

PERSONAL INFORMATION

Alar Irs

WORK EXPERIENCE

January 2012–Present

Chief Medical Officer

Estonian State Agency of Medicines (Ravimiamet) (Estonia)

Responsibility for the medical quality of the Agency's output and co-ordination of the Estonian participation at the European Medicines Agency's scientific bodies.

January 2009–December 2017

Lecturer in Clinical Pharmacology

University of Tartu (Estonia)

Teaching clinical pharmacology, pharmacoepidemiology, pharmacoconomics, clinical trial methodology and pharmacotherapy to 6th year medical and 4th year pharmacy students as well as residents and post-graduate students, providing CME in clinical trial conduct and therapeutics.

September 2017–Present

Teaching physician, cardiologist

Tartu University Hospital (Estonia)

Patient care in invasive and acute cardiology, under- and postgraduate teaching.

January 2003–December 2011

Deputy Director General

State Agency of Medicines (Ravimiamet) (Estonia)

Co-ordination of the Agency's day-to-day activities and of the Estonian participation in the EU drug regulatory bodies.

January 2001–December 2002

Head, Department of Human Medicines

Estonian State Agency of Medicines (Ravimiamet) (Estonia)

Co-ordination of the Agency's work in marketing authorisation, pharmacovigilance and drug statistics, clinical trial oversight and in EU accession.

January 1998–December 2000

Medical Officer, GCP and Clinical Trials

Estonian State Agency of Medicines (Ravimiamet) (Estonia)

Assessment of clinical trial applications submitted to the Agency, GCP training for investigators and GCP inspection.

September 1997–December
2008**Various junior teaching posts in clinical pharmacology**

University of Tartu (Estonia)

Teaching of clinical pharmacology and related subjects in a university's medical faculty.

EDUCATION AND TRAINING

September 1991–June 1997

Medical doctor (cum laude)

University of Tartu (Estonia)

Medicine

September 1997–May 2002

Medical doctor

University of Tartu (Estonia)

Clinical pharmacology

September 2012–August 2017

Cardiologist

University of Tartu (Estonia)

European curriculum in cardiology

ADDITIONAL INFORMATION

Expertise

- Clinical assessment
- Clinical pharmacology
- Cardiovascular therapeutics
- Pharmacoepidemiology and drug utilisation
- Pharmacoeconomics and HTA
- GCP

Publications

Books and chapters

Rootslane L, Laius O, Kurvits K, Irs A. 20 aastat ravimistatistikat Eestis. 20 years of Estonian Statistics on Medicines. Ravimiamet, Tartu, 2015.

Irs A. Scientific and Societal Developments: Pooling of Expertise. In: Woods K, Wathion N, Bonini S et al, eds. European Medicines Agency Celebrating 20 Years. London 2015

Al-Fannah JM, Coelho H, Cranswick N, Gilani AU, Gray A, Gupta U, Helali A, Hoppu K, Irs A, Kazembe P, Mehta D, Reidenberg M, Suryawati S, Walters S, Pedersen HB, Chongtrakul P, Zhiping L, Nakamura H, Robertson J, Hill S, Hogerzeil H, Ondari C, Zisovska E, Davies EH, Kearns G, Mattison D, Terlouw D. The selection and use of essential medicines. World Health Organ Tech Rep Ser. 2008;(950).

Jesse M, Habicht J, Aaviksoo A, Koppel A, Irs A, Thompson S. Health Care Systems in Transition: Estonia. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, 2004.

Irs A, de Hoog T.J, Rågo L. Development of Marketing Authorisation Procedures for Pharmaceuticals. In: Freemantle N, Hill S, eds. Evaluating Pharmaceuticals for Health Policy and Reimbursement. BMJ Books. Malden (USA), Oxford (UK), Carlton (Australia): Blackwell Publishing, 2004: 3-23.

Articles in international journals

Hatswell AJ, Baio G, Berlin JA, Irs A, Freemantle N. Regulatory approval of pharmaceuticals without a randomised controlled study: analysis of EMA and FDA approvals 1999-2014. *BMJ Open*. 2016;6(6):e011666. doi: 10.1136/bmjopen-2016-011666.

Bueno H, de Graeff P, Richard-Lordereau I, Emmerich J, Fox KA, Friedman CP, Gaudin C, El-Gazayerly A, Goldman S, Hemmrich M, Henderson RA, Himmelmann A, Irs A, Jackson N, James SK, Katus HA, Laslop A, Laws I, Mehran R, Ong S, Prasad K, Roffi M, Rosano GM, Rose M, Sinnaeve PR, Stough WG, Thygesen K, Van de Werf F, Varin C, Verheugt FW, de Los Angeles Alonso García M. Report of the European Society of Cardiology Cardiovascular Round Table regulatory workshop update of the evaluation of new agents for the treatment of acute coronary syndrome: Executive summary. *Eur Heart J Acute Cardiovasc Care*. 2016, pii: 2048872616649859.

Lass J, Odliind V, Irs A, Lutsar I. Antibiotic prescription preferences in paediatric outpatient setting in Estonia and Sweden. *Springerplus* 2013;2(1):124.

Hoebert J, Irs A, Mantel-Teeuwisse A, Leufkens H. Future of the European Union regulatory network in the context of the uptake of new medicines. *British Journal of Clinical Pharmacology* 2012, DOI: 10.1111/j.1365-2125.2012.04476.x

Lass J, Irs A, Pisarev H, Leinemann T, Lutsar I. Off label use of prescription medicines in children in outpatient setting in Estonia is common. *Pharmacoepidemiology and Drug Safety* 2011, DOI: 10.1002/pds

Freemantle N, Irs A. Observational evidence for determining drug safety. *BMJ* 2008; 336: 627-8.

Johnson KR, Ringland C, Stokes BJ, Anthony DM, Freemantle N, Irs A, Hill SR, Ward RL. Response rate or time to progression as predictors of survival in trials of metastatic colorectal cancer or non-small-cell lung cancer: a meta-analysis. *Lancet Oncology* 2006;7(9):741-6

Raal A, Fischer K, Irs A. Determination of Drug Information Needs of Health Care Professionals in Estonia. *Medicina* 2006;42(12):1030-4

Rootslane L, Irs A. ATC/DDD methodology: a country perspective. *WHO Drug Information*

2001;15(1):26-30

Kask A, Pähkla R, Irs A, Rägo L, Wikberg JES, Schiöth HB Long-term administration of MC4 receptor antagonist HS014 causes hyperphagia and obesity in rats. *Neuroreport* March 1999; 10(4): 707-11

Pähkla R, Irs A, Oselin K, Rootslane L Digoxin: use pattern in Estonia and bioavailability of the local market leader. *Journal of Clinical Pharmacy and Therapeutics* 1999; 24: 375-80

Articles in national medical journals

Lass J, Tamme K, Irs A. Ravimite annustamine äärmise rasvumusega patsiendile –haigusjuhu kirjeldus. *Eesti Arst* 2016; 95(1):38–44

Kalda R, Viigimaa M, Irs A. Eesti ravijuhend „Täiskasvanute kõrgvererõhktõve käsitus esmatasandil“. *Eesti Arst* 2012; 91(8):437–439

Raudsepp D, Lass J, Saar M, Kuld L, Irs A. Ravimite kõrval- või koostoimed erakorralise meditsiini osakonda pöördumise põhjusena – prospektiivne vaatlusuuring. *Eesti Arst* 2011;90(3):122–128

Kirss A, Maipuu L, Eelmäe I, Metsvaht T, Sirotkina M, Irs A. Angiotensiini konverteeriva ensüümi inhibiitori ja angiotensiin II retseptori blokaatori kasutamise ohud raseduse ajal: haigusjuhu kirjeldus ja kirjanduse ülevaade. *Eesti Arst* 2010;89(7–8):502–509

Conference presentations

Pintson M, Irs A. Involvement of Residents in the National Guideline Development Process in Estonia. 10th EACPT Summer School, Edinburgh, UK, 4-6.07.2013, poster.

Lass J, Iljuhhina J, Laius O, Pisarev H, Irs A. Retseptiravimite rasedusaegne kasutamine Eestis. TÜ Arstiteaduskonna teaduskonverents, Tartu, 7-8.10.2010, poster. *Eesti Arst* 2010; 89(9):580

Irs A. Regulatory clinical pharmacologist – an ambassador of sanity. WorldPharma 2010 Bridging Basic and Clinical Pharmacology. Copenhagen, Denmark, 17-23.07.2010, oral.

Iljuhhina J, Laius O, Lass J, Irs A. Prescription drug use during pregnancy in Estonia. WorldPharma 2010 Bridging Basic and Clinical Pharmacology. Copenhagen, Denmark, 17-23.07.2010, oral.

Review publications in national medical journals

Irs A. Raviminimede entroopia. *Eesti Arst* 2016; 95(5):328–331

Sonn K, Laius O, Irs A. Und soodustavate ravimite kliiniline farmakoloogia ja kasutamise suundumused Eestis. *Eesti Arst* 2015; 94(11):684–688

Irs A. PCSK9 monokloonsed antikehad düslipideemia raviks: evolokumab ja alirokumab. *Eesti Arst* 2015; 94(9):567–570

Irs A. Kaks uut kardiovaskulaarravimit: kangreloor ja vorapaksaar. *Eesti Arst* 2015; 94(2):108–110.

Irs A, Serg M, Elmet M. Euroopa Südamerütni Assotsiatsiooni praktilised juhised uute suukaudsete antikoagulantide kasutamise kohta kodade virvendusarütmiaiga patsientidel. *Eesti Arst* 2013; 92(11):645–648

Irs A. Mittesteroidsete põletikuvastaste ravimite kasutamine südame-veresoonkonna-haiguse riskiga patsientidel *Eesti Arst* 2013; 92(5):287–289.

Laius O, Irs A. Toimeainepõhine retsept ja ravi tulemuslikkus. *Eesti Arst* 2013; 92(3):157–160.

Harrison P, Laius O, Irs A. Filgrastiimiga ja somatropiiniga samased bioloogilised ravimid. *Eesti Arst* 2012; 91(11):611–615

Harrison P, Laius O, Irs A. Samased bioloogilised ravimid – epoetiinid. *Eesti Arst* 2012; 91(10):570–573

Harrison P, Laius O, Irs A. Samased bioloogilised ravimid. *Eesti Arst* 2012; 91(9):492–495

Irs A. Dabigatraani kasutamise juhised verejooksuriski vähendamiseks. *Eesti Arst* 2012; 91(3):148–149

Irs A, Laius O, Uusküla M. Uued andmed viitavad liigsele agarusele dronedarooni kasutamisel kodade virvendusarütmia ravis. *Eesti Arst* 2011; 90(9):422–426

Harrison P, Laius O, Irs A. Bioloogiliste ravimite uus julge maailm: ravimiarenduse edasimineku viimase viie aasta jooksul. *Eesti Arst* 2011; 90(7):338–341

Irs A, Uusküla M. Uued suukaudsed tromboosivastased ravimid dabigatraan ja rivaroksabaan. *Eesti Arst* 2011; 90(5):232–235

Viigimaa M, Irs A, Soosaar A. Kliiniline probleem. Ravisoostumuse parandamine on arteriaalse hüpertensiooni suurim terapeutiline reserv. *Eesti Arst* 2010; 89(7–8):513–520

Irs A, Salupere R, Sinisalu V. Mittesteroidsete põletikuvastaste ravimite ohutu kasutamine. *Eesti Arst* 2010; 89(6):417–22

Irs A. Ravimitel on ikka veel kõrvaltoimeid. Lege Artis 2010;2(92):8-12

Projects

- Memberships**
- European Medicines Agency (EMA) CHMP, member (alternate 2004-2006, member since 2006)
 - EMA PDCO, member (until 2010, alternate 2010-13)
 - EMA CHMP cardiovascular working party, member
 - EMA CHMP efficacy working party, member 2004-2010
 - WHO Expert Committee for the Selection and Use of Essential Medicines, member
 - WHO Expert Panel on Drug Policy, member
 - Drug Information Association, Advisory Council of Europe, member 2011-2014
 - Ministerial Committee on Drug Reimbursement, Estonia, member
 - Marketing Authorisation Committee for Human Medicines, Estonia, vice-chair
 - National Clinical Guideline Advisory Board, Estonia, member
 - European Association for Clinical Pharmacology and Therapeutics (EACPT) Council, member
 - EACPT Sub-Committee on Education, member
 - Estonian Society of Pharmacology, member, president since 2010
 - Estonian Hypertension Society, member
 - Estonian Society of Cardiology, member
 - Estonian Medical Association, member
 - Medical Curriculum Committee, University of Tartu, Estonia, member
 - National programme for HTA capacity development, council member

Other Relevant Information