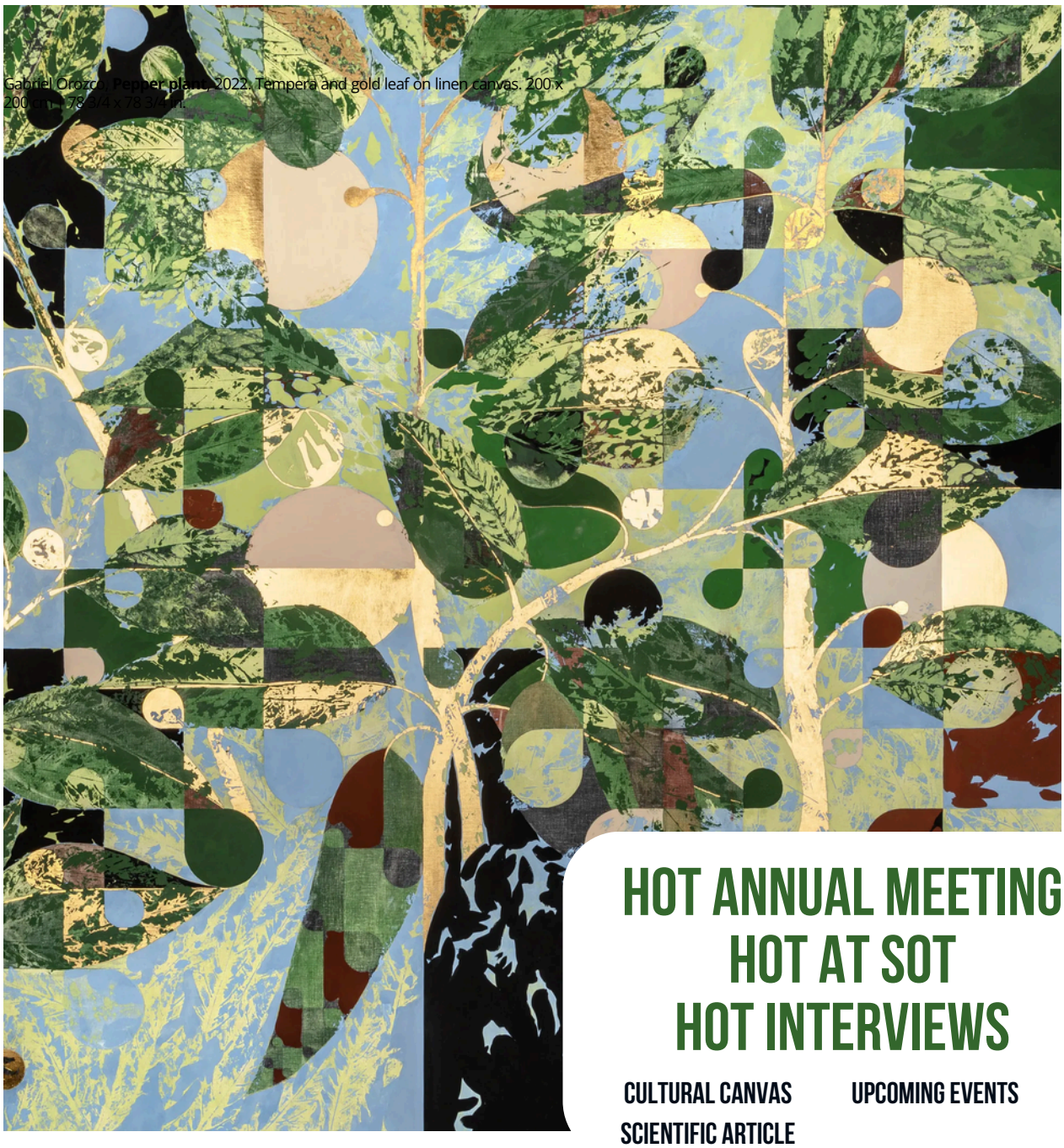
WINTER ISSUE | JANUARY - FEBRUARY 2025

TOXENLACES

BUILDING BRIDGES THROUGH TOXICOLOGY

ISSUE 80



Gabriel Orozco, **Pepper plate**, 2022. Tempera and gold leaf on linen canvas. 200 x 200 cm. 78 3/4 x 78 3/4 in.

HOT ANNUAL MEETING
HOT AT SOT
HOT INTERVIEWS

CULTURAL CANVAS

UPCOMING EVENTS

SCIENTIFIC ARTICLE

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MESSAGE FROM THE PRESIDENT

Dear *Toxenlaces* Readers,

As we step into March, we once again gather for our highly anticipated annual meeting. This year, the 2025 SOT Annual Meeting convenes in Orlando, Florida, a city renowned for its theme parks. The 64th SOT Annual Meeting and ToxExpo will span five days of featured and scientific sessions, poster presentations, and social events, alongside the highly anticipated three-day ToxExpo. The opening plenary session, "A Changing Earth System: Risk to Human Health" delivered by Earth Scientist Kimberley Miner, has been thoughtfully selected as it serves as a powerful reminder of our shared responsibility to protect our planet.

As members of the Hispanic Organization of Toxicologists (HOT), we look forward to coming together to renew connections and fortify our community through networking and mentoring. HOT will host our joint mentoring event with the Food Safety Specialty Section. Without any doubt, our ongoing collaborations with other SOT Component Groups and Special Interest Groups (SIGs) continue to enhance our collective strength and visibility within the SOT community.

This year's meeting offers us ample cause for celebration, yet we also face significant professional and societal challenges that we will confront as a unified body. We will do so at our Annual HOT Reception, where we will reflect on the year past and present the Distinguished Toxicologist Awards (DTA), Travel Awards, and Honorary Mentions. The HOT Executive Committee has recognized the exceptional professional and personal contributions of Dr. Luz María Del Razo Jiménez and Dr. Andrea De Vizcaya Ruiz, whose work has been instrumental in advancing the prominence of Hispanic toxicology. We also extend our congratulations to the recipients of the Travel Awards for the 2025 SOT meeting in Orlando: Marvin Paz Sabillón (International Graduate Student), Pablo Reina-González, Madeline Vera-Colón, and Wagner Tamagno (Graduate Students), and José Arturo Jiménez Chávez (Postdoc). Furthermore, we recognize the winners of the Honorary Mentions: Marc J. Rodríguez (Graduate Student), Reese M. Valdez (Graduate Student), Ailemys Curbelo Valiente (International Graduate Student), and Luísa Becker Bertotto (Postdoc).

Among the highlights we celebrate are the HOT-endorsed sessions at this year's SOT meeting. Notably, the Continuing Education Course "Tackling Risk Communication Challenges: Lessons from Expert Voices and Case Studies" alongside sessions and roundtables on "Emerging Approaches in Chemical Analysis and Toxicological Risk Assessments of Extractable Data for Medical Device Evaluations," "Skin Deep: Navigating the Evolution and Application of Dermal Absorption Modeling in Modern Risk Assessment of Cosmetics and Personal Care Products," and "How Can We Use Alternative Approaches to Move Safety Evaluation of Medical Devices Forward?". We are deeply grateful to Kelly Salinas, Betina Lew, JA Cuevas, René Viñas, and others for incorporating HOT into these esteemed scientific sessions.

The latest edition of *Toxenlaces*, our newsletter, celebrates Latin American culture through a feature on Gabriel Orozco, one of Mexico's most influential contemporary artists. In the scientific section, we present an article by Prof. Betzabet Quintanilla and colleagues on the epigenetic multi- and transgenerational effects of pesticides. The influence and inspiration of our members are vital to the community, and we thank Prof. Ana Juan García for sharing her invaluable perspective and experience. Additionally, in an interview with our first president, Mari Stavanja, we highlight her visionary strategy in uniting the Hispanic community within SOT.

HOT is dedicated to serving and representing all, and it is only through our collective efforts that we can continue to grow and strengthen. Founded in 2004 and formally recognized as a Special Interest Group (SIG) within the SOT in 2006, HOT's primary goal is to provide a forum for raising awareness and disseminating toxicological knowledge and issues pertinent to the Hispanic community. Let us not forget that one of our core objectives is to foster discussions, enhance general awareness, and engage in the search for relevant toxicological insights regarding the Hispanic community, both within the US and abroad.

As I conclude my tenure as President, I wish to express my deepest gratitude to the exceptional Executive Committee who has supported me throughout this year of leadership. I also extend my heartfelt congratulations to the newly elected officers who will lead us in the coming term. My sincere appreciation goes to the Advisory Board, composed of Past Presidents, for their unwavering support and sound guidance, as well as to our sponsors and donors, whose generosity and commitment make so much of HOT's work possible.

Let us continue to build "Bridges Through Toxicology" together.

Carmen Rubio Armendáriz, PhD
2024-2025 HOT President
Hispanic Organization of Toxicologists

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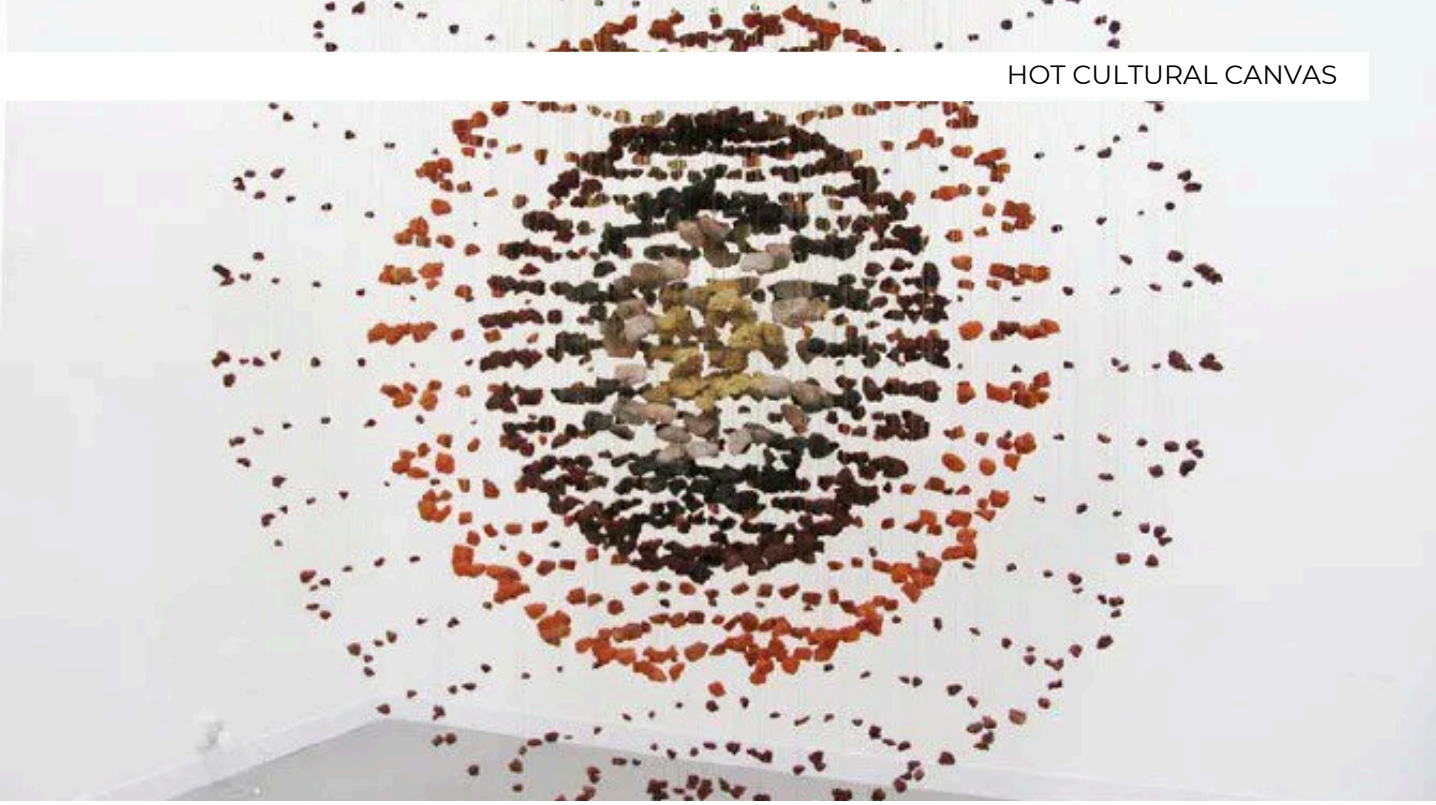


CULTURAL HOT CANVAS

Gabriel Orozco

In order to celebrate the rich Latin American culture, in this 80th issue of *Toxenlaces*, we shine a spotlight on Gabriel Orozco.

Gabriel Orozco, one of Mexico's most influential contemporary artists, has built an impressive career by challenging conventional artistic norms and redefining the boundaries between art and everyday life. Born in 1962 in Xalapa, Veracruz, Orozco grew up surrounded by creativity, as his father was a muralist. This early exposure to art laid the foundation for his later explorations of form, space, and perception.

Orozco's work is characterized by its fluidity across different mediums, including sculpture, photography, painting, and installation. Rather than confining himself to a single artistic discipline, he embraces the impermanent and the ephemeral, often drawing inspiration from mundane objects and urban landscapes. His art is not merely about aesthetics but about prompting viewers to see the world differently, to engage with their surroundings in a more conscious and reflective manner.

One of his most iconic pieces, La DS (1993), is a modified Citroën DS car, sliced and reassembled into a narrower form. This surreal transformation challenges the viewer's perception of functionality and design, illustrating his fascination with form and movement. Another striking work, Black Kites (1997), features a human skull meticulously covered in a geometric graphite grid, blending themes of mortality and mathematical precision.

Exploring Art & Public Places

Orozco has also explored the dynamics of public spaces. His Yielding Stone (1992), a ball of plasticine the same weight as the artist, was rolled through city streets, collecting imprints and debris from the environment. This work exemplifies his interest in the relationship between art and lived experience, emphasizing process over permanence.

Gabriel Orozco, Matrix móvil, 2006

Gabriel Orozco, La DS, 1993.

A Tribute to Mexican Identity

Orozco has spoken about the role of art in shaping perception. In an interview with Benjamin H. D. Buchloh, he stated:

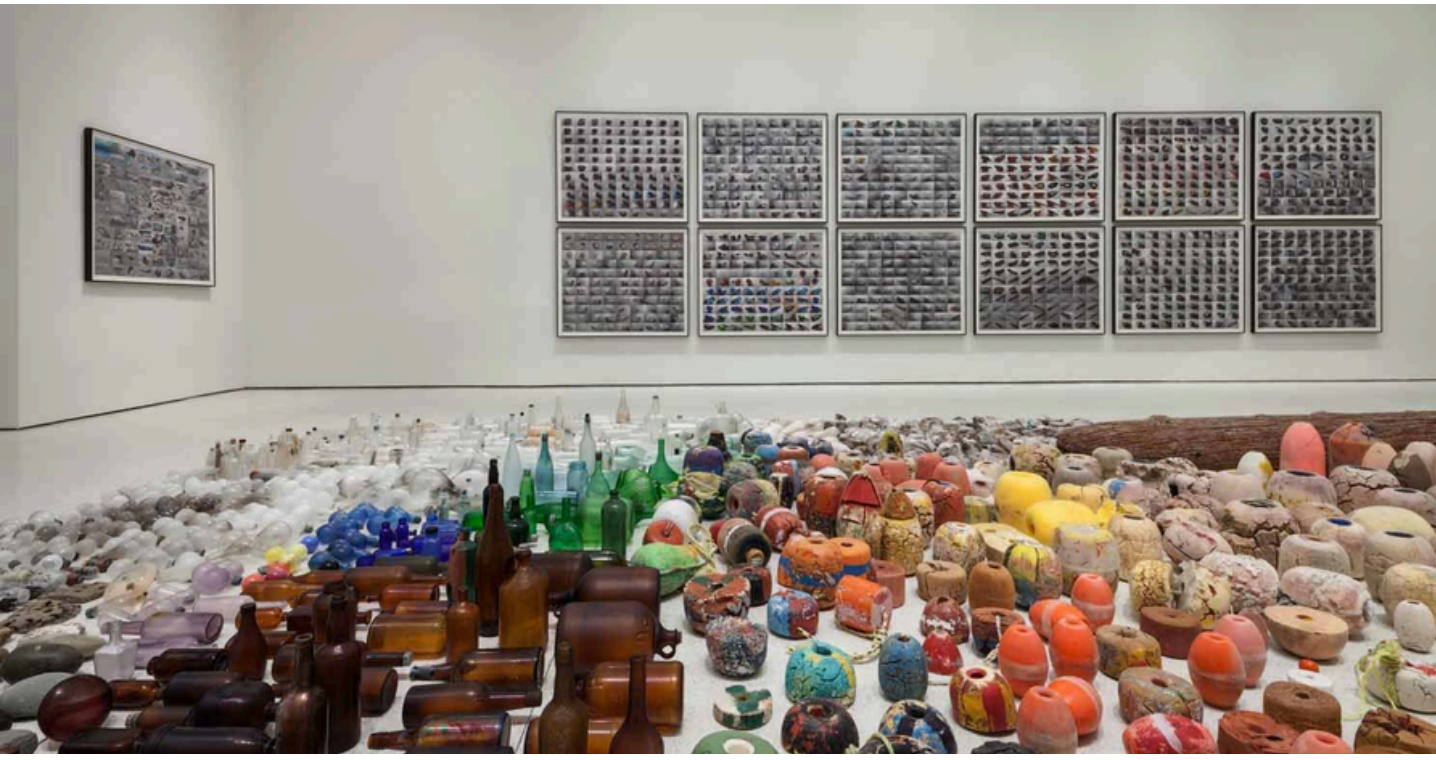
"*What is most important is not so much what people see in the gallery or the museum, but what people see after looking at these things, how they confront reality again.*"

His impact on contemporary art is undeniable. By resisting traditional institutional boundaries and embracing a nomadic artistic practice, Orozco continues to challenge and expand the definition of what art can be. Through his work, he invites audiences to reconsider the beauty and significance of everyday objects, turning the ordinary into something extraordinary.

In a world where art often seeks grandiosity, Gabriel Orozco reminds us that true artistic depth lies in the subtle, the transient, and the overlooked.

From: (Routers/Carlos Jasso)

https://www.thejakartapost.com/life/2020/10/09/art-star-gabriel-orozcos-pandemic-a-screen-friendly-opening-and-new-introspection.html



EXPOSURE TO PESTICIDES INDUCES EPIGENETIC MULTI- AND TRANSGENERATIONAL EFFECTS

Betzabet Quintanilla-Vega, Aylin Larrañaga-Parrado, Eduardo Rojas-Prado.

Exposure to pesticides in agriculture and health campaigns is a public health and environmental problem worldwide with greater impact in developing countries, such as those in Latin America. Some of these pesticides are banned in many countries for their high toxicity or due to their properties as endocrine disruptors. The toxicity of these highly toxic pesticides has been related to epigenetic alterations; understanding epigenetics as those changes in DNA without modifications in the base sequence, which regulate the gene expression. Among the epigenetic marks are DNA methylation (DNAme, the most studied), histone modifications (methylation/acetylation), and non-coding micro RNAs. These epigenetic marks are stable and if occurring in germ cells (sperm or egg) cause multi- and transgenerational inheritance of phenotypic variations, with adverse effects on future generations, including reproduction, neurological and metabolic diseases, and cancer (Nilsson et al., 2018).

TRANSGENERATIONAL EPIGENETIC INHERITANCE

Transgenerational epigenetic inheritance is defined as the germline-mediated inheritance of epigenetic information between generations in the absence of ongoing direct environmental influences leading to phenotypic variations. Epigenetic mechanisms are mitotically inheritable to ensure cellular identity; however, recent research suggests that, despite the robustness of these developmental mechanisms, they are highly sensitive to external signals, particularly during early life (Nilsson et al., 2018; Szyf, 2012).

Exposure to environmental factors, such as xenobiotics, can induce epigenetic changes (epimutations) in germ cells that can affect subsequent generations. These epimutations are transmitted to the next generation at fertilization and have the potential to alter gene expression and phenotype in the developing embryo (Ben Maamar et al., 2021).

MULTI- AND TRANSGENERATIONAL INHERITANCE BY EPIGENETIC CHANGES IN GAMETES

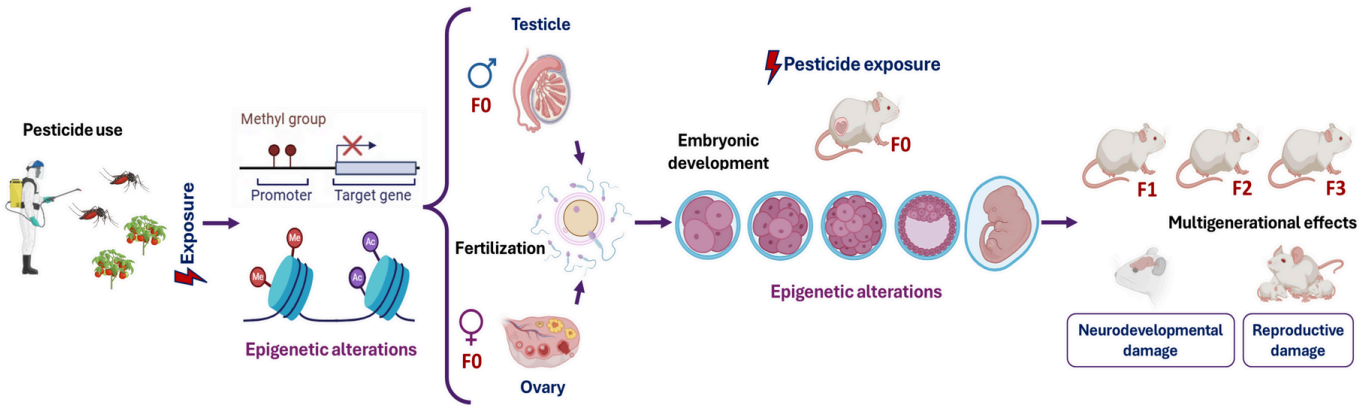
Prior to fertilization, the oocyte and sperm have their own epigenetic processes necessary to ensure proper growth and development of the embryo (Greeson et al., 2023). DNAme occurs at sites that are differentially imprinted between male and female gametes, so that imprinted genes can be expressed mono allelically in the offspring. DNAme gradually occurs at imprinted genes in oocytes in developing follicles after the primary follicle stage and continues during the antral follicle stages of development (Sendžikaitė and Kelsey, 2019). The major ovarian-related epigenetic events that are vulnerable to the adverse effects of environmental factors are (i) epigenetic reprogramming of female germ cells and the establishment of maternal imprinting patterns, and (ii) the initial differentiation and ongoing adaptation of somatic components of ovarian follicles to the various stages of folliculogenesis and corpus luteum function. Importantly, epigenetic reprogramming of the early embryo is also vulnerable to the influence of environmental factors (Cruz et al., 2014).

Maternal exposures during pregnancy may affect the epigenetics of the offspring causing alterations in the germline affecting future generations. For example, the exposure to the organochlorine insecticide chlordecone, included in the list of the Stockholm Convention of persistent compounds, at 100 µg/kg/day (DG 6.5-15.5) in mice resulted in altered epigenetic features in mature oocytes of F1, including methylation and acetylation changes in histones (H3K4me3 and H4ac), some of these alterations were in genes required to maintain DNA and histone methylation in imprinting regions, as well as in genes involved in development and chromatin remodeling in ovaries. The authors also reported a significant delay in the vaginal opening in F1 (Legoff et al., 2019). Also, the exposure to chlorpyrifos during pregnancy (4, 20 or 100 mg/kg/day, GD 7-17) in mice altered the expression of imprinted genes in several tissues depending on the developmental stage, as well as sex hormone levels, organs weight, and disruption of early development; these effects were more marked in males F1 than in females F1. The authors also observed altered methylation of H19 (an imprinted gene) in sperm and internal organs of male F1 (Shin et al., 2015).

Regarding male germs cells, their epigenetic marks have important functions during embryogenesis, and changes in sperm DNA methylation by environmental factors can exert an impact on embryo development (Akhatova et al., 2025). Some studies have reported that these epigenetic changes can be transmitted to the offspring. Co-exposure to carbendazim and chlorothalonil (0.1-10 mg/kg/5 d), the most widely used broad-spectrum fungicides, synergized a decrease in spermatogenesis in mice, where histone and DNAme changes in Leydig and germ cells could play a key role in altering the estrogen signaling pathway (Li et al., 2020) . Dichlorodiphenyltrichloroethane (DDT) is an organochlorine pesticide listed in the Stockholm Convention to eliminate its use to protect human health and the environment. Lismer et al., 2024 identified differences in sperm DNAme and histone methylation (H3K4me3) enrichment in transposable elements and regulatory regions implicated in fertility and neurodevelopment, among others, in a cohort of South African men, and a sub-set of regions with these marks was predicted to persist in the preimplantation embryo and to be associated with embryonic gene expression. In experimental studies, the herbicide glufosinate-ammonium (0.2 mg/kg/d/5 weeks in drinking water in adult male mice-F0) caused alterations in repressive epigenetic marks (DNAme and histone methylation: H3K27me3 and H3K9me3) and an extensive transcriptional inhibition in spermatozoa, mainly in genes of synapse-related pathways and subtle differences in the genomic imprint were observed (Ma et al., 2022a). The authors also showed that histone modifications were consistent with gene expression changes in 4-cell embryos (preimplantation stage), which could affect embryonic development and offspring health (Ma et al., 2022b) .

Epigenetic alterations in gametes may continue to affect future generations. One of the first studies evaluating transgenerational inheritance of disease in mammals was an investigation of the effects of the fungicide vinclozolin (100 mg/kg/day, GD 8-14 in rats), in which the F3 generation had increased male germ cell apoptosis and decreased sperm motility. And it was reported that primordial germ cells transcriptome and DNAme profile were altered by exposure in utero to the fungicide (Anway et al., 2006; Skinner et al., 2013). Another study showed that the F1 generation of rats exposed to 25 mg/kg/day of the herbicide atrazine (GD 8-14) did not develop any disease; however, F2 showed a higher frequency of sperm cell atrophy and apoptosis and mammary tumors in both sexes, early-onset of puberty in males and decreased body weight in females. Whereas, F3 showed a higher frequency of testicular disease, early-onset of puberty, behavioral alterations (motor hyperactivity), and a thin phenotype in both sexes (McBirney et al., 2017). Likewise, a study performed in zebrafish (F0) exposed to the pyrethroid insecticide permethrin (widely used for agricultural and domestic purposes) during early life (10 µg/L) reported that their male F1 and F2 generations showed a decrease in anxious behavior due to DNAme and transcriptional changes (Blanc et al., 2021).

The studies previously described showed that pesticide exposure has the capacity to generate multi- and transgenerational effects by male, female, or intrauterine exposures, which compromise the health and wellbeing of the offspring. Knowledge in epigenetics is required to understand how gene expression is controlled and how environmental factors may impact the health of subsequent generations, even in the absence of direct environmental influences.



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IMPACT & INSPIRATION

What Does HOT Mean to You?

We are thrilled to welcome **Ana Juan García** to this edition of *Toxenlaces*! Join us as she shares how HOT has shaped and inspired her career, offering valuable insights into its impact on her professional journey.

HOW HAS HOT SUPPORTED YOUR CAREER?

The first support I received from HOT was exploring the professional development opportunities that were possible "outside" my comfort zone, a step forward of my usual network such as training programs, workshops, and certifications that enhance my skills. It gave me an overview of the toxicology in the broader Hispanic community and the involvement of their members in the largest fields where toxicology can reach and to know the opportunities for promotion. Additionally, a supportive work environment was even more noticed when I joined HOT, either from the society itself, in the board and their members that encourages collaboration, and from recognition of achievements and constructive feedback. It all helped me and still helps me to stay motivated and pursue improvement continuously. Among all, it has facilitated to build networking opportunities and exposure to cross-functional projects to build relationships and gain valuable insights. HOT puts in front place its members in such a way that it benefits toxicological science and it also contributes to the overall success of the HOT members.

WHICH INITIATIVES OR EVENTS DO YOU FIND MOST IMPACTFUL?

The HOT launched initiatives focused on advancing research, education, and public awareness in different formats which is very helpful in the way of following the knowledge brought by them. This includes different sessions that allows the HOT community to be updated in innovative tendencies such as AI-driven risk assessment tools, promoting *in vitro* and co-culture models, and organizing hands-on training programs to enhance industry and competent institutions expertise. It's these initiatives during the year and during the SOT Annual Meeting and ToxExpo that brings the impact of the HOT to its members and the society interested in it. Additionally, initiatives on toxic compound, environmental sustainability, and regulatory advocacy drive safer chemical practices and global health protection that are also considered as topics of interest.

WHAT ARE YOUR EXPECTATIONS FOR THE FUTURE OF THE ORGANIZATION?

One of the primary objectives of a toxicology organization is to advance scientific research while ensuring public health and environmental safety. Looking ahead, HOT toxicology has the potential to play a pivotal role in shaping cutting-edge advancements within the organization's structure, workshops, and training programs. To maintain a leadership position in the field, HOT will prioritize the integration of AI and *in vitro* models, along with exploring co-culture techniques, to enhance research efficiency and ethical standards while significantly reducing reliance on animal testing —aligning with the most innovative industry trends.

Furthermore, the organization could emphasize the importance of stricter regulations to enhance transparency in toxic compound research, strengthen sustainability efforts, and ensure compliance with global safety standards. Advancements in risk assessment will drive the evolution of personalized toxicology through biomonitoring and genetic analysis, enabling more precise evaluations of health impacts—an area that could be central to future workshops and training sessions. With growing environmental concerns, research on pollutants, microplastics, and chemical exposure effects will expand, while climate change will accelerate the need for studies on emerging natural contaminants. To address these challenges, the organization will leverage immersive training methods such as virtual reality and interdisciplinary collaboration, cultivating a highly skilled workforce equipped with cutting-edge expertise.

To solidify its position as a leader in the field of toxicology and the expertise of its members, HOT could host specialized workshops on AI-driven toxicology assessments, co-culture research techniques, and regulatory compliance training, alongside high-profile events focused on emerging environmental risks and sustainable chemical innovations. By continuously prioritizing innovation, regulatory adaptation, and proactive public health protection, HOT toxicology will position itself at the forefront of the industry, ensuring long-term impact and global recognition.

HOT INTERVIEW

MARI STAVANJA

BY **Carmen Rubio Armendáriz, PhD**
2024-2025 HOT President
Hispanic Organization of Toxicologists

We are delighted to feature **Mari Stavanja**, the first president of the Hispanic Organization of Toxicologists (HOT), in this edition of *Toxenlaces*. As a pioneering leader in the field, Mari has played a crucial role in shaping the organization and fostering a strong community of Hispanic toxicologists. In this interview, she shares her experiences, the challenges and achievements of her leadership, and the lasting impact of HOT on the toxicology field. Join us for an inspiring conversation about mentorship, advocacy, and the future of toxicology.

CAREER AND INSPIRATION

WHAT INSPIRED YOU TO PURSUE A CAREER IN TOXICOLOGY, AND HOW DID YOUR JOURNEY LEAD YOU TO THE US?

I used to work on animal husbandry and plant science and received a scholarship to pursue a MS on plant science in the US. Working with my mentor, I expressed my desire to combine this opportunity with additional classes in animal science. My career in toxicology began when one of my professors, Dr. Wallace, asked if I considered pursuing a PhD, I told him I didn't have the resource to pay for it. He then directed me to Dr. Smith, who often worked with foreign students. Dr. Smith, who ran the toxicology program, advised me take toxicology a class in my last semester and then we would discuss further. Before returning to Venezuela, I met with him again, and he said, "When you are ready and I am still here at NMSU, you will have an Assistantship to get your PHD." He changed my life!

AS A VENEZUELAN TOXICOLOGIST IN THE US, WHAT WERE THE BIGGEST CHALLENGES YOU FACED IN ESTABLISHING YOURSELF IN THE FIELD?

My first challenge was the language barrier; my English was not good enough when I arrived in the US. I attended 20 hours of English per week during my first semester, along with two courses in English: Statistics and Special Research Program. During my Master's, I studied diligently in Spanish and English until I became more confident with my English skills. By the time I pursued my PhD, studying hard was less stressful. Another challenge is my personality; I am very passionate, which some people may find overwhelming. I take every review, toxicological study, and risk assessment with a deep sense of responsibility to myself, my employer, occupational workers, and the general population. We all face challenges in our careers, but we should let them drive our success.

LOOKING BACK AT YOUR CAREER, WHAT ACHIEVEMENT ARE YOU MOST PROUD OF?

Wow, I am proud of being a toxicologist. I am proud that I have trained hundreds of farm workers on how to protect themself from pesticides, reduced animal use in research as much as possible, and every risk assessment and recommendation I have written. Of course, I am proud of the Hispanic Organization for Toxicologists. I feel immense joy every time one of our members is selected and recognized for their work.

HOT AND ITS LEGACY

CAN YOU SHARE THE STORY BEHIND THE FOUNDING OF HOT? WHAT MOTIVATED YOU AND YOUR COLLEAGUES TO CREATE THIS ORGANIZATION?

I saw many toxicologists with a huge potential but with limited opportunities to connect with other toxicologists during SOT Annual Meetings. I approached four colleagues Ranulfo Lemus, Braulio Jimenez, Fernando Suarez, and Javier Davalos, and shared my thoughts on how we could provide them with more opportunities in toxicology. For many professionals attending the SOT Annual Meeting, this may be their only chance to make contacts, and we should make that easier for them. They were very supportive, and we worked together for four years until were able to establish the Hispanic Organization for Toxicologists. Through that effort, other toxicologist joined us, such as Ofelia Olivares, Pedro Del Valle, Elena Hernandez, Silvia Berlanga, Betzabet Quintanilla, Roberto Casillas, Betina Lew, Linval Depass, Teresa Palacios, Arturo Anadon, Carmen Rubio, and many others. Today, we are almost 200 members. Here, I want to express my gratitude to all of you. Without you, this would have been impossible.

HOW DID HOT EVOLVE FROM THAT FIRST MEETING IN 2005 TO BECOMING AN OFFICIAL SPECIAL INTEREST GROUP OF THE SOCIETY OF TOXICOLOGY IN 2006?

When we realized how many we were, it became essential to organize ourselves to secure a place in SOT. We presented a proposal to SOT and with support by other toxicologists, we got approved. Later, SOT created Special Interest Groups. We aimed to build a strong network, to increase our participation in the SOT program with high-quality research to show our expertise and create opportunities for our colleagues and students from other countries and in the US.

DIVERSITY, INCLUSION, AND WOMEN IN TOXICOLOGY

HOT IS CELEBRATING 19 YEARS AS AN SOT SPECIAL INTEREST GROUP IN 2025. WHAT DO YOU THINK HAS BEEN ITS MOST SIGNIFICANT IMPACT ON THE HISPANIC TOXICOLOGY COMMUNITY?

Now, we are recognized within the SOT, playing a key role in various groups, earning many awards every year, and continuing to bring great toxicologists to the Annual Meeting. We have demonstrated our capability to conduct outstanding research, lead toxicological studies, and bring new members.

WHAT WERE SOME OF THE BIGGEST CHALLENGES IN ESTABLISHING HOT, AND HOW WERE THEY OVERCOME?

To demonstrate the need for the Hispanic Organization for Toxicologists , we highlighted the dispersed and overlooked talent within the vast SOT. Through perseverance, we overcame these challenges by showing strong organization, increasing participation, and recognizing our great toxicologists with excellent paths in toxicology.

IF YOU HAD TO DEFINE HOT'S LEGACY IN ONE SENTENCE, WHAT WOULD IT BE?

Our mission statement is "Building Bridges Through Toxicology." We aim to bring more opportunities for future toxicologists from other countries and within the US.

YOU HAVE BEEN A STRONG ADVOCATE FOR HISPANIC SCIENTISTS AND WOMEN IN TOXICOLOGY. WHAT ADVICE WOULD YOU GIVE TO YOUNG HISPANIC TOXICOLOGISTS ASPIRING TO BUILD A SUCCESSFUL CAREER?

Education is the key. We must continue increasing our knowledge, be willing to explore new areas and topics, and stay updated with the latest development in science and toxicology. What you know today is no longer enough. Everyone is a potential key contact, so be brave and introduce yourself. You never know who will support your new idea or project, give you advise, or offer you a better job, and don't forget there are others waiting to learn from you. Be a mentor.

THE FUTURE OF HOT AND TOXICOLOGY

HOW DO YOU SEE THE ROLE OF WOMEN IN TOXICOLOGY EVOLVING, AND WHAT MORE CAN BE DONE TO SUPPORT THEM?

There are reports that state, “Women make up a majority of the workforce in this field [science], which is one of the fastest-growing fields for women” (US Census Bureau). Approximately 48.8% toxicologists are women. Our role as women in toxicology is evolving positively, with increasing representation and influence in the field.

WHAT INITIATIVES OR PROGRAMS HAVE YOU FOUND MOST EFFECTIVE IN EMPOWERING WOMEN IN TOXICOLOGY?

Great mentoring programs in career development, strong networking support, and improving participation in research and scientific committees.

WHAT DO YOU THINK ARE THE BIGGEST CHALLENGES AND OPPORTUNITIES FOR HISPANIC TOXICOLOGISTS TODAY?

Keep perservering and don’t give up! Sometimes we get tired, busy, or distracted with work and everyday life, but we must continue working on increasing our visibility and securing great positions and fundings for research.

WHERE DO YOU SEE HOT IN THE NEXT 10 YEARS?

Strong networking and influence on research and policies are crucial. We have very smart young toxicologists, some of whom are highly specialized and developing new test methods such as NAMs. I see a bright future for them. What goals should the organization prioritize moving forward? Provide mentoring on career development, promote educational courses on areas where Hispanic toxicologists can influence future research, and occupy key roles in Universities, research institutes, and government agencies in and outside the US.

WHAT EMERGING TRENDS IN TOXICOLOGY EXCITE YOU THE MOST?

Even though AI seems intimidating, it is increasingly being used for risk assessment and predictive toxicology. The reduced use of animals in toxicological studies continues being questioned; therefore, *in vitro* and *silico* models will continue developing and implementing. There are areas that I find fascinating, for example, the integration of genomics, proteomics, and metabolomics in toxicology. We know a lot about effects but we still need to understand the mechanisms. Toxicology has advanced a lot in the last 20 years but the best is still coming.

IF YOU COULD GIVE ONE ADVICE TO THE NEXT GENERATION OF HISPANIC TOXICOLOGISTS, WHAT WOULD IT BE?

My advice to the next generation of toxicologists would be to embrace your unique perspective and cultural background as strengths and use them to drive innovation and participation in the field of toxicology. Our experiences and viewpoints can lead to groundbreaking research and solutions that benefit not only our community but society as a whole. Stay curious, seek mentorship, and never underestimate the power of collaboration and networking within and beyond your community.

SOT MARCH 16-20 ORLANDO

SAVE THE DATES

Escape to Warm Weather with SOT

The SOT 64th Annual Meeting and ToxExpo will feature five days of Featured and Scientific Sessions, poster presentations, and social events, as well as the popular three-day ToxExpo.

Where

Orange County Convention Center
West Concourse
9800 International Drive
Orlando, FL 32819

When

Sunday, March 16, 2025, to Thursday, March 20, 2025

HOT AGENDA ENDORSED ACTIVITIES

16 MAR, 2025
1:15 PM–5:00 PM

TACKLING RISK COMMUNICATION CHALLENGES: LESSONS FROM EXPERT VOICES AND CASE STUDIES

Chair: Kelly Sallinas, HOT Vice President

Room W204A, Convention Center

17 MAR, 2025
5:00 PM–6:00 PM

JOINT MENTORING EVENT

Hosted by food safety specialty section & HOT special interest group

Celebration Room 1, Hyatt Regency

18 MAR, 2025
11:00 AM–12:30 PM

EMERGING APPROACHES IN CHEMICAL ANALYSIS AND TOXICOLOGICAL RISK ASSESSMENTS OF EXTRACTABLE DATA FOR MEDICAL DEVICE EVALUATIONS

Chair: Trevor Fish, Edwards Lifesciences
Co-Chair: Joel Cohen, Gradiente

Room W203A, Convention Center

18 MAR, 2025
7:00 PM–9:00 PM

HISPANIC ORGANIZATION OF TOXICOLOGISTS ANNUAL RECEPTION

Rosen Plaza
9700 International Dr, Orlando, FL 32819

19
MAR, 2025
11:00 AM–12:20 PM

SKIN DEEP: NAVIGATING THE EVOLUTION AND APPLICATION OF DERMAL ABSORPTION MODELING IN MODERN RISK ASSESSMENT OF COSMETICS AND PERSONAL CARE PRODUCTS

Chair: Sara Farahmand, The Honest Company
Co-Chair: AJ Cuevas, Combe Inc.

Room W203A, Convention Center

19
MAR, 2025
1:30 PM–4:15 PM

HOW CAN WE USE ALTERNATIVE APPROACHES TO MOVE SAFETY EVALUATION OF MEDICAL DEVICES FORWARD?

Chair: Betina Lew, Johson & Johnson
Co-Chair: Echoleah Rufer, US FDA/CDRH

Room W204A, Convention Center

HISPANIC ORGANIZATION OF TOXICOLOGISTS
Building Bridges
Through Toxicology
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HOT

ANNUAL RECEPTION
AND AWARD CEREMONY

TUESDAY
18 MAR, 2025

07:00PM TO
09:00 PM

3NINE AT ROSEN PLAZA
9700 INTERNATIONAL DRIVE, ORLANDO, FL

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- Kelly Salinas
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SISTER ORGANIZATIONS

Asociación Española de Toxicología	http://www.aetox.es/
Asociación Latinoamericana de Toxicología	http://www.alatox.org
Associação Latino Americana de Patologia Toxicológica e Experimental	http://www.alapte.com/
Asociación Toxicológica Argentina	https://toxicologia.org.ar/
Asociación Venezolana de Toxicología Médica	https://www.facebook.com/groups/1767405857 57320/?ref=br
Center of Environmental and Toxicological Research – University of Puerto Rico	https://rcm1.rcm.upr.edu/centerenvironmental/
Escuela Académico-Profesional de Toxicología de la Universidad Nacional Mayor de San Marcos, Lima	https://farmacia.unmsm.edu.pe/
PLAGBOL – Salud, Agricultura y Medio Ambiente	http://plagbol.org.bo/
Red Iberoamericana de Toxicología y Seguridad Química	http://www.ritsq.org/
Sociedade Brasileira de Toxicologia	http://www.sbtox.org
Sociedade Brasileira de Ecotoxicologia	https://ecotoxbrasil.org.br/
Sociedad Cubana de Toxicología	http://www.sld.cu/sitios/toxicologia/
Sociedad Mexicana de Toxicología	http://www.somtox.com.mx/
Sociedad de Toxicología de Chile	http://sotox.cl/
Society for Risk Analysis Latin America	http://www.srala.org/
Toxicología Acuática Ambiental, Medicina Veterinaria-Universidad Nacional de Colombia	https://unal.edu.co/
Universidad de Cartagena	https://www.unicartagena.edu.co/

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 in the upcoming *Toxenlaces* issues, send an email to Julieta Martino, PhD (Councilor for Sister Organizations) at julieta.martino.pitt@gmail.com.

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 the 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:

http://www.facebook.com/pages/Society-of-Toxicology-SOT/163627880427831?fref=ts

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 Rodrigo Gonçalves Queijo (*Toxenlaces* Editor) at rodrigogoncalvesqueijo@usp.br or Andy Joel Taipe Huisa (*Toxenlaces* Editor Assistant) at andyjth1792@gmail.com