Toronto Canada IUPHAR Mentoring Center

Site Clinical Pharmacology, University of Toronto (Hospital for Sick Children, and Sunnybrook Health Sciences Centre)

Address Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8 CANADA

Contact
Dr. Shinya Ito shinya.ito@sickkids.ca

Affiliations
- Research Institute, Hospital for Sick Children
- Ontario/Manitoba Poison Information Centre, Hospital for Sick Children
- Institute of Clinical Evaluative Sciences
- Department of Pharmacology and Toxicology, University of Toronto

Key individuals and expertise
- Dr. Shinya Ito Paediatric Pharmacology, Reproductive toxicology, Pharmacogenetics, Adverse drug reactions
- Dr. Irena Nulman Paediatric Pharmacology, Reproductive toxicology
- Dr. Margaret Thompson Clinical Toxicology
- Dr. David Juurlink Clinical Pharmacology, Clinical Toxicology, Pharmacoepidemiology

Research expertise
- Clinical toxicology
- Clinical epidemiology
- Drug interactions
- Drug safety in breastfeeding
- Molecular pharmacology
- Pharmacogenetics/pharmacogenomics
- Paediatric pharmacology
- Population pharmacokinetics
- Reproductive toxicology (Foetal drug safety)
- Translational research

Opportunities
- Email consultation (Skype conference, if necessary) on various aspects of paediatric clinical pharmacology and general clinical pharmacology, including training curriculum development, clinical activities, case discussion and research.
- Research collaboration
- Potential on-site training (if funding available)

Selected publication
1. Ito S. Drug therapy for breast-feeding women. New Engl J Med 2000; 343:118-126.

PMID: 10891521
2. Klinger G, Morad Y, Westall CA, Laskin C, Spitzer KA, Koren G, Ito S, Buncic RJ. Ocular toxicity and antenatal exposure to chloroquine or hydroxychloroquine for rheumatic diseases Lancet 2001;358:813-814. PMID: 11564493
3. Juurlink DN, Mamdani M, Kopp A, Laupacis A, Redelmeier DA. Drug-drug interactions among elderly patients hospitalized for drug toxicity. JAMA. 2003 Apr 2;289(13):1652-8.
4. Juurlink DN, Mamdani MM, Lee DS, Kopp A, Austin PC, Laupacis A, Redelmeier DA. Rates of hyperkalemia after publication of the Randomized Aldactone Evaluation Study. New England Journal of Medicine. 2004 Aug 5;351(6):543-51
5. Taguchi N, Rubin ET, Hosokawa A, Choi J, Ying AY, Moretti ME, Koren G, Ito S. Prenatal exposure to HMG-CoA reductase inhibitors: effects on fetal and neonatal outcomes. Reproductive Toxicology 2008;26:175-177. PMID: 18640262
6. Antenatal use of selective serotonin-reuptake inhibitors and QT interval prolongation in newborns. Dubnov-Raz G, Juurlink DN, Fogelman R, Merlob P, Ito S, Koren G, Finkelstein Y. Pediatrics. 2008 Sep;122(3):e710-5. doi: 10.1542/peds.2008-0658. PMID: 18762507
7. Levy S, Fayez I, Taguchi N, Han J-Y, Aiello J, Matsui D, Moretti M, Koren G, Ito S. Pregnancy outcome following in utero exposure to bisphosphonates. Bone 2009;44:428-430. PMID: 19059370
8. Tan KP, Wang B, Yang M, Boutros PC, MacAulay J, Xu H, Chuang AI, Kosuge K, Yamamoto M, Takahashi S, Wu A, Ross DD, Harper PA, Ito S. Aryl hydrocarbon receptor (AHR) is a transcriptional activator of human breast cancer resistance protein (BCRP/ABCG2). Mol Pharmacol 2010;78:175-185. PMID: 20460431
9. Panchaud A, Garcia-Bournissen F, Csajka C, Kristensen JH, Taddio A, Ilet KF, Begg EJ, Ito S. Prediction of infant drug exposure through breastfeeding: population PK modeling and simulation of fluoxetine. Clin Pharmacol Ther 2011;89: 830–836. PMID: 21525869
10. Nulman I, Koren G, Rovet J, Barrera M, Pulver A, Streiner D, Feldman B. Neurodevelopment of Children Following Prenatal Exposure to Venlafaxine, Selective Serotonin Reuptake Inhibitors, or Untreated Maternal Depression. Am J Psychiatry. 2012 Nov 1;169(11):1165-74
11. Yazdani-Brojeni P, Garcia-Bournissen F, Fujii H, Tanoshima R, Ito S. Relative bioequivalence of amoxicillin dissolved in breast milk. Arch Dis Child 2014, 99(3):258-61. PMID 24363363
12. Wu A, Yang M, Dalvi P, Turinsky AL, Wang W, Butcher D, Egan SE, Weksberg R, Harper PA, Ito S. Role of STAT5 and epigenetics in lactation-associated upregulation of multidrug transporter ABCG2 in the mammary glandand. Am J Physiol Endocrinol Metab. 2014; 307:E596-E610. PMID: 25117410
13. Neonatal opioid withdrawal and antenatal opioid prescribing. Turner SD, Gomes T, Camacho X, Yao Z, Guttmann A, Mamdani MM, Juurlink DN, Dhalla IA. CMAJ Open. 2015 Jan 13;3(1):E55-61. doi: 10.9778/cmajo.20140065. eCollection 2015 Jan-Mar. PMID: 25844370
14. Tanoshima M, Kobayashi T, Tanoshima R, Beyene J, Koren G, Ito S. Risks of congenital malformations in offspring exposed to valproic acid in utero: a systematic review and cumulative meta-analysis. Clin Pharmacol Ther 2015; 98:417-441 PMID: 26044279
15. Nulman I, Koren G, Rovet J,Barrera M, Streiner DL, Feldman BM. Neurodevelopment of Children Prenatally Exposed to Selective Reuptake Inhibitor Antidepressants: Toronto

Sibling Study. J Clin Psychiatry 2015;76(7):e842–e847
16. Long-term outcomes following self-poisoning in adolescents: a population-based cohort study. Finkelstein Y, Macdonald EM, Hollands S, Hutson JR, Sivilotti ML, Mamdani MM, Koren G, Juurlink DN; Canadian Drug Safety and Effectiveness Research Network (CDSERN). Lancet Psychiatry. 2015 Jun;2(6):532-9. doi: 10.1016/S2215-0366(15)00170-4. PMID: 26360449
17. Aminkeng F, Bhavsar AP, Visscher H, Rassekh SR, Li Y, Lee JW, Bruham LR, Caron HN, van Dalen E, Kremer LC, van der Pal H, Amstutz U, Rieder MJ, Bernstein D, Carleton BC, Hayden MR, Ross, CJD and the Canadian Pharmacogenomics Network for Drug Safety Consortium. A coding variant in RARG confers susceptibility to anthracycline-induced cardiotoxicity in childhood cancer.. Nature Genetics 2015;47:1079-1083. PMID: 26237429
18. Wu A, Dedina L, Dalvi P, Yang M, Leon-Cheon J, Earl B, Harper PA, Ito S. Riboflavin uptake transporter Slc52a2 (RFVT2) is upregulated in the mouse mammary gland during lactation. Am J Physiology: Regulatory, Integrative and Comparative Physiology 2016; 310(7): R578-85
19. Juurlink, D. N. (2016) Activated charcoal for acute overdose: a reappraisal. Br J Clin Pharmacol, 81: 482–487