

THE
TERATOLOGY
SOCIETY
BIRTH DEFECTS RESEARCH • EDUCATION • PREVENTION
EST. 1960

55th Annual Meeting

June 27–July 1, 2015
Hilton Montréal Bonaventure

Understanding Birth Defects
and Reproductive Health:
From Basic to Translational Research



QUÉBEC

MONTREAL

President:
Mary Alice Smith

Program Chair:
Tacey E.K. White

www.teratology.org

Why Attend the 2015 Teratology Society Annual Meeting?

Birth defects and reproductive and developmentally-mediated disorders constitute a major public health concern in the world today. Human development can be affected not only by drugs and chemicals but also by diet, genetics, maternal health, and socioeconomic factors. The Teratology Society strives to understand and protect against potential hazards to developing embryos, fetuses, children, and adults, by bringing together scientific knowledge from diverse fields such as cell and molecular biology, developmental biology and toxicology, reproduction and endocrinology, nutritional biochemistry, genetics, and epidemiology, as well as the clinical disciplines of prenatal medicine, pediatrics, obstetrics, neonatology, medical genetics, and teratogen risk counseling.

- The Annual Meeting provides the opportunity to learn about the latest scientific research in birth defects, diseases of developmental origin, and cutting-edge technologies.
- The meeting provides a unique forum for a diverse group of scientists and clinicians to present and discuss the latest scientific and clinical information on causes and prevention of abnormal development and reproduction, and for trainees to discuss topics of mutual interest with seasoned investigators.
- Attendees can indulge in discussions from philosophical to practical with established experts in the field, new researchers, and students.
- The Annual Meeting provides a place and time to catch up with colleagues, make new friends, and network.

The theme of the 2015 meeting is **“Understanding Birth Defects and Reproductive Health: From Basic to Translational Research”** and will highlight that preventing and treating birth defects and developmental disabilities are dependent on: a) developing and integrating the latest information and technology into research; and b) recruiting, training, and mentoring the next generation of birth defects researchers. Students and postdoctoral fellows have a special appreciation for the multiple opportunities to interact with scientific leaders in attendance.

The scientific program provides numerous opportunities for trainees to understand the importance of the integration of basic, regulatory, clinical, and epidemiological information and for networking with scientific experts. The meeting is an important forum for issues related to public policy regarding the prevention of birth defects and education of state-of-the-art methods and approaches to research in this field. Understanding the mechanisms leading to birth defects and effects on reproduction will help in designing drugs and preventing exposures to compounds that affect these pathways, understanding physiological conditions that may affect drug metabolism and effectiveness, and tests to identify drugs/chemicals/procedures that could result in birth defects or disruption of reproduction.

If your research and/or daily activities involve any of the items below, you should come to Montréal.

- Researchers whose cutting-edge science can be applied to birth defects research such as research with stem cells, adverse outcome pathways, computational toxicology, genomics/genetics, mechanistic toxicology, proteomics, or metabolomics.
- Clinicians involved in early diagnosis of birth defects, technologies to identify birth defects or adverse pregnancy outcomes, or identification of chemicals and pathogens that affect pregnancy and development.
- Epidemiologists working to recognize developmental disabilities.
- Regulators responsible for interpreting and managing regulations based on reproductive and developmental endpoints.
- Developmental and reproductive toxicologists who develop and/or test pharmaceuticals or chemicals for development and reproductive effects.
- Pharmacologists who develop and design new drugs and chemicals for use during pregnancy and early childhood.
- Educators who teach developmental and reproductive biology/toxicology, serve as mentors to students, or develop training materials for scientists, clinicians, or pregnant women.
- Students with a desire to learn more in developmental or reproductive toxicology and diseases of developmental origin and who want a career in government, academia, or industry in the field of birth defects research.

Montréal

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Abstract Submission

(Deadline: February 15, 2015)

You are encouraged to participate in the meeting by presenting your research as a poster or platform talk. Submit your abstract through the Teratology Society website at www.teratology.org. Submission is quick and easy. Abstracts must be submitted **by February 15, 2015**. Short talks will be selected from abstract submission files for presentation in one of five different Platform Sessions held throughout the meeting. To be considered for an opportunity to speak in a Platform Session, you must select one of the platform presentation options as your presentation preference. The Program Committee will assign abstracts in March, and you will be notified by April if you have been selected to give a platform talk or to present a poster.

Registration Information

You may register for the Annual Meeting and Education Courses online through the Teratology Society website at www.teratology.org. You will find categories tailored with your participation in mind. Visit website for complete details.

Hilton Montréal Bonaventure and Montréal, Québec, Canada

In the heart of downtown Montréal, Québec, Canada stands the Hilton Montréal Bonaventure hotel. Stroll through the underground city, consisting of tunnels that connect malls, restaurants, food courts, and the metro. The hotel is approximately 20 miles from The Montréal-Pierre Elliott Trudeau (YUL) International Airport.

Key Deadlines:

Abstract Submission Deadline: February 15, 2015

Student/Postdoctoral Travel Award Application Deadline: February 15, 2015

Early Bird Registration Deadline: February 22, 2015

Room Sharing Program Deadline: May 12, 2015

Advance Registration Deadline: May 15, 2015

Hotel Reservation Deadline: June 5, 2015

2015 Annual Meeting Sponsors *(as of November 21, 2014)*

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Teratology Society Fifty-Fifth Annual Meeting Understanding Birth Defects

Conference Overview

Bienvenue à Montréal

We invite you to experience the friendly and warm culture of the Teratology Society in Montréal. Take advantage of the opportunity to present your research during the meeting by submitting an abstract for poster or platform presentation.

The **education courses** offer a broad array of leading-edge educational topics. Sessions include a comprehensive review of occupational and environmental reproductive and developmental hazards; an overview of emerging ethical issues surrounding birth defects research and practice; and an introduction to a variety of new genetic engineering techniques for genome editing in multiple model organisms.

The **scientific sessions** are focused on basic and clinical research and the application of new technologies and demonstrate how we are “Understanding Birth Defects and Reproductive Health: From Basic to Translational Research.” The meeting is also an important forum for training the next generation of scientists and public policy discussions regarding the prevention of birth defects and other developmentally-mediated disorders. The Annual Meeting brings together basic and applied researchers to present and discuss the latest scientific and clinical information on causes and prevention of abnormal development and reproduction. Topics for the scientific program represent active, timely research areas of high relevance to public health and significant usefulness to researchers in the fields of birth defects research and birth defects surveillance. Session topics and questions addressed will include:

- Assisted Reproductive Technologies—What is the latest research on birth defect prevalence and neurological development in offspring conceived by ART?
- Cerebral Palsy (CP)—What is the relevant and novel research regarding the diagnosis, epidemiology, potential mechanisms, and preventive measures for CP?
- Contraception in Clinical Trials—How do pharmaceutical companies approach preventing and managing inadvertent pregnancy exposure in clinical trials?
- Epigenetic and Genetic Alterations in Progeny Resulting from Paternal Exposures—Can paternal aging, lifestyle, and diet impact the offspring?
- Genetic and Environmental Interactions of Common Malformations—What are the contributions of genetics and environmental exposures to the formation of certain common malformations, and how we can use an interdisciplinary approach to better understand causes and develop prevention strategies?
- Human Skeletal Malformations—What is the relationship between arterial dysgenesis and skeletal malformations?
- Microbiomes—What is the emerging research on how maternal and early infant microbiomes can affect development?
- Postnatal Reproductive Development—What are the best mechanistic ways to predict effects on the onset and timing of puberty in children?
- Reactive Oxygen Species, Oxidative Stress, and Redox Signaling in Developmental Toxicology—What is the role of oxidative stress in the development of birth defects?
- Regulatory Neurodevelopmental Testing—How can harmonized approaches for evaluating and interpreting neurobehavioral data be developed?

Other meeting highlights:

- European Teratology Society (ETS) and the Teratology Society exchange lectures on endocrine disruptors.
- Platform and Poster presentations from submitted abstracts.
- Special Lectures
- Student and Postdoctoral Lunch Workshop on transitioning from graduate school, to postdoctoral fellow, to first job.

Plan to stay through Wednesday to enjoy the Banquet and to take advantage of all of the scientific interaction. Visit the meeting website frequently to view the most up to date agenda and information about the meeting.

Annual Meeting: Effects and Reproductive H

Education Courses:

- **Agnish Fellowship Lecture**
- **Occupational and Environmental Exposures: Reproductive and Developmental Hazards in the Workplace and Home** (*J. Chevrier, A. M. Hoberman, E. Z. Francis, R. A. Lawrence, R. K. Miller*)
- **Ethics and Ethical Conundrums** (*B. Robaire, J. Nisker, A. Janvier, R. Mykitiuk*)
- **Sunrise Mini Course: Life in the Genetic Fast Lane: Gene Manipulation and Genome Editing to Understand Congenital Diseases** (*Y. Yamanaka, R. H. Finnell*)

Symposia:

- **Paternal Exposures Impact Progeny Outcome by Altering the Sperm Genome and Epigenome** (*B. Robaire, F. Marchetti, S. Kimmins, M. Szyf*)
- **Wiley-Blackwell Symposium: Are Human Skeletal Malformations the Result of Embryonic Arterial Dysgenesis?** (*L. Wolpert, D. R. Hootnick, J. M. DeSesso, N. Vargesson*)
- **March of Dimes Symposium: Perinatal Outcomes Following Assisted Reproductive Technologies (Joint with OTIS)** (*M. Anderka, B. Luke, W. Mak, L. A. Kondapalli, S. Boulet*)
- **Reactive Oxygen Species, Oxidative Stress and Redox Signaling in Developmental Toxicology** (*D. P. Jones, C. Harris, L. M. Winn, P. G. Wells, J. M. Hansen*)
- **Public Affairs Committee Symposium: Microbiomes: An Underappreciated Organ for Teratologists (Joint with NBTS and OTIS)** (*TBA, C. M. Slupsky, TBA, J. F. Cryan, TBA*)
- **Genetic and Environment Interactions in Common Malformations** (*S. L. Carmichael, J. M. Graham, C. A. Bacino, G. M. Shaw, S. R. Lalani, H. Tully*)
- **Cerebral Palsy: History, Mechanisms, and Prevention** (*K. B. Nelson, N. Paneth, P. Rosenbaum, M. V. Johnston*)

Workshops:

- **Student and Postdoctoral Workshop: Building a Successful Career in Developmental and Reproductive Toxicology** (*C. P. Curran, J. H. Charlap, C. Sledzik, N. C. Kleinstreuer*)
- **Regulatory Neurodevelopmental Testing: New Guiding Principles for Harmonization of Data Collection and Analysis (Joint with NBTS)** (*F. Bailey, L. P. Sheets, W. Bowers, K. Raffaele, V. C. Moser, A. A. Li, A. M. Hoberman, A. Hofstra, S. L. Makris*)
- **ILSI HESI Workshop: Contraception in Clinical Trials: From Animal Data to the Patient** (*J. Stewart, W. J. Breslin, M. Desai, G. Carlson*)
- **Mechanisms of Postnatal Reproductive Development/Puberty, and Best Ways to Evaluate** (*T. E. Stoker, S. B. Laffan, K. E. Thompson, M. M. Lee*)

Special Lectures and Awards:

- **Josef Warkany Lecture** (*W. Slikker Jr.*)
- **F. Clarke Fraser New Investigator Award**
- **James G. Wilson Publication Award**
- **Special Lecture**
- **TS/NBTS Joint Elsevier Distinguished Lecturer: Microbiota-Gut-Brain Axis: From Neurodevelopment to Behavior** (*J. F. Cryan*)
- **TS/ETS Exchange Lecture: Endocrine Disruptors: A Regulatory Solution in Search of a Problem**
- **Robert L. Brent Lecture: Teratogen Update** (*J.M. Friedman*)
- **Distinguished Scholar Awards**
- **Distinguished Service Award**

Visit the meeting website to view the detailed agenda and information about the meeting.

www.teratology.org

Health: From Basic to Translational

Student and Postdoctoral Fellow Opportunities

Trainees have multiple opportunities to interact with established members/scientists in professional and casual settings during the meeting. It is easy to engage leaders in the field in discussions to learn more about them and the science. Be sure to take advantage of the unique opportunities that exist during the Annual Meeting.

The Student/Postdoctoral Fellow Platform Session will be held Sunday, June 28. The two best presentations in this session will be selected to receive a Wilson Presentation Award of \$500. Plan to attend the TS/MARTA Student Career event on Monday evening for dinner, conversation, and networking. This event is open to all students and postdoctoral fellows attending the Teratology Society, Neurobehavioral Teratology Society (NBTS), and Organization of Teratology Information Specialists (OTIS) annual meetings. Don't miss this great networking opportunity.

Travel awards are available to assist graduate students and postdoctoral fellows attending the Teratology Society Annual Meeting. Students and postdoctoral fellows who present an abstract are eligible to receive a \$500 travel award. These awards are designed to help defray a portion of the travel costs to the meeting. Presentation awards are also provided. Visit the Teratology Society website for complete information on how to apply for a travel award and to learn about other award and networking opportunities.

Make plans to participate in the 2nd Annual Student/Postdoc Treasure Hunt. This activity is intended to facilitate networking between the students/postdocs and the Society members at the Annual Meeting. It is a great opportunity to discuss your research, connect with members and attendees, learn about different career paths, and forge relationships that you will "treasure" throughout your career! A random drawing for a prize of \$100 will take place at the Banquet. All who participate are winners, but you must be present to win the prize.

Dine with a Teratology Ambassador

The Teratology Society is pleased to offer the opportunity during the meeting for students and postdoctoral fellows to meet with established members of the Society for informal discussion. Visit the website for more information about participating.

Silent Auction

The Teratology Society intends to hold a Silent Auction during the Welcome Reception on Sunday, June 28. Perhaps you have a book, an original piece of artwork, a timeshare, or another item to donate for the Silent Auction. If you have an item to donate, please contact the business office at tshq@teratology.org. Your donated items will help raise funds to support the trainee activities during the 2016 meeting. Donations are tax deductible and will be acknowledged in the registration materials and on the bidding sheets.

Bidding will start at 6:30 pm and will conclude at 8:00 pm. A list of the highest bidders will be posted in the registration area by Monday at 12:00 noon. All items must be claimed by Wednesday at 12:00 noon. The Society is unable to ship auction items to the highest bidder; unclaimed items will become property of the Society. Your generosity will help us continue our mission to support the activities of our graduate students and postdoctoral fellows.

Découvrez Montréal

June 27–July 1, 2015

Montréal
QUÉBEC

Translational Research

Accommodations

You are encouraged to make plans early to attend the meeting at the Hilton Montréal Bonaventure in Montréal, Québec, Canada. The conference rate is \$199 CAD (not to exceed \$199 US) for single/double occupancy. Based on availability, the meeting rate is available three days prior and three days past the meeting. The conference rate includes complimentary access to the fitness center and complimentary in-room high-speed Internet access. Limited rooms are available for students at a reduced rate. You must reserve your room prior to June 2, 2015. All rates are subject to applicable taxes, currently 18%. Reservations can be made by calling toll free 800.774.1500 or direct 514.878.2332 and telling the reservation office that you are a Teratology Society meeting participant or by reserving a room online through the Annual Meeting website.

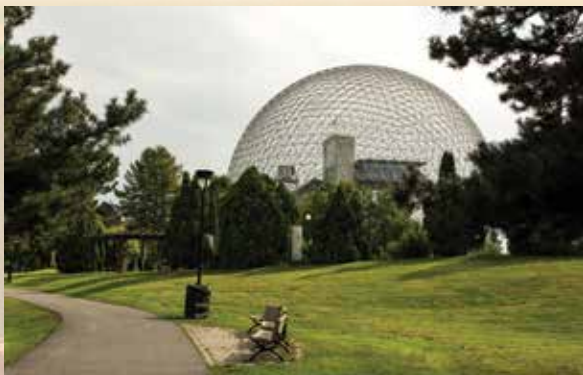
By staying at the meeting hotel, you help the Teratology Society meet its contractual obligations and keep registration fees reasonable. Please take this into consideration when making your accommodation decision.

There are steps leading to many of the sleeping rooms at the Hilton Montréal Bonaventure. Persons with special needs should inform the hotel of their needs when making reservations. Wheelchair accessible rooms are available. Check-in time is 4:00 pm and check-out time is 12:00 noon.

Room Sharing Program

This program is designed to help attendees reduce their cost of attending the Annual Meeting. The Room Sharing Program is open to all Teratology Society Annual Meeting attendees. Requests to share a room should be submitted by May 15. Individuals using this service will be provided with a list of names with similar housing requirements. Individuals are responsible for contacting the potential roommate and making the hotel reservation. Participation in this program does not guarantee the discounted room rate. Attendees must make their hotel reservations early to secure the discounted rate. The Teratology Society will not be responsible for securing housing for participants in the Room Sharing Program.


For updated information, visit www.teratology.org/meetings/2015.



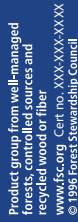
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