

Curriculum vitae with track record (For established researchers)

ROLE IN PROJECT

Project manager Collaborator

PERSONAL INFORMATION

*Family name, First name: PARUCH, LISA

*Gender: Female

*Nationality: Norwegian

URL for personal web site: [Research scientist at NIBIO](#)

***EDUCATION**

2001 PhD in Microbial Genetics: **Disputation date: 26.06.2001.**
Department of Biochemistry, Dalian University of Technology, P.R.China

1995 Master in Medical Microbiology and Immunology
Department of Microbiology, Dalian Medical University, P.R.China

1992 Bachelor in Clinical Medicine, Faculty of Clinical Medicine, Dalian Medical University,
P.R.China

***CURRENT AND PREVIOUS POSITIONS**

2012-present Research Scientist
NIBIO – Norwegian Institute of Bioeconomy Research, Norway

2004-2011 Research Scientist
LingVitae Genomics AS, Vollesveien 13H, 1366 Lysaker, Norway

2002-2004 Postdoctoral Researcher (PostDoc)
Department of Chemistry and Biotechnology, Norwegian University of Life Sciences,
Norway

1995-2002 Research Scientist
Department of Medical Microbiology and Immunology, Dalian Medical University,
P.R.China

1995-1998 Researcher
Section of Research and Development, Dalian Wan-Da Pharmaceutical Industry,
P.R.China

1992-1993 Clinical Doctor
Dalian Medical University Affiliated Hospital, P.R.China

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS (if applicable)

2000-2002 Two Master Students and One PhD student
Department of Microbiology and Immunology, Dalian Medical University, P.R.China

TEACHING ACTIVITIES (if applicable)

1998-2001 - Medical Microbiology – semesters
Courses for Bachelor Students at the Faculty of Clinical Medicine, Dalian Medical
University, P.R.China

- Microbiological Laboratory Technology – semester course for Bachelor Students at the
Faculty of Clinical Medicine, Dalian Medical University, P.R.China

COMMISSIONS OF TRUST (if applicable)

1995-1998 Editorial Board, Chinese Academic Journal of Microbial Ecology

1998-2001 Principal Editor, English Version of Chinese Academic Journal of Microbial Ecology

MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)

2014- Member of the Norwegian Society of Graduate Technical and Scientific Professionals (Tekna – Teknisk-naturvitenskapelig forening)

RESEARCH PROJECTS:

- 2019-2022 Greenhouse gas emissions from biogas digestate applications to rice production systems, NIBIO – Norwegian Research Council (NRC) project
- 2017-2020 Bactericidal hybrid surfaces against Gram-negative and Gram-positive pathogenic bacteria: Smart Tools for Wastewater Purification” Project under the M-Era.Net (an EU funded network) with consortium from Romania and Norway
- 2016-2017 B - DNA based testing system for environmental analysis, NIBIO Innovation Project
- 2014-2017 AQUARIUS: Assessing water quality improvement options concerning nutrient and pharmaceutical contaminants in rural watersheds” Project in the Czech Republic and Norway, granted by the EEA/Norwegian Financial Mechanism
- 2014-2017 DEVELOPMENT OF A COST EFFECTIVE ROMANIA-NORWAY JOINT PLANT-BASED TECHNOLOGY PLATFORM FOR PRODUCTION, NIBIO – EEA Norway-Romania research project
- 2015-2017 Biogas from organic residues and livestock manure as a vehicle fuel, NIBIO – NRC project
- 2012-2015 Advanced Techniques to Evaluate the Long-term Stability and Carbon Sequestration Potential of Different Types of Biochar, NIBIO – NRC project
- 2008-2011 FP7: Digital Sequencing, LingVitae Genomics AS – EU funded project
- 2005-2007 FUGE: Development of new platform technology for molecular analysis, LingVitae AS – NRC project
- 2002-2004 PROEUHEALTH project cluster, EU project, NMBU – EU funded project

PUBLICATIONS: The total number of publications on Cristin is **46**.

A. Recent (last 3 years) Publications in Peer-Reviewed Journals:

Hong Yang, **Lisa Paruch**, Xunji Chen, André van Eerde, Hanne Skomedal, Yanliang Wang, Di Liu and Jihong Liu Clarke (2019). Antibiotic Application and Resistance in Swine Production in China: Current Situation and Future Perspectives, *Frontiers in Veterinary Science*, 6 (2019), article 136.

Kine Svensson, **Lisa Paruch**, John Christian Gaby, Roar Linjordet (2018). Feeding Frequency Influences Process Performance and Microbial Community Composition in Anaerobic Digesters Treating Steam Exploded Food Waste, *Bioresource Technology* 269 (2018) 276-284.

Paruch, Lisa; Paruch, Adam (2018). Contributors to faecal water contamination in urban environments. I: Water Management and the Environment: Case Studies, *Springer Nature* 2018 ISBN 978-3-319-79013-8. s 215-230

Mihaela-Olivia Dobrica, Catalin Lazar, **Lisa Paruch**, André van Eerde, Jihong Liu Clarke, Catalin Tucureanu, Iuliana Caras, Sonya Ciulean, Adrian Onu, Vlad Tofan, Alexandru Branzan, Stephan Urban, Crina Stavaru, Norica Branza-Nichita (2018). Oral administration of a chimeric Hepatitis B Virus S/preS1 antigen produced in lettuce triggers infection neutralizing antibodies in mice, *Vaccine* 36 (2018) 5789-5795.

Yanliang Wang, Erik Lysøe, Tegan Armarego-Marriott, Alexander Erban, **Lisa Paruch**, Andre van Eerde, Ralph Bock and Jihong Liu-Clarke (2018). Transcriptome and metabolome analysis provide insights into root and root released organic anion responses to phosphorus deficiency in oat, *Journal of Experimental Botany* 69 (15) s. 3759-3771.

Krystad R., Paruch A.M., **Paruch L.**, Mæhlum T. (2017). Gjenåpning av byvassdrag: forekomst, kilder og rensing av E. coli i Teglverksdammen i Hovinbekken, Oslo (Deculverting of urban watercourses: occurrence, sources and removal of E. coli in Teglverksdammen in Hovinbekken, Oslo). *Vann*, 52(4), 373-386.

- Dobrica MO, Lazar C, **Paruch L**, Skomedal H, Steen H, Haugslie S, Tucureanu C, Caras I, Onu A, Ciulean S, Branzan A, Clarke JL, Stavaru C, Branza-Nichita N. (2017). A novel chimeric Hepatitis B virus S/preS1 antigen produced in mammalian and plant cells elicits stronger humoral and cellular immune response than the standard vaccine-constituent, S protein, *Antiviral Research*, 144:256-265. doi:10.1016/j.antiviral.2017.06.017.
- Paruch L.**, Paruch A.M. (2017). The importance of melting curve analysis in discriminating faecal and environmental Bacteroidales bacteria. *Microbiology* 86(4), 536-538. DOI 10.1134/S0026261717040117.
- Paruch L.**, Paruch A.M., Blankenberg A-G.B., Haarstad K., Mæhlum T. (2017). Norwegian study on microbial source tracking for water quality control and pollution removal in constructed wetland treating catchment run-off. *Water Science and Technology* 76 (5): 1158-1166. DOI: 10.2166/wst.2017.303.
- Jihong Liu Clarke, **Lisa Paruch**, Mihaela-Olivia Dobrica, Iuliana Caras, Catalin Tucureanu, Adrian Onu, Sonya Ciulean, Stavaru Crina, Hege Steen, Sissel Haugslie, Catalina Petrareanu, Catalin Lazar, Ioan Popescu, Jean Dubuisson, Norica Branza-Nichita. (2017). Lettuce-produced hepatitis C virus E1E2 heterodimer triggers immune response in mice and antibody production post oral vaccination, *Plant Biotechnology Journal* (2017), pp. 1–11pp. 1–11. doi: 10.1111/pbi.12743.
- Anne-Grete Busetth Blankenberg, Adam M. Paruch, **Lisa Paruch**, Johannes Deelstra and Ketil Haarstad (2016). Nutrients Tracking and Removal in Constructed Wetlands Treating Catchment Runoff in Norway. J. Vymazal (ed.). Natural and Constructed Wetlands, *Springer International Publishing Switzerland*, 23-40, DOI 10.1007/978-3-319-38927-1_2
- Budai A., Rasse D.P., Alessandra Lagomarsino, Thomas Z. Lerch, **Paruch L.** (2016) Biochar persistence, Priming and microbial responses to pyrolysis temperature series. *Biology and Fertility of Soils* 52(6), 749-761 (DOI 10.1007/s00374-016-1116-6).
- Paruch L.**, Paruch A.M., Blankenberg A.G.B., Bechmann M., Mæhlum T. (2015). Application of host – specific genetic markers for microbial source tracking of faecal water contamination in agricultural catchment, *Acta Agriculturae Scandinavica*, Section B — Soil & Plant Science 65 (S2), 164-172.
- Blankenberg A.G.B, Paruch A.M., Bechmann M. & **Paruch L.** (2015). Rural decentralized wastewater treatment systems in agricultural catchments, *VANN* 50(1), 8-17.

B. Patents Involved:

1. 2005, US20080248536 Polynucleotide Ligation Reactions
2. 2005, US20080286769 Sequencing a Polymer Molecule
3. 2005, US20090239213 Identifying a Target Polynucleotide
4. 2006, US20090047744 Method for Improving the Characterization of A Polynucleotide Sequence
5. 2006, US20090053699 Method for Preparing Polynucleotides for Analysis
6. 2007, US20080057546 Methods of Cloning and Producing Fragment Chains with Readable Information Content.

C. Research reports:

Haaland S., Bechmann M., Eikebrokk B., Eregno F., Greipslund I., Heistad A., Paruch A. **Paruch L.** Riise G., Rohrlack T., Turtumøygaard S. 2018. Forurensingsanalyse av drikkevannskilden Jordalsvatnet med vanntilsigsområde. NIBIO Rapport 4/120, 86 pp.

Paruch Adam., **Paruch Lisa.**, Mæhlum Trond 2017. Kildesporing av fekal vannforurensing med molekylærbiologiske metoder – Eksempler på undersøkelser i Norge. NIBIO Rapport; 3(66) 2017

Tryland, Ingun; Mæhlum, Trond; Wennberg, Aina Charlotte; Paruch, Adam; Krystad, Rebekka; **Paruch, Lisa**; Ranneklev, Sissel Brit; Moe, Therese Fosholt; Haande, Sigrid; Myrmel, Mette; Robertson, Lucy; Fergus, Tharan; Beschorner, Anna-Lena; Kvitsjøen, Julia. 2017. Tiltak for å oppnå bedre hygienisk vannkvalitet til

rekreasjonsformål i overvann og byvassdrag - forprosjekt for å identifisere forskningsbehov. NIVA-rapport, (7190-2017) 2017. 75s.

Paruch Adam, **Paruch Lisa**, Mæhlum Trond 2016. Kildesporing av fekal vannforurensing I Jordalsvatnet med nedbørsfelt. NIBIO Rapport, 2(49) 2016. 44s.

Paruch Adam, **Paruch Lisa**, Mæhlum Trond 2016. Kildesporing av fekal vannforurensing I noen av tilløpsbekkene til Maridalsvannet og utløp til Akerselva. NIBIO Rapport, 2(27) 2016. 25s.

Paruch Adam, **Paruch Lisa**, Mæhlum Trond 2016. Kildesporing av fekal vannforurensing I tilløpsbekkene til Jonsvannet. NIBIO Rapport, 2(34) 2016. 60s.

Paruch Lisa, 2015. Molecular biological method – a powerful tool to understand what is going on in a biogass reactor. Bioforsk-konferansen 2015. Bioforsk Fokus, 10(2) 2015. 86.

Paruch Adam, **Paruch Lisa**, Mæhlum Trond, 2014. Implementering av molekylærbiologiske metoder for kildesporing av fekal vannforurensing og vurdering av helsefare. Bioforsk TEMA, 9(19) 2014. 4s.

Anne-Grete Buseth Blankenberg, Marianne Bechmann, **Lisa Paruch**, Adam Paruch, 2014. Spredt avløp i jordbrukslandskapet. Bioforsk TEMA, 9(12) 2014. 4s.

Anne-Grete Buseth Blankenberg, Marianne Bechmann, Stein Turtumøygard, Adam Paruch, **Lisa Paruch** 2014. Spredt avløp i jordbrukslandskapet – Fosfor og E.coli i jordbruksbekker. Bioforsk Rapport, 9(6) 2014. 22s.