Air pollutants and coronavirus

SOT 2021

HOT Professional Tip
HOT Trainee Wall

www.toxicology.org/groups/sig/hot/newsLetter.asp
MESSAGE FROM THE PRESIDENT

Dear HOT members,

We hope you all and your families are well and safe!

Since 2004, I have been an active member of Society of Toxicology (SOT), where I had the great opportunity to serve in several leadership positions within SOT including the HOT Executive Committee (EC) as the HOT Graduate Student Representative, Postdoctoral Representative, Councilor, and then becoming the Vice President-Elect and Vice President. This year, I am honored to take the responsibility to serve as the HOT President for the period 2020-2021. I have the honor to work with an outstanding EC Board members (Aline de Conti, Teresa Palacios, Julieta Martino, Vinicius de Paula Venancio, Carmen Rubio-Armendariz, Michelle Hernandez, Patricia Ruiz, Mercedes Salvador-Siva, Henry Lujan and Ranulfo Lemus Olalde) with valuable combination of work experiences to implement and lead new initiatives. In order to continue making the HOT a better organization within the SOT, we plan to continue promoting the proposal pipeline for Scientific and Career Development Sessions at the SOT Annual Meetings; take advantage of the available online virtual resources to expand these sessions during the year and fortify our relationship with Sister Organizations; implement strategies to increase the funds in our new established Endowment Fund; continue the initiative to formalize a mentoring program for students residing inside and/or outside of the United States; and continue promoting diversity and inclusiveness.

This year brought unexpected challenges that has impacted us all, directly or indirectly. However, we know that with great challenges we can come with greater solutions to move forward stronger as one diverse and inclusive family, sharing our passion in toxicology. “No hay mal que por bien no venga.” As a result of the CoViD-19 pandemia, the online virtual resources became more available. Therefore, we are very excited that this resources will give us the great opportunity to bring our toxicology outreach activities to your doorsteps as well as the possibility to connect and participate in outreach activities from our sister organizations.

HOT, as well as the SOT, will always work hard to promote diversity and inclusiveness. I encourage all HOT members to recruit new members to join our HOT growing family, to become a mentor of young toxicologists, and to volunteer time for key HOT activities. As part of our goals for this year, we will implement new strategies to identify HOT members to be nominated for SOT leadership elective positions and national awards. Please, nominate a candidate or nominate yourself for HOT EC positions.

With the initiative and hard work of our HOT President, Dr Ranulfo Lemus Olalde, HOT established the first HOT Endowment Fund, which is a great achievement and milestone. This Endowment Fund will play an important role in promoting the career development of trainees/scientists of Iberoamerican (Latin-Americans countries, Spain, and Portugal) in toxicology by providing the funds for HOT awards. We strongly encourage you to donate by visiting the SOT’s endowment fund website. Our goal is to reach $50,000 within 3-years to ensure it becomes a Permanently Restricted Net Asset Fund to offer perpetual support that can impact the career development of Iberoamerican scientists in Toxicology. We strongly encourage you to donate money (any amount will help) to our recently established Endowment Fund and/or look for Sponsors for our Travel Awards. Please contact me or the EC officers if you would like to give us ideas or volunteer in the HOT Committees.

Stay safe and continue working hard to create a safer and healthier world by advancing science and increasing the impact of toxicology. And remember, together we can continue building bridges with toxicology!

Un fuerte abrazo!

Enrique Fuentes Mattei, Ph.D.
HOT President
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ERRATA
Debora Rodrigues da Silva Colombo co-author of the article Toxicological research in Brazil: Challenges and Opportunities published in the Toxenlaces issue 62 is affiliated to the Fisheries Institute, Agency for Agribusiness Technology, Department of Agriculture and Food Supply of the State of São Paulo, Brazil.
Dear HOT members and readers,

As you may know, the Hispanic Organization of Toxicologists was founded in 2004 and the first Toxenlaces was issued more than 10 years ago. I became a member of SOT and HOT in 2015; however, my very first contact with Toxicology was long before that.

I grew up in a small village in Mexico, where being surrounded by nature created me a special interest for certain kind of animals: the poisonous. I can recall myself reading about scorpions, vipers and spiders in biology books and encyclopedias, trying to find out what made them poisonous. It was not until 2010, in the Toxicology class, when I finally understood what a poison is. I fell in love with it. For this reason, I decided to get involved in Nanotoxicology research projects since then.

In 2016, thanks to HOT I attended to SOT meeting for the very first time. During that meeting, Dr. Aline invited me to collaborate in Toxenlaces. At the beginning, I was just helping with some graphical edits. Four years later, I became the editor. I could not be more grateful with HOT for having trusted me. Particularly, I want to thank to Dr. Aline de Conti, Dr. Ofelia Olivero, Dr. Elena Hernández, Ranulfo Lemus Olalde, Dr. Julieta Martino, Dr. Tere Palacios and Jose F. Delgado.

This experience has taught me one of the biggest lessons. During your training as a researcher, you must take important decisions that has to come from who you are. Most of the times, this could be [or is] an overwhelming and stressful process. But a clarity of thought can be found in others who have been in similar situations. Sharing experiences to help others is, undoubtedly, one of the main characteristics of the HOT community.

As a member of HOT, I had the chance to meet up wonderful people, who share my passion for science and, who have faced the same [or even harder] challenges that I have confronted. Knowing their experiences have let me be inspired, motivated and identified.

I would never imagine that, deciding to be part of Toxenlaces would have bring me such experience. Therefore, I strongly believe that participating in Toxenlaces is vital. This newsletter builds the community enthusiasm, supports ongoing education and enhances identity. For this reason, I have decided to allow others to live the experience of leading this newsletter. I am pretty sure that they will not only discover HOT greatness, but also, they will discover themselves.

Own your decisions, but more importantly, own who you are.

Alejandro Ramirez-Lee, Ph.D.
Registration

Toxicologists and those from related fields are invited to attend the Virtual SOT 60th Annual Meeting and ToxExpo. Available registration types include:

- SOT Member
- Nonmember
- SOT Retired/Emeritus Member
- Postdoctoral: Member and Nonmember
- Graduate Student: Member and Nonmember
- SOT Global Partner

Information on registration fees and other registration-related details for the all-virtual meeting will be available in October 2020.
We are so glad to announce that Dr. Ofelia Olivero contributed in the article entitled “Diversity Is a Strength of Cancer Research in the U.S.”

Nowadays, racism and discrimination still present in daily life. Cancer research, as any other kind of research, is not exempt. Motivated by this situation, scientists from different ethnicities, identities, and national origins gathered to share their stories. Their aim is to promote a change through mentoring, active participation, and policy changes and to inspire the next generation of cancer researchers to make better science together.

Dr. Olivero is a strong believer that mentoring plays a key role in future science.

We invite you to read the article and her contribution!

Read full article at https://www.cell.com/cancer-cell/fulltext/S1535-6108(20)30429-3 and check out HOT mentoring activities https://www.toxicology.org/groups/sig/hot/education.asp
AIR POLLUTANTS
AND THEIR CONTRIBUTION TO INCREASE THE CORONAVIRUS EFFECTS

BY MARITZA ROJAS MARTINI

Air pollution (AP) is a major cause of death and disease globally. Its health effects range from increased hospital admissions and emergency room visits to enhanced risk of premature death. AP is linked to several health problems which includes respiratory, cardiovascular, reproductive, neurological and immune systems, adverse pregnancy outcomes and even death (1). An estimated 4.2 million premature deaths globally are linked to ambient AP (2). Long-term exposure can cause cancer and scientists have discovered associations with obesity and diabetes (3,4). In 2013, the World Health Organization concluded that “outdoor AP” is carcinogen to humans.
AP from industries and health impact
Among the main industrial sectors responsible for AP are petrochemical, chemical, mineral, food industry, concrete companies, dry cleaning and automotive repair garages, as well as additional activities associated with waste treatment. Industrial processes that emit pollutants are the combustion of fuels such as fuel oil, gas oil, natural gas, thermal power plants and production processes that do not involve combustion but emit air pollutants (5,6). Among the most common industrial pollutants are sulfur oxides, particulates, nitrogen oxides, carbon oxides, non-methane volatile organic compounds (VOCs) and ammonia.

COVID-19 and Air Pollution
Currently, the entire world is facing this global pandemic of COVID-19, and AP research shows that exposure to contaminants lowers our ability to fight off infections. It worsens reactions to viruses in people with health challenges like asthma and it could have a pernicious effect in a pandemic (7,8).

Clay et al (9) in their 2018 paper, found that heavy AP appeared to increase deaths up to 25% and that poverty and poor overall community health, also had substantial effects. A study on the SARS virus that impacted China in 2003, found that 84% of the victims were previously exposed to moderate AP levels (10). A study of Zuo-Feng Zhang concluded that SARS patients living in the most polluted places, were twice as likely to die from the disease as those in the cleanest areas, finding a very strong correlation between AP and deaths (7). The findings, which, given the diseases’ similarities, almost certainly apply to COVID-19, are consistent with everything scientists already know about AP’s mostly invisible toll on health.

AP can damage immune cells. It also tends to be inflammatory in the lung, and that inflammation can interfere with mechanisms that clear pathogens (including viruses), from our respiratory tracts. It increases rates of cancer, diabetes, cardiovascular problems, respiratory diseases like Chronic obstructive pulmonary disease (COPD), and many other illnesses. That means that people with preexisting conditions dramatically elevate their risk of complications and higher mortality rate if they contract the coronavirus (11). It is believed that viruses may bond with pollution particles, allowing them to remain airborne longer and potentially helping them make their way into the lungs. It is known that Particulate Matter (PM) fractions, serve as carrier for several chemical and biologic pollutants, viruses included. Inhalation of virus-laden fine particles could transport the virus into deeper alveolar and tracheobronchial regions, which could increase the chance of infective transmission. The rapid COVID-19 infection spread, observed in selected regions of Northern Italy, is supposed be related to PM10 pollution, due to airborne particles able to serve as carrier of pathogens (12).
The simultaneous inhalation of chemical pollutants in PM alongside COVID-19 virus, may exacerbate the level of COVID-19 infection. Pro-inflammation, injury, and fibrosis from inhaled PM combined with an immune response or cytokine storm induced by COVID-19 infection, could enhance the infection severity. Studies from the School of Public Health, Harvard (13) found that an increase of only 1 g/m3 in long-term PM2.5 exposure, is associated with a 15% increase in the COVID-19 death rate.

A study from Società Italiana Medicina Ambientale, together with Università di Bologna and Università di Bari, is looking at the possible correlation between the presence of PM and the disease’s outbreak in the Po Valley in Northern Italy, where COVID-19’s outbreak was detected in February (14). Researchers concluded that “the increasing rate of contagion cases in some areas of northern Italy could be linked to the conditions of airborne PM pollution that exerted as a carrier and as a booster”.

CONCLUSIONS

- Breathing dirty air damages our health and can create underlying conditions that dramatically elevate the risk of complications and death from COVID-19.
- PMs represent effective carriers for viruses’ transport and diffusion and proliferation of virus diseases as well.
- Improving indoor air quality is a support measure against the COVID-19 pandemic, especially for the elderly and patients with underlying respiratory diseases and immunodeficiency.
- It is more likely to die from COVID-19 if you live in a place with higher levels of long-term AP where there is a need to keep an even closer look to the social distancing measures, and make sure that they are equipped to those hospitalized with COVID-19.

Maritza Rojas Martini, M.Sc.
Toxicologist
Pollution Control Service Dept. - Harris County. Texas. USA.
Several postdoctoral IRTA positions are open in the Virus Ecology Unit within the Laboratory of Virology at the Rocky Mountain Laboratories (RML) campus of the National Institute of Allergy and Infectious Diseases (NIAID) in Hamilton, Montana. The laboratory studies the ecology of high- and maximum-containment RNA viruses and is currently focused on the ongoing COVID-19 pandemic.

Successful candidates will be part of a diverse and multidisciplinary team focused on understanding the molecular and ecological determinants of spillover from bats to humans and the determinants for onward human-to-human transmission. Candidates are expected to study the underlying molecular and structural determinants involved in zoonotic and human-to-human transmission of COVID-19 and newly identified emerging viruses (including filoviruses and henipaviruses).

To apply send your curriculum vitae (CV), a letter expressing career goals and interests, and three letters of reference with contact information no later than Oct. 30, 2020, to Kay Menk, Laboratory Operations Specialist, Laboratory of Virology, Rocky Mountain Laboratories, NIAID, NIH, 903 S 4th Street, Hamilton, MT 59840, 406-375-9624 (phone), 406-375-9620 (fax), or email menk@niaid.nih.gov.

For more information visit https://www.training.nih.gov/programs/postdoc_irp
By 2036, it is predicted that one in three students in U.S. public schools will be of Hispanic heritage. However, the proportion of Hispanic students who do not graduate from high school is twice as high as that of non-Hispanic white students. One potential reason for this disparity? A lack of access to relatable role models.

Would you like to be part of the solution? Become a HISPA role model today and help inspire the lives of Hispano middle school children.

Schedule a date/time for your HISPA orientation session at https://calendly.com/addrianahispa/30min

or contact

Michelle Hernandez
HOT HISPA Role Model contact
michelle.hernandez1@merck.com

Addriana Montalvo-Andujar
HISPA Role Model Development Director
addriana@hispa.org
ANNOUNCEMENT

The Network of Pesticides Toxicology from CONACyT Mexico, is pleased to announce the next virtual meeting.

1st Virtual Congress of Pesticides, environment & health
October 12-16th, 2020

This Congress will offer a forum to convene scientists, professionals, and government and social visionaries to exchange information aimed to identify strategies to progressively ban or reduce the use of the most toxic pesticides, and to design alternatives of pest control compounds with less detrimental impacts on ecosystems and human populations.

The Congress will have three plenary sessions, five symposia, and two workshops

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For more information contact plaguicidas.ambienteysalud2020@gmail.com

Or visit https://www.redtoxicologiadeplaguicidas.org

Targeted therapies and melanoma resistance

BY JULIA REZENDE DA SILVA

My name is Julia Rezende da Silva and I am currently a M.Sc. student in the School of Pharmaceutical Sciences at the University of São Paulo (USP), in São Paulo, Brazil. My graduate research has focused on exploring the molecular mechanisms that support the progression of melanoma and resistance to therapy. We mainly focus on studying the adenosine kinase (ADK), a gene involved in purine metabolism and related with cell growth and proliferation.
What is going on?

Melanoma is a malignant neoplasm that originates from melanocytes and although it corresponds to only 3% of skin cancers, it is responsible for 80% of deaths (1). This is because metastatic melanoma is refractory to conventional and targeted therapies and it quickly acquires resistance to specific mutated proteins inhibitors in the MAPK pathway, such as BRAF, the most common mutation in melanoma (2).

In this context, our group (Skin Biology and Melanoma Group) developed an in silico study in search of altered gene expressions during the process of benign tumor to metastatic melanoma, in order to identify possible key genes that could be involved in melanoma progression and resistance. Thus, this study highlighted that ADK gene could be a potential regulator of this malignant transition (3).

Researchers has shown an interesting relationship between ADK activity and cell growth and proliferation (4,5); also, one of ADK isoforms might be related with cancer biology but its importance has never been investigated in melanoma (6). Therefore, due to the urgency of finding a way to overcome melanoma resistance, my research focus on understand the role and regulation of ADK and how it could be related to melanoma progression, collaborating for the identification of a new therapeutic target.

Julia Rezende da Silva
M.Sc. Student
School of Pharmaceutical Sciences
University of São Paulo (USP)

References
The National Postdoctoral Association (NPA) was founded in 2003. It is a non-profit educational organization which has been dedicated to enhancing the quality of the postdoctoral experience for all participants in the United States. More than 160 institutions have adopted portions of the NPA’s Recommendations for Postdoctoral Policies and Practices. Today the NPA has 180 institutional members, whose research efforts are supported by 40,000 postdocs, and 2,000 individual members.

Since 2009, the NPA has sponsored National Postdoc Appreciation Day/Week to recognize the significant contributions that postdoctoral scholars make to United States research and discovery. Institutions from across the country and other parts of the world participate by holding special events.

In 2010, this week was officially recognized by the United States House of Representatives. This year events will be held throughout the September 21-25th week across the country to create awareness.

Congratulations HOT POSTDOCTORAL MEMBERS!

For more information visit:
https://www.nationalpostdoc.org/events/event_list.asp?utm_source=content&utm_medium=email&utm_campaign=NPAW%202020
HOT invites you to submit applications or nominations for the **2021 HOT awards**. This year HOT continues its commitment to offer **travel awards** to students and postdoctoral trainees of Hispanic/Latino origin working in the area of toxicology research. Additionally, every year HOT also recognizes a **distinguished toxicologist** whose work exemplifies the mission of the HOT-SIG by contributing to the advancement of the field of toxicology.

**DEADLINE**
January 10th, 2021.

For more information, please visit: [https://www.toxicology.org/groups/sig/hot/awards.asp](https://www.toxicology.org/groups/sig/hot/awards.asp).
Leadership in Toxicology

tips and advices to acquire international recognition and visibility on your field

BY JULIETA MARTINO, TERESA PALACIOS HERNANDEZ & JOSE F. DELGADO

Hello HOT folks!

We hope you are doing well and safe during this pandemic.

For this issue, we have a fantastic interview performed by Dr. Julieta Martino, our HOT Secretary, to the speakers who participated in the HOT Mentoring Activity this year. This interview is very useful when thinking about how young toxicologists with our Hispanic/Latino background can acquire international recognition and visibility, in order to get access to leadership positions on their field.

Many thanks to Dr. Martino and the speakers who contributed on this interview.

Enjoy!
Earlier this year HOT hosted a mentoring webinar on “Leadership in Toxicology” in which four of HOT’s Past Presidents shared their career paths and experiences. In case you missed it, a live recording of the mentoring webinar can be seen here: https://www.toxicology.org/groups/sig/hot/education.asp. After the event, we received many great questions from the attendees, some of which could not be answered live due to time constraints. So we got in touch with the speakers again and asked them to give us their insight on some of these pending questions! Below is our interview with Dr. Silvia Barros, Dr. Linval DePass and Dr. Ofelia Olivero.

1) *Any advice for young toxicologists that are in developing countries? How can they reach international recognition?*

**Dr. Silvia Barros:** The first step is to become a member of your local toxicology Society. I also suggest you to become a member of an international Society such as the Society of Toxicology USA (SOT) or the American College of Toxicology (ACT). Both have many opportunities for graduate students and post docs including reduces fees for developing countries. At SOT, there is also the opportunity to participate at the Special Interest Groups, such as HOT, that congregate members of different origins. Participating at national and international meetings is absolutely fundamental not only to update about the news on the science but also to build your connections with senior toxicologists. When you say international recognition there are two different aspects. One is to be recognized as an expert and this will depend on your previous activities and basically your curriculum. Other aspect is to get a certification as a toxicologist. Some countries have their own systems of certification. USA and Europe have a robust system accepted worldwide.

**Dr. Linval DePass:** Communicate with colleagues in other countries. Attend meetings in other countries when possible. SOT has funds to support travel of toxicologists from other countries to attend the annual meeting.

**Dr. Ofelia Olivero:** Apply to any scholarship provided by SOT or other Societies to attend their meetings. Submit an abstract and present your work. Engage at the posters and set up collaborations. Participate in any committee or special interest group or other forms of scientific community service at those societies. Volunteer your time and contribute.

2) *What advice would you give to young investigators (and not so young) to be successful in their own countries?*

**Dr. Silvia Barros:** Success in academia implies a MSc and a PhD diploma. Some companies nowadays also prefer professionals with an academic degree but some experience is also required (e.g. previous internships). Opportunities in Toxicology depend on the country needs. As a general advice you must have a solid basis of toxicology principles.

**Dr. Linval DePass:** Identify an area of toxicology that interests you and become an expert in that area.

**Dr. Ofelia Olivero:** Be aware of the way science moves in your own country, such as where is the money, who is who, which are the stronger lines of research and country-scientific priorities. Establish your network and participate in the meetings of the Societies and be a proactive member of those. Do good solid research and publish. Mentor young people and empower
them to be leaders tomorrow. Generate activities that plant seeds in the minds of young scientists. Organize activities where the young can present and discuss their data. Small colloquia will do. Many things do not require funding (Journal clubs, meetings inside the university, company, etc).

3) How did you decide which area of toxicology was your passion?

**Dr. Silvia Barros:** My passion for toxicology came since my undergraduate studies working with hepatotoxicity of aflatoxin and working with liver toxicology turned a passion. Liver is a central organ for systemic toxicology a great part of my carrier was related to liver toxicology. But, after some years, one of my students started a work with skin toxicology and nowadays my research turned to skin toxicity of particulate matter using 3D models. It is always time to change the focus keeping the passion for toxicology.

**Dr. Linval DePass:** My interests changed during the early stages of my career. For example, I did research on a pesticide for my MSc thesis. For my PhD I worked on chemical carcinogens. In my first job, I worked on pesticides and other industrial chemicals. Then, I moved to the pharmaceutical industry. Since that time, I have done toxicology as part of drug discovery and development.

**Dr. Ofelia Olivero:** I was fascinated by DNA damage, so Genetic Toxicology was my field of choice. I do not have formal training as a toxicologist. I am a Zoologists and cytogeneticist.

4) How did you transition from bench work to leadership positions?

**Dr. Silvia Barros:** In academia this is a natural transition. Since the very beginning of my career I got involved in representing my category at my Department Council. I was then elected for some positions at the University (but first I had to decide I wanted to run for the position). The same happened at the Brazilian Society of Toxicology as Secretary General and President. The message is to always keep updated with the activities that are running in your workplace and the Societies you take part.

**Dr. Linval DePass:** My bench work ended when I got my first job which involved directing toxicology studies without any hands-on involvement.

**Dr. Ofelia Olivero:** I transitioned at the end of my career, once I realized that I could impact the lives of many by working in training the next generation of scientists. The transition was natural, because I was doing that anyway. However, hanging the lab coat had a profound impact in my identity.

5) Would you like to share an occasion/time where you were not very successful, and how that helped you grow. You are all very successful now and learning that journeys are not always perfect gives hope.

**Dr. Linval DePass:** My career path contained many failures as well as some successes. For example, I applied to medical school but I was not accepted. Then, I decided to apply to graduate school and pursued a career in toxicology.

**Dr. Ofelia Olivero:** When people tell you “you learn from your mistakes” we do not believe them. There is always an opportunity to grow and that is what we decide to do with mistakes.
I am a very optimistic person, so I minimize mistakes or failures and move forward. I do not make the same mistake twice (I make new ones). An example: I was not successful obtaining awards. I would apply to some and got disappointed if I was not selected. The failure was getting discouraged and to stop applying. People apply to so many things! They self-nominate also.

6) How important and relevant has been leadership as a skill in your career?

**Dr. Linval DePass:** Leadership is a subjective concept. It is similar to beauty in that it depends on who you ask. If you establish scientific credibility and treat other people with respect, you will increase your chances of being accepted as a leader.

**Dr. Ofelia Olivero:** Very important. I would describe it as a “ying and yang” figure where science feeds the leadership abilities and the leadership abilities move your career forward. Leadership is not being the CEO of a company. There are so many opportunities to be a leader. We first need to understand that we need to remove the stereotypes of leaders we have deeply integrated in our cortex. We can lead in a lab meeting, in a lab, in a small group, in a collaboration, in small or large settings. The clue is to have a genuine desire to contribute. The visibility gained by leadership helps move forward your career.

---

**Julieta Martino**
HOT Secretary

**Teresa Palacios Hernández**
HOT Vice President-Elect

**Jose F. Delgado**
Ph.D. Candidate
If your Hispanic Organization is planning a Toxicology meeting or if you are organizing a Toxicology event intended for a primarily Hispanic audience and want to promote it, send an email to Carmen Rubio Armendáriz (Councilor for Sister Organizations) at crubiotox@gmail.com for more information for its inclusion in upcoming Toxenìaces issues.

## SPONSORS & SISTER ORGANIZATIONS

### Sponsors

- Ofelia A. Olivero
- Michelle Hernandez

### Sister Organizations

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ANNOUNCEMENT

HOT wants you to be part of the organization! To make it available to everyone, HOT accepts applications from non-SOT members to become HOT members. Yes, that is right! You only have to have the desire to collaborate with and be part of our great organization.

Your HOT membership provides you with valuable resources throughout your scientific career as for networking through the largest Hispanic toxicologist community, giving you opportunity for Travel Awards or serving as a mentor to the young Hispanic toxicologists; besides you receive the Toxenlaces newsletter!

Download the application by clicking on the following link: Non-SOT Member Application. So, what are you waiting for? We are looking forward to receiving your application today!

Follow us on Facebook at: http://www.facebook.com/hispanicorganizationoftoxicologists
Don’t forget to visit also the SOT Facebook page:

Toxenlaces is the newsletter that informs Hispanic toxicologists in the United States and the international Spanish and Portuguese-speaking scientific communities about important toxicological events and issues occurring in our countries. It is electronically published and distributed to our membership and Sister Organizations in Ibero-America. Toxenlaces disseminates critical dates for events, health perspectives and funding and training opportunities. It serves as a toxicology forum for our members and other partner organizations, engages in educational outreach to the Hispanic communities and provides the essential elements to support networking among Hispanic toxicologists. Toxenlaces is open to receive collaborations from HOT and SOT members and Sister Organizations. You can collaborate with short scientific articles, news or notes related with toxicology. Other ways to collaborate is by nominating your peers or yourself for the HOT Trainee Wall. For more information about collaborating with Toxenlaces send an email to Alejandro Ramirez-Lee (Toxenlaces Editor and Graphic Designer) at alejandroramirezlee@gmail.com.

The views expressed in this Toxenlaces issue do not necessarily represent those of the Hispanic Organization of Toxicologists (HOT) or Society of Toxicology (SOT).