



Yearly report

2021

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Key numbers 2021*

- **2 PhD defenses**
- **51 scientific publications**
- **42 posters/oral presentations/external lectures**
- **25 media coverages, 9 multimedia events**
- **4 visits from international guest researchers**
- **6 research grants awarded (a total of 36.1 mill. NOK)**

2020: 34 scientific publications, 13 posters, 6 presentations/external lectures, >50 media coverages, 4 visits from international guest researchers, 7 research grants awarded.

2019: 31 scientific publications, 20 posters, 33 presentations/external lectures, 39 media coverages, 4 visits from international guest researchers, 10 clinical guidelines, 6 PhD defense committees as an international member.

2018: 43 scientific publications, 25 posters, 40 presentations/external lectures, 22 media coverages, 7 visits from international guest researchers.

2017: 50 scientific publications, 30 posters, 44 presentations/external lectures, 13 media coverages, 6 visits from international guest researchers.

** Ingunn Björnsdóttir had a research sabbatical in 2021, and will provide a separate report on her research activities.*

PhD defenses

- **Maria Bich-Thuy Truong**, PhD thesis defense, "Nausea and Vomiting in Pregnancy. Management, Consequences and the Community Pharmacist's Potential Role", 2021 Jun 21.
- **Maria Bich-Thuy Truong**, trial lecture, "Stakeholder engagement in the development and evaluation of community pharmacy services", 2021 Jun 21.
- **Sarah Hjorth Andersen**, PhD thesis defense, "Childhood outcomes after prenatal exposure to analgesics or antibiotics", 2021 Sept 24.
- **Sarah Hjorth Andersen**, trial lecture, "Vaccination against covid-19 in pregnant women. An overview of ethical and epidemiological challenges", 2021 Sept 24.

PhD committees

- **Granås AG**. 2nd opponent for PhD student Tone Westergren, "Reporting of adverse effects in clinical trials, systematic reviews, and guidelines. How events are lost along the evidence chain.". University of Oslo, 2021 Nov 25.
- **Granås AG**. Examiner Committee for PhD student Sonja Kallio, "Community Pharmacists' Contribution to Prospective Medication Risk Management for Older Adults in the Context of Network Theory". University of Helsinki, 2021 Aug 20.

Scientific publications

January

1. Ceulemans M, Foulon V, **Ngo E**, Panchaud A, Winterfeld U, Pomar L, Lambelet V, Cleary B, O'Shaughnessy F, Passier A, Richardson JL, Hompes T, **Nordeng H**. Mental health status of pregnant and breastfeeding women during the COVID-19 pandemic – A multinational cross-sectional study. *Acta Obstet Gynecol Scand*. 2021 Jan 21;10.1111/aogs.14092. doi: 10.1111/aogs.14092.
2. Heier KF, Andersson Y, **Granås AG**. Utvikling av opplæringspakke for nyansatte sykehusleger i legemiddelsamstemming – med fokus på dokumentasjon og kildebruk. *Norsk Farmaceutisk Tidsskrift*. 2021 Jan 26.
3. Nauwelaerts N, Deferm N, Smits A, Bernardini C, Lammens B, Gandia P, Panchaud A, **Nordeng H**, Bacci ML, Forni M, Ventrella D, Van Calsteren K, DeLise A, Huys I, Bouisset-Leonard M, Allegaert K, Annaert P. A comprehensive review on non-clinical methods to study transfer of medication into breast milk – A contribution from the ConcePTION project. *Biomed Pharmacother*. 2021 Apr;136:111038. doi: 10.1016/j.biopha.2020.111038.
4. **Wood ME**. Prenatal antidepressant exposure and neurodevelopmental problems in children: to get the right answer, we must ask the right question. *Pediatr Res*. 2021 May;89(6):1336-1338. doi: 10.1038/s41390-020-01348-8.
5. **Josendal AV**, Bergmo TS, **Granås AG**. The Practice Guidelines for Multidose Drug Dispensing Need Revision-An Investigation of Prescription Problems and Interventions. *Pharmacy (Basel)*. 2021 Jan 6;9(1):13. doi: 10.3390/pharmacy9010013.
6. Rajula HSR, Manchia M, Agarwal K, Akingbuwa WA, Allegrini AG, Diemer E, Doering S, Haan E, Jami ES, Karhunen V, Leone M, Schellhas L, Thompson A, van den Berg SM, Bergen SE, Kuja-Halkola R, Hammerschlag AR, Järvelin MR, Leval A, Lichtenstein P, Lundstrom S, Mauri M, Munafò MR, Myers D, Plomin R, Rimfeld K, Tiemeier H, **Ystrom E**, Fanos V, Bartels M, Middeldorp CM. Overview of CAPICE-Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe-an EU Marie Skłodowska-Curie International Training Network. *Eur Child Adolesc Psychiatry*. 2021 Jan 20. doi: 10.1007/s00787-020-01713-2.

February

7. van Gelder MMHJ, **Nordeng H**. Antiemetic Prescription Fills in Pregnancy: A Drug Utilization Study Among 762,437 Pregnancies in Norway. *Clin Epidemiol*. 2021 Feb 26;13:161-174. doi: 10.2147/CLEP.S287892.
8. Sivertsen B, Harvey AG, Reichborn-Kjennerud T, **Ystrom E**, Hysing M. Sleep problems and depressive symptoms in toddlers and 8-year-old children: A longitudinal study. *J Sleep Res*. 2021 Feb;30(1):e13150. doi: 10.1111/jsr.13150.
9. Zambrana IM, Vollrath ME, Jacobsson B, Sengpiel V, **Ystrom E**. Preterm birth and risk for language delays before school entry: A sibling-control study. *Dev Psychopathol*. 2021 Feb;33(1):47-52. doi: 10.1017/S0954579419001536.
10. **Josendal AV**, Bergmo TS. From Paper to E-Prescribing of Multidose Drug Dispensing: A Qualitative Study of Workflow in a Community Care Setting. *Pharmacy (Basel)*. 2021 Feb 16;9(1):41. doi: 10.3390/pharmacy9010041.

March

11. Eilertsen EM, Jami ES, McAdams TA, Hannigan LJ, Havdahl AS, Magnus P, Evans DM, **Ystrom E**. Direct and Indirect Effects of Maternal, Paternal, and Offspring Genotypes: Trio-GCTA. *Behav Genet*. 2021 Mar;51(2):154-161. doi: 10.1007/s10519-020-10036-6.
12. Amundsen S, **Nordeng H**, Fuskevåg OM, Nordmo E, Sager G, Spigset O. Transfer of triptans into human breast milk and estimation of infant drug exposure through breastfeeding. *Basic Clin Pharmacol Toxicol*. 2021 Jun;128(6):795-804. doi: 10.1111/bcpt.13579.
13. Ceulemans M, Foulon V, Panchaud A, Winterfeld U, Pomar L, Lambelet V, Cleary B, O'Shaughnessy F, Passier A, Richardson JL, Allegaert K, **Nordeng H**. Vaccine Willingness and Impact of the COVID-19 Pandemic on Women's Perinatal Experiences and Practices-A Multinational, Cross-Sectional Study Covering the First Wave of the Pandemic. *Int J Environ Res Public Health*. 2021 Mar 24;18(7):3367. doi: 10.3390/ijerph18073367.
14. Morales DR, Fonkwen L, **Nordeng H**. Antithyroid drug use during pregnancy and the risk of birth defects in offspring: systematic review and meta-analysis of observational studies with methodological considerations. *Br J Clin Pharmacol*. 2021 Mar 30. doi: 10.1111/bcp.14805.
15. Degerud E, Høiseth G, Mørland J, Ariansen I, Graff-Iversen S, **Ystrom E**, Zuccolo L, Tell GS, Næss Ø. Binge drinking and risk of ischemic heart disease and stroke: a study of pooled Norwegian health surveys. *Am J Epidemiol*. 2021 Mar 15:kwab063. doi: 10.1093/aje/kwab063.

April

16. Dudman DC, **Tauqeer F**, Kaur M, Ritchey ME, Li H, Lopez-Leon S. A systematic review and meta-analyses on the prevalence of pregnancy outcomes in migraine treated patients: a contribution from the IMI2 ConcePTION project. *J Neurol*. 2021 Apr 1. doi: 10.1007/s00415-021-10534-5.
17. **Hjorth S**, **Lupattelli A**, Handal M, Spigset O, **Ystrom E**, **Nordeng H**. Prenatal exposure to non-steroidal anti-inflammatory drugs and risk of attention-deficit/hyperactivity disorder: A follow-up study in the Norwegian mother, father and child cohort. *Pharmacoepidemiol Drug Saf*. 2021 Apr 18. doi: 10.1002/pds.5250.
18. Bjørk MH, Kristoffersen ES, Tronvik E, **Nordeng H**. Management of cluster headache and other trigeminal autonomic cephalalgias in pregnancy and breastfeeding. *Eur J Neurol*. 2021 Jul;28(7):2443-2455. doi: 10.1111/ene.14864.
19. Gomes JDA, **Olstad EW**, Kowalski TW, **Gervin K**, Vianna FSL, Schüler-Faccini L, **Nordeng H**. Genetic Susceptibility to Drug Teratogenicity: A Systematic Literature Review. *Front Genet*. 2021 Apr 27;12:645555. doi: 10.3389/fgene.2021.645555.
20. **Olstad EW**, **Nordeng H**, **Gervin K**. Prenatal medication exposure and epigenetic outcomes: a systematic literature review and recommendations for prenatal pharmacoepigenetic studies. *Epigenetics*. 2021 Apr 29;1-24. doi: 10.1080/15592294.2021.1903376.

May

21. Morales DR, **Nordeng H**. Commentary: Obstetric oxytocin exposure and risk of attention-deficit hyperactivity disorder and autism spectrum disorder in offspring-case closed. *Int J Epidemiol*. 2021 May 17;50(2):457-458. doi: 10.1093/ije/dyab025.

22. **Hjorth S**, Hemmingsen CH, Bénévent J, Broe A, Pottegaard A, Mørch LS, Leinonen MK, Kjaer SK, Hargreave M, **Nordeng H**. Maternal Medication Use and Childhood Cancer in Offspring - Systematic Review and Considerations for Researchers. *Am J Epidemiol*. 2021 May 21. doi: 10.1093/aje/kwab154.

June

23. **Wood ME**, **Lupattelli A**, Palmsten K, Bandoli G, Hurault-Delarue C, Damase-Michel C, Chambers CD, **Nordeng H**, van Gelder MMHJ. Longitudinal Methods for Modeling Exposures in Pharmacoepidemiologic Studies in Pregnancy. *Epidemiol Rev*. 2021 Jun 8. doi: 10.1093/epirev/mxab002.
24. **Lupattelli A**, Mahic M, Handal M, **Ystrom E**, Reichborn-Kjennerud T, **Nordeng H**. Attention-deficit/hyperactivity disorder in children following prenatal exposure to antidepressants: results from the Norwegian mother, father and child cohort study. *BJOG*. 2021 May 13. doi: 10.1111/1471-0528.16743.
25. **Ilic M**, **Nordeng H**, **Lupattelli A**. Medical care contact for infertility and related medication use during pregnancy – a European, cross-sectional web-based study. *Norsk Epidemiologi*. 2021 Jun.
26. **Lupattelli A**, Karlstad Ø, Engeland A, Småbrekke L, Olsen K, Øvrebust A, Waaseth M. The Norwegian Society for Pharmacoepidemiology. *Norsk Epidemiologi*. 2021. doi: 10.5324/nje.v29i1-2.4051.
27. **El Khalil N**, **Lupattelli A**, **Nordeng H**. Antithyroid drug treatment and pregnancy outcomes among women with hyperthyroidism in pregnancy: A Norwegian population-based registry-linkage study. *Norsk Epidemiologi*. 2021. doi: 10.5324/nje.v29i1-2.4048.
28. **Mulac A**, Taxis K, Hagesaether E, **Granås AG**. Severe and fatal medication errors in hospitals: findings from the Norwegian Incident Reporting System. *Eur J Hosp Pharm*. Epub 2020 Jun 23. 2021 Nov 28;(Suppl 2):s56-s61. doi: 10.1136/ejhpharm-2020-002298.
29. van den Broek S, **Lupattelli A**, Frank AS, Haug LS, **Nordeng H**. Thyroid hormone replacement therapy in pregnancy and motor function, communication skills, and behavior of preschool children: The Norwegian Mother, Father, and Child Cohort Study. *Pharmacoepidemiol Drug Saf*. 2021 Jun;30(6):716-726.

July

30. Gustavson K, **Ystrom E**, Ask H, Ask Torvik F, Hornig M, Susser E., Lipkin WI, Lupattelli A, Stoltenberg C, Magnus P, Mjaaland S, Askeland RB, Walle KM, Bresnahan M, Nordeng H, Reichborn-Kjennerud T. Acetaminophen use during pregnancy and offspring attention deficit hyperactivity disorder – a longitudinal sibling control study. *JCPP Advances*. 2021 1: e12020. doi: 10.1002/jcv2.12020.
31. Stuckelberger S, Favre G, Ceulemans M, **Nordeng H**, Gerbier E, Lambelet V, Stojanov M, Winterfeld U, Baud D, Panchaud A, Pomar L. SARS-CoV-2 Vaccine Willingness among Pregnant and Breastfeeding Women during the First Pandemic Wave: A Cross-Sectional Study in Switzerland. *Viruses*. 2021 Jun 22;13(7):1199. doi: 10.3390/v13071199.
32. **Mulac A**, Mathiesen L, Taxis K, **Granås AG**. Barcode medication administration technology use in hospital practice: a mixed-methods observational study of policy deviations. *BMJ Qual Saf*. Epub 2021 Jul 20. 2021 Dec 30;(12):1021-1030. doi: 10.1136/bmjqs-2021-013223.

August

33. Degerud E, Høiseth G, Mørland J, Ariansen I, Graff-Iversen S, **Ystrom E**, Zuccolo L, Tell GS, Næss Ø. Associations of Binge Drinking With the Risks of Ischemic Heart Disease and Stroke: A Study of Pooled Norwegian Health Surveys. *Am J Epidemiol*. 2021 Aug 1;190(8):1592-1603. doi: 10.1093/aje/kwab063.
34. **Tauqeer F, Wood M, Hjorth S, Lupattelli A, Nordeng H**. Perinatal use of triptans and other drugs for migraine – A nationwide drug utilization study. *PLoS One*. 2021 Aug 23;16(8):e0256214. doi: 10.1371/journal.pone.0256214
35. **Ahmed SM**, Sundby J, Aragaw YA, **Nordeng H**. Medicinal plants used among pregnant women in a tertiary teaching hospital in Jimma, Ethiopia: a cross-sectional study. *BMJ Open*. 2021 Aug 24;11(8):e046495. doi: 10.1136/bmjopen-2020-046495.

September

36. Vlenterie R, van Gelder MMHJ, Anderson HR, Andersson L, Broekman BFP, Dubnov-Raz G, El Marroun H, Ferreira E, Fransson E, van der Heijden FMMA, Holzman CB, Kim JJ, Khashan AS, Kirkwood BR, Kuijpers HJH, Lahti-Pulkkinen M, Mason D, Misra D, Niemi M, **Nordeng HME**, Peacock JL, Pickett KE, Prady SL, Premji SS, Räikkönen K, Rubertsson C, Sahingoz M, Shaikh K, Silver RK, Slaughter-Acey J, Soremekun S, Stein DJ, Sundström-Poromaa I, Sutter-Dallay AL, Tiemeier H, Uguz F, Varela P, Vrijkotte TGM, Winterfeld U, Zar HJ, Zervas IM, Prins JB, Pop-Purceleanu M, Roeleveld N. Associations Between Maternal Depression, Antidepressant Use During Pregnancy, and Adverse Pregnancy Outcomes: An Individual Participant Data Meta-analysis. *Obstet Gynecol*. 2021 Oct 1;138(4):633-646. doi: 10.1097/AOG.0000000000004538.
37. **Trønnes JN, Lupattelli A**, Handal M, Skurtveit S, **Ystrom E, Nordeng H**. Association of Timing and Duration of Prenatal Analgesic Opioid Exposure With Attention-Deficit/Hyperactivity Disorder in Children. *JAMA Netw Open*. 2021;4(9):e2124324. doi:10.1001/jamanetworkopen.2021.24324.
38. Lambelet V, Ceulemans M, **Nordeng H**, Favre G, Horsch A, Stojanov M, Winterfeld U, Baud D, Panchaud A, Pomar L. Impact of the COVID-19 pandemic on Swiss pregnant and breastfeeding women – a cross-sectional study covering the first pandemic wave. *Swiss Med Wkly*. 2021 Sep 17;151:w30009. doi: 10.4414/smw.2021.w30009.
39. **Ngo E**, Spigset O, **Lupattelli A**, Panchaud A, Annaert P, Allegaert K, **Nordeng H**. Antihistamine use during breastfeeding with focus on breast milk transfer and safety in humans – a systematic literature review. *Basic Clin Pharmacol Toxicol*. 2021 Sep 29. doi: 10.1111/bcpt.13663.

October

40. **Mulac A**, Hagesaether E, **Granås AG**. Medication dose calculation errors and other numeracy mishaps in hospitals: Analysis of the nature and enablers of incident reports. *J Adv Nurs*. 2021 Oct 10. doi: 10.1111/jan.15072.
41. **Hjorth S**, Pottegård A, Broe A, Hemmingsen CH, Leinonen MK, Hargreave M, Nörby U, **Nordeng H**. Prenatal exposure to nitrofurantoin and risk of childhood leukaemia: a registry-based cohort study in four Nordic countries. *Int J Epidemiol*. 2021 Oct 13. doi: 10.1093/ije/dyab219. Epub ahead of print.

November

42. **Lupattelli A, Nordeng H.** Does antidepressant use in pregnancy increase the risk of ADHD in children? *BestPractice Nordic.* 2021 Nov.
43. Thurin NH, Pajouheshnia R, Roberto G, Dodd C, Hyeraci G, Bartolini C, Paoletti O, **Nordeng H**, Wallach-Kildemoes H, Ehrenstein V, Dudukina E, MacDonald T, De Paoli G, Loane M, Damase-Michel C, Beau AB, Droz-Perroteau C, Lassalle R, Bergman J, Swart K, Schink T, Cavero-Carbonell C, Barrachina-Bonet L, Gomez-Lumbreras A, Giner-Soriano M, Aragón M, Neville AJ, Puccini A, Pierini A, Ientile V, Trifirò G, Rissmann A, Leinonen MK, Martikainen V, Jordan S, Thayer D, Scanlon I, Georgiou ME, Cunningham M, Swertz M, Sturkenboom M, Gini R. From Inception to ConcePTION: Genesis of a Network to Support Better Monitoring and Communication of Medication Safety During Pregnancy and Breastfeeding. *Clin Pharmacol Ther.* 2021 Nov 26. doi: 10.1002/cpt.2476. Epub ahead of print. PMID: 34826340.
44. Haan E, Sallis HM, Zuccolo L, Labrecque J, **Ystrom E**, Reichborn-Kjennerud T, Andreassen O, Havdahl A, Munafò MR. Prenatal smoking, alcohol and caffeine exposure and maternal reported ADHD symptoms in childhood: triangulation of evidence using negative control and polygenic risk score analyses. *Addiction.* 2021 Nov 17. doi: 10.1111/add.15746.
45. **Lupattelli A**, Barone-Adesi F, **Nordeng H.** Association between antidepressant use in pregnancy and gestational diabetes mellitus: results from the Norwegian Mother, Father and Child Cohort Study. *Pharmacoepidemiol Drug Saf.* 2021 Nov 24. doi: 10.1002/pds.5388. Online ahead of print.
46. Nustad HE, Steinsland I, Ollikainen M, Cazaly E, Kaprio J, **Gervin K**, Lyle R. Modeling dependency structures in 450k DNA methylation data. *Bioinformatics.* 2021 Nov 12. doi: 10.1093/bioinformatics/btab774. Online ahead of print.
47. Guderud K, Sunde LH, Flåm ST, Mæhlen MT, Mjaavatten MD, Norli ES, Evenrød IM, Andreassen BK, Franzenburg S, Franke A, Rayner S, **Gervin K**, Lie BA. Methotrexate Treatment of Newly Diagnosed RA Patients Is Associated With DNA Methylation Differences at Genes Relevant for Disease Pathogenesis and Pharmacological Action. *Front Immunol.* 2021 Nov 18;12:713611. doi: 10.3389/fimmu.2021.713611. eCollection 2021.
48. Grzeskowiak LE, Saha MR, Ingman WV, **Nordeng H, Ystrom E**, Amir LH. Incidence, antibiotic treatment and outcomes of lactational mastitis: Findings from The Norwegian Mother, Father and Child Cohort Study (MoBa). *Paediatr Perinat Epidemiol.* 2021 Nov 28. doi: 10.1111/ppe.12824.

December

49. **Trinh NTH, Hjorth S, Nordeng HME.** Use of interrupted time-series analysis to characterise antibiotic prescription fills across pregnancy: a Norwegian nationwide cohort study. *BMJ Open* 2021;0:e050569. doi:10.1136/bmjopen-2021-050569.
50. **Josendal AV**, Bergmo TS, **Granas AG.** Implementation of a shared medication list in primary care – a controlled pre-post study of medication discrepancies. *BMC Health Services Research.* 10.1186/s12913-021-07346-8.

Editorials and commentaries

51. Jamtveit B, Carlson M, Helgaker T, **Nordeng H**, Olsbye U, Stenseth NC, Torsvik T, Winther R. Hvem skal planlegge grensesprengende forskning og hvordan? *Khrono.* 2021 Oct 12.

Conference presentations

1. **Mulac A**, oral presentation: “Barcode medication administration technology (BCMA) use in hospital practice: a mixed methods observational study”, NFIF annual conference, spring 2021 (digital).
2. **Hjorth S**, oral presentation: “Maternal Medication Use and Childhood Cancer in Offspring – Systematic Review and Considerations for Researchers”, NFIF annual conference, spring 2021 (digital).
3. **Ngo E**, poster presentation: “Use of Decision Support Tools to Empower Pregnant Women”, NFIF annual conference, spring 2021 (digital).
4. **Olstad EW**, poster presentation: “Does prenatal medication exposure impact offspring epigenetic patterns?”, NFIF annual conference, spring 2021 (digital).
5. **Lupattelli A**, oral presentation: “Risk of gestational diabetes mellitus after use of antidepressant medication in pregnancy: results from the Norwegian Mother and Child Cohort Study”, ENTIS annual meeting 2021 (digital).
6. **Trinh NTH, Hjorth S, Nordeng HME**, poster presentation: “Use of Interrupted Time-series Analysis to Characterize Antibiotic Prescription Fills across Pregnancy – a Norwegian nation-wide cohort study”, ICPE 2021 (digital).
7. **Olstad EW**, poster presentation: “Paracetamol and folic acid in pregnancy – the impact on DNA methylation”, NFIF annual conference, autumn 2021 (digital).
8. **Trønnes JN**, oral presentation: “Opioids and ADHD”, ISPE’s 37th International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE 37).
9. **Hjorth S**, spotlight presentation: “Maternal Medication Use and Childhood Cancer in Offspring – Systematic Review and Considerations for Researchers”, ISPE’s 37th International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE 37).
10. **Thurin NH, Pajouheshnia R, Roberto G, Dodd C, Sturkenboom M, Gini R** on behalf of the **ConcePTION consortium**, oral presentation: “From Inception to ConcePTION: Genesis of a Network to Support Better Monitoring and Communication of Medication Safety During Pregnancy and Breastfeeding”, ISPE’s 37th International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE 37).
11. **Christensen JJ, Bogsrud MP, Holven KB, Retterstøl K, Veierød MB, Nordeng H**, oral presentation: “Maternal use of statins in pregnancy: a population-based registry study”, the European Atherosclerosis Society conference, virtual conference, May 30, 2021–Jun 1, 2021.
12. **Pedroncelli M**, oral presentation: “Self-Reported Medication Use among Pregnant and Breastfeeding Women during the COVID-19 Pandemic: A Cross-Sectional Study in Five European Countries.”, OTIS 2021.
13. **Trinh NTH, Nordeng HME, Bandoli G, Eberhard-Gran M, Lupattelli A**, poster presentation: “Mental health care utilization in pregnant women with depression and/or anxiety according to longitudinal antidepressant fill trajectories: an interrupted time-series analysis”, the Nordic Marcé meeting 2021.
14. **Trinh NTH, Nordeng HME, Bandoli G, Palmsten K, Eberhard-Gran M, Lupattelli A**, poster presentation: “Antidepressant fill trajectories in pregnant women with depression and/or anxiety in Norway: results from a registry linkage study”, the Nordic Marcé meeting 2021.

15. **Lupattelli A**, poster presentation: “Association between prenatal antidepressant exposure and child risk for ADHD”, the Nordic Marcé meeting 2021.
16. **Trinh NTH**, oral presentation: “Antidepressant fill trajectories in pregnant women with depression and/or anxiety in Norway: results from a registry linkage study”, NOFE 2021.
17. **Trønnes JN**, oral presentation: “Association between prenatal analgesic opioid exposure and fifth grade school performance – a MoBa study”, NOFE 2021.
18. **Page CM**, poster presentation: “A MoBa Study on Antidepressant Use in Pregnancy and School Performance”, NOFE 2021.
19. **Nguyen NN**, Kjome RLS, Irminger B, Helgesen CG, **Granås AG**, webinar presentation: “Language barriers between community pharmacist and immigrants. Identifying coping strategies with Design Thinking method. Pharmacy Practice Research Virtual Summer Meeting for PhD students, Postdoctoral fellows and supervisors.”, Federation of International Pharmacy (FIP) Webinar, 2021 Jun 24.
20. **Granås AG**, chair of panel discussion: “Kan feil oppstå i Pasientens legemiddeliste (PLL)?”, [EHIN 2021](#) Nov 9, 2021 (digital and on-site conference).
21. **Jøsendal AV**, panel discussion: “Erfaringer fra utprøving av PLL for multidosespasienter.”, [EHIN 2021](#) Nov 9 (digital and on-site conference).

International external lectures

22. **Lupattelli A**: “COST Peripartum Depression workshop”, 2021 Mar 1 (digital).
23. **Nordeng H**: “Safety of Medications in Pregnancy - controversies and clinical perspectives Swiss Poison Information Service”, 2021 Jun 3 (digital).
24. **Nordeng H**: “Draft GVP module product- or population-specific considerations III: pregnant & breastfeeding women – Controversial topics and clinical perspectives”. European Medicines Agency’s information day. Risk minimization measures, Drug Information Association (DIA), 2021 Jun 15 (digital).
25. **Nguyen NN**: “Language barriers between community pharmacist and immigrants. Identifying coping strategies with Design Thinking method.”, Pharmacy Practice, Pharmacists Sans Frontiers, Finland, 2021 Sep (digital).

National external lectures

26. **Nordeng H**: “COVID-19 research projects”, UiO Digital Life, 2021 Jan 14 (digital).
27. **Nordeng H**: “Legemidler og graviditet, grunnkurs i obstetikk”, Den norske legeförening, 2021 Jan 18 (digital).
28. **Nordeng H**: “COVID-19 research projects”, IMPACT Breakfast, 2021 Jan 27 (digital).
29. **Nordeng H**: “COVID-19 in Pregnancy”, UiO COVID-19 Forum, 2021 Mar 24 (digital).
30. **Nordeng H**: “COVID-19 graviditet og amming”, Norsk Farmaceutisk Selskap, 2021 Jun 17 (digital).
31. **Nordeng H**: Panel debate on sustainability. MatNat seminar, Vettakollen, Oslo, 2021 Sep 6.
32. **Nordeng H**: “Covid-19 vaksinerer til gravide og ammende”, academic lunch meeting, Kvinnekliviken OUS, 2021 Sep 13 (digital).

33. **Nordeng H:** “Legemidler, graviditet og amming - hva har vi lært de 40 siste årene?”, 40th anniversary for the Ullevål team, Ullevål hospital (OUS), Oslo, 2021 Nov 11.
34. **Nordeng H:** “Helsedata og farmakoepidemiologiske studier – gir de oss bedre folkehelse?”, Farmasidagene, 2021 Nov 11 (digital).
35. **Granås AG:** “Farmasihistorier”, digital recordings and dissemination of recent Norwegian pharmacy history, autumn meeting, 2021 Nov 21.
36. **Granås AG:** [“Ingen skal dø av feilmedisinering”](#), webinar in the webinar series *Digital legemiddelhåndtering*, 2021 Dec 10.
37. **Granås AG:** “Farmasøytens rolle som legemiddelekspert i pasientens e-helsetjeneste – hva skal til for å lykkes?”, Farmasidagene, 2021 Nov 12 (digital from studio).
38. **Granås AG:** “Writing up your PhD Thesis.” (twice; one in English, and one in Norwegian), NFIF's annual conference, Svalbard, 2021 Sep 15–16.
39. **Nguyen NN:** “Språkbarrierer mellom ansatte og fremmedspråklige apotek kunder.”, professional meeting: communication and ethics with the Council of Ethics of Norsk Farmasøytisk Selskap (NFS), and Norges Farmaceutiske Forening (NFF), Oslo, 2021 Oct 14
40. **Alma M:** “Innovative interventions to improve medication safety: Learning from medication errors”, 2021 Mar 19 (digital lecture for Vingmed).
41. **Alma M:** [“Teknologi som hindrer feilmedisinering”](#), webinar i webinarserien *Digital legemiddelhåndtering*, 2021 Oct 29.
42. **Robinson EG:** “Health economic aspects of potentially inappropriate prescribing and prescription interventions in elderly polypharmacy patients in primary and secondary care – thesis work so far”, IPSUM research group, Tromsø, 2021 Oct 11.

Guest researchers

1. Dr. Eimir Hurley, Ireland, April, 2021. «Norwegian Registre». Main supervisor: **Nordeng H.**
2. Michele Pedroncelli, University of Milano, Milano, Italy, April–September, 2021. Title of project. Association between prenatal antidepressant exposure and child longer-term metabolic outcomes. Main supervisor: **Lupattelli A.**
3. Naify Safira Cerna Salas, University of Milano-Bicocca, Milano, Italy, August, 2021–February, 2022. Title of project: Association between antidepressant initiation in pregnancy and maternal mental health outcomes: a population-based study in Norway and Italy. Main supervisor: **Lupattelli A.**
4. Sally Rafie, Pharmacist Specialist at UC San Diego Health, and University of California San Diego. Digitalization of medication management. [Webinar #17](#), 2021 Sep 9. Main collaborator: **Granås AG.**

Media coverages

1. [– Antidepressiva fjerner ikkje tankar om sjølvskading etter fødsel](#) Titan | Angela Lupattelli
2. [Samtalen som kan hjelpe gravide med å takle morgonkvalme](#) forskning.no | Maria Bich-Thuy Truong
3. [Dersom du går på antidepressiva under svangerskapet, er det antakeleg best å fortsette](#) forskning.no | Angela Lupattelli
4. [Upopulær reform ga 20 interessante apotekår](#) Norsk Farmaceutisk Tidsskrift | Anne Gerd Granås
5. [Finner hvilke legemidler som er sikre for gravide under Covid-19-pandemien](#) Apollon | Hedvig Nordeng
6. [Gravides vanskelige valg: La være å behandle sykdom eller risikere bivirkninger?](#) Titan | Hedvig Nordeng
7. [– Dilemmaet rundt AstraZeneca-vaksinen er langt frå unikt](#) forskning.no | Hedvig Nordeng
8. [I mitt laboratorium bruker gravide legemidler hver eneste dag](#) Titan | Hedvig Nordeng
9. [Migrenemedisin går lite over i morsmjølk](#) Titan | Hedvig Nordeng
10. [Det er trygt å bruke triptaner når du ammer barnet ditt](#) Hodepine Norge | Hedvig Nordeng
11. [Forskarar sjekkar medisinar for ADHD-forbindelse](#) Titan | Sarah Hjort and Angela Lupattelli
12. [Gena styrer korleis medisinbruken til mora påverkar fosteret](#) Titan | Emilie Willoch Olstad
13. [Én samtale med farmasøyt kan gjøre livet bedre](#) Norsk Farmaceutisk Tidsskrift | Maria Bich-Thuy Truong
14. [Webinarsuksess om digital legemiddelbehandling](#) Norsk Farmaceutisk Tidsskrift | Anne Gerd Granås
15. [Forskere: - Har kostet mange gravide og barselkvinner dyrt](#) VG | Hedvig Marie Egeland Nordeng og Eivind Ystrøm
16. [Trenger Norge 1000 apotek?](#) Bergens Tidende | Anne Gerd Granås
17. [Pasient ved St. Olav ble feilmisinert - fikk hjerteinfarkt: - Vi beklager på det sterkeste](#) Nidaros | Alma Mulac
18. [Farmasøytisk forskningsformidling med Harald Eia og Wasim Zahid](#) Department of Pharmacy | PharmaTox and PharmaSafe
19. [Vanskeleg å samanlikna forskning om kvifor barn får kreft](#) Titan | Sarah Hjorth
20. [COVID vaccines and breastfeeding: what the data say](#) | Hedvig Nordeng
21. [Gravide bør vera varsame med langvarig bruk av sterke smertestillande](#) Titan | Johanne Trønnes
22. [Prenatal analgesic opioid exposure associated with elevated risk of ADHD in children](#) Contemporary OB/GYN | Johanne Trønnes
23. [Gravide som brukar migrenemedisin, brukar ofte andre medisinar óg](#) Titan | Fatima Tauqeer
24. [Legar bør følgje ekstra godt med gravide som brukar migrenemedisin](#) forskning.no | Fatima Tauqeer
25. [Pasientsikkerhet: – Ordningen med multidoser mangler retningslinjer](#) forskning.no | Anette Vik Jøsendal

Multimedia

1. [Forskningssamtaler om legemiddelbruk fra vugge til grav \(in press\)](#) PharmaTox – Talking research | Hedvig Nordeng, Anne Gerd Grånas, and Angela Lupattelli interviewed by the «Twitter doctor» Wasim Zahid
2. [Forskningssamtaler \(in press\)](#) PharmaTox – Talking research | Hedvig Nordeng, Kristina Gervin, Eivind Ystrom, and Geir Kjetil Sandve interviewed by the comedian Harald Eia
3. [Svanger – samtaler om forskning på helse i svangerskap og barse](#) Sanitetskvinnene (video) | Hedvig Nordeng
4. [Gravidens vanskelige valg: Ukjente medisiner eller ubehandlet sykdom](#) Universitetsplassen (podcast) | Hedvig Nordeng
5. [Legemidler i graviditet og barse](#) Engler & Hormoner (podcast) | Hedvig Nordeng
6. [Pandemien preger graviditeten](#) Universitetsplassen (podcast) | Hedvig Nordeng
7. [ConcePTION: Building a European Breast Milk Collection](#) BBMRI-ERIC (video) | Hedvig Nordeng
8. [Legemidler og graviditet](#) Norske kvinners sanitetsforenings *Rosa Resept* (podcast) | Hedvig Nordeng
9. [IKT, risiko og helsedata](#) The Norwegian Centre for E-Health Research (podcast) | Anne Gerd Granås, Ivar Terje Solberg and Lars Talstad

Awarded research grants

1. [UiO:RealArt](#) (convergence environment, UiO; 16.7 mill. NOK). PI: **Nordeng H.**
2. [INTPART iAPOGEE](#) (10 mill. NOK). PI: **Nordeng H.**
3. [New COVID-19 projects](#)
 - a. **EMA tender COVID-19 vaccines via UU** (0.8 mill. NOK). PI: **Nordeng H.**
 - b. **COVID-19 tenders via VAC4EU** (5.2 mill. NOK). PI: **Lupattelli A.**
 - c. **VERDI - SARS-coV2 variants Evaluation in pRegnancy and paeDIiatrics cohorts** (2.1 mill. NOK). PI: **Lupattelli A.**
4. **EDHEN data characterization** (1 mill. NOK). PI: **Nordeng H.**
5. **UiO:LifeScience summer students** (grants for 6 students x 50,000 NOK)
 - a. “Can we use machine learning approaches to detect new teratogens? Active Surveillance of the Safety of Medications Used in Pregnancy?”, Janita Ovidie Sandtrøen Willumsen and Kristin Eng. Main supervisor: **Nordeng.**
 - b. “Clinical benefit of antidepressant medication in pregnancy on maternal perinatal mental health”, currently Jakir Alam and Sara Seidel. Main supervisor: **Lupattelli A.**
 - c. “Allopregnanolone level in early pregnancy and perinatal mental health in women with bulimia nervosa medicated or not with antidepressants”, Ludvig Daae Bjørndal. Main supervisor: **Lupattelli A.**
 - d. “Congenital anomaly registries as a complement tool to monitor drug safety signal”, Mridula Debnath. Main supervisor: **Trinh THN.**

Master projects finalised in 2021

1. **Iram Younas:** “Legemiddelbruk og graviditet og amming: brukervedvirkning i forskning”. Main supervisor: **Lupattelli A.**
2. **Nebghouha el Khalil:** “Hvilke analyser får gravide og ammende utført i primærhelsetjenesten – og hva forteller disse analysene oss?”. Main supervisor: **Nordeng H.**
3. **Tina Nguyen:** “Hva er effektene på kvalitet og sikkerhet ved legemiddelhåndtering etter innføring av lukket legemiddelsøyfe i klinikk for psykisk helsevern og rusbehandling ved Sykehuset Østfold, Kalnes?”. Main supervisor: **Granås AG.**
4. **Nhu Nhu Nguyen:** “Hvordan kan apoteket sikre likeverdige helsetjenester i møte med fremmedspråklige kunder? Design thinking som en innovativ tilnæringsmetode”. Main supervisor: **Granås AG.**
5. **Basma Kousa:** “Bruk av allergilegemidler og amming – en klinisk studie og analyse av nasjonal tall.”. Main supervisor: **Nordeng H.**
6. **Jevan Jones Mezori:** “Legemiddelhåndtering av risikolegemidler på sykehus”. Main supervisor: **Granås AG.**

PharmaSafe participants

Scientific staff

Name	Position
Hedvig Nordeng	Professor, and PharmaSafe head
Anne Gerd Granås	Professor
Ingunn Björnsdóttir*	Assoc. professor
Angela Lupattelli	Senior researcher
Eimir Hurley	Researcher
Socheat Chen	Post doc
Thi Hong Nhung Trinh	Post doc
Alma Mulac	PhD student
Anette Vik Jøsendal	PhD student
Eirin Guldsten Robinson	PhD student
Elin Thuy Phuong Ngo	PhD student
Emilie Willoch Olstad	PhD student
Fatima Tauqeer	PhD student
Gerd Marie Eskerud Harris	PhD student
Johanne Naper Trønnes	PhD student
Lene Maria Sundbakk	PhD student
Sina Rostami	Researcher (10%)
Christian Magnus Page	Post doc, PharmaTox, Dpt. Mathematics
Eivind Ystrøm	Guest researcher, Dep. Psychology, UiO
Kristina Gervin	Guest researcher, OUS
Mollie Wood	Guest researcher, Univ. Chapel Hill, North Carolina
Maria Bich-Thuy Truong	PhD-student, then Guest researcher, RELIS SØR-ØST
Sarah Hjorth Andersen	PhD student, then Guest researcher, Univ. Odense

* Ingunn Björnsdóttir had a research sabbatical in 2021.

Lecturers

Name	Position
Anne Rørv-Johnsen	Lecturer, pharmacy practice
Dagrun Beate Eggen	Lecturer, communication
Hilde Iren Samdal	Lecturer, regulatory sciences
Hassina Hassan	Lecturer, pharmacy practice
Lavin Dlshad Kadir	Lecturer, social pharmacy
Vedrana Rosic	Lecturer, health care services