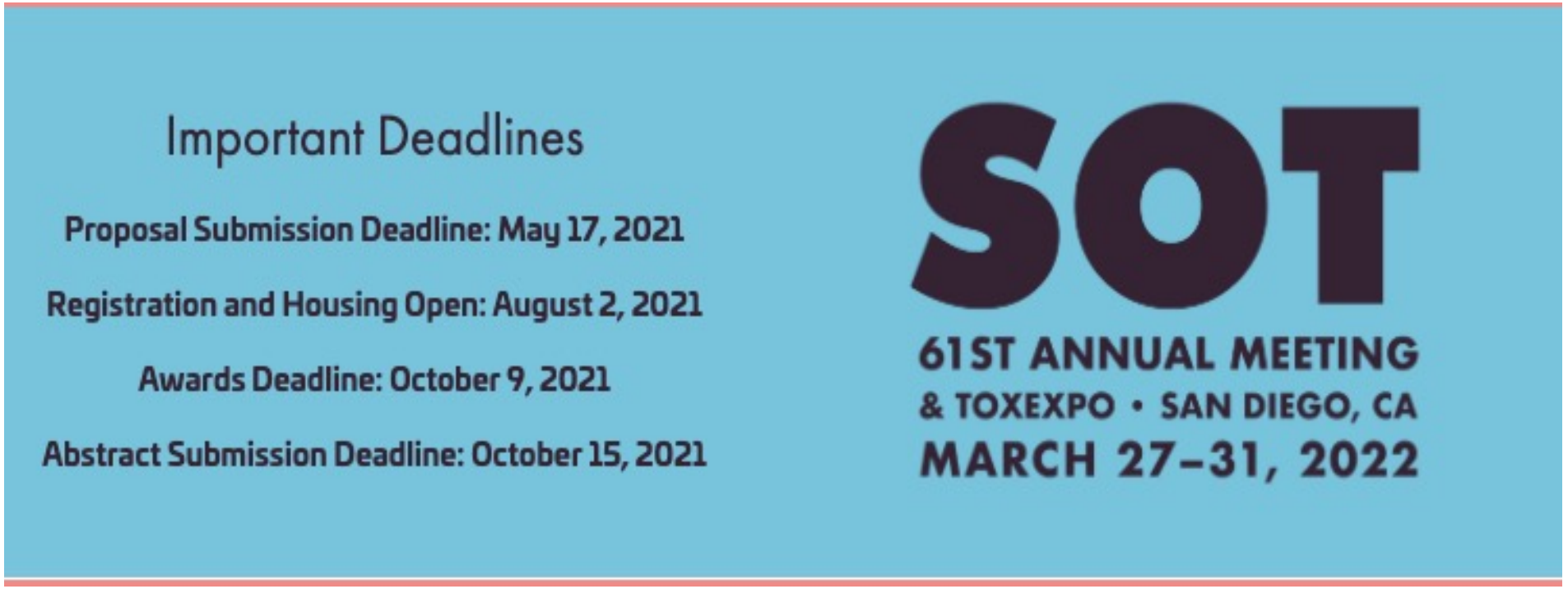

https://www.toxicology.org/2022

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Arab Toxicologists Association of the Society of Toxicology

ATA Est. 2019

NOTIFICATION SETTINGS

Yes

Automatically set community discussion emails to "No Email" when a community is added to a consolidated digest.

8 Communities

COMMUNITY NAME A-Z

COMMUNITY	DISCUSSION EMAIL	CONSOLIDATED DAILY DIGEST	CONSOLIDATED WEEKLY DIGEST
Arab Toxicologists Association	REAL TIME	☑	☐
Arab Toxicologists Association - Leadership	NO EMAIL	☑	☐
Graduate Student Announcement Topics	REAL TIME	☐	☐
Lone Star	NO EMAIL	☐	☐
Molecular and Systems Biology	NO EMAIL	☐	☐
Reproductive and Developmental Toxicology	REAL TIME	☑	☐
Toxicologists of African Origin	NO EMAIL	☐	☐
Women in Toxicology	REAL TIME	☑	☐

Social Media:
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Arab Toxicologists Association

of the Society of Toxicology

We want to hear from you!
Please share suggestions and feedback

Email us:

- Hasan Alghetaa fatosh_2001@yahoo.com
- Hanan Ghantous Hino1951@Live.com
- Amira Mohammed Dr.amirakamil@covm.uobaghdad.edu.iq
- Nabila Saber nabilasaber@yahoo.com
- Hadil Almuhisen hadilm@tamu.edu
- Saif Alharthy saif.alharthy14@my.stjohns.edu
- Noor Aly naly@cvm.tamu.edu
- Mohamed Ghorab ghorabmo@msu.edu

Survey:

https://docs.google.com/forms/d/1keirqqC5_kDT9iqEBQ9Ddj57fnajRjeDQ3sTgGidNz8/viewform?edit_requested=true

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Let's get to know you!

Open discussion,
Virtual picture

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Thank you for joining us and looking forward to see you in person again!

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