

Contact information

Aviaja Lyberth Hauptmann, PhD.

Birthdate 2nd July 1986

Assistant Professor, Ilisimatusarfik

Postdoc, Carlsberg Internationalization grant UC Davis/Ilisimatusarfik

Appointed member of the Greenland Research Council

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Languages: Danish, English and Kalaallisut (Greenlandic)



Summary and future career perspectives

Curriculum vitae for Aviaja Lyberth Hauptmann, Ph.D., microbiologist, metagenome-bioinformatician and public speaker with a passion for Greenland's microbiology and its potential value in culture, business and for inspiring young people through education.

The below sums up to an expertise in

- Project leadership including research and non-research projects
- Planning and conducting research in microbiology
- Mentoring students
- Disseminating research for both the general public and a research audience
- Acquiring funding for research and outreach activities
- Navigating interests of the public sector and society of Greenland

My educational background is in biotechnology and applied microbiology. I have had a strong focus on innovation and entrepreneurship and have taken part in numerous mentoring programs as well as the Biobusiness & Innovation Program before co-founding the first Greenlandic biotech company in 2015. Through my PhD I developed my skillset towards microbial ecology and metagenomics. For the past three years I have used this skillset to develop a novel area of research focusing on the microbiomes of traditional Inuit foods. I see this area of research as a platform for working with the three topics that are my primary professional interests:

1. understanding the connection between humans and nature through our microbiomes
2. mentoring and teaching students based on a belief in the importance of their individual motivation and self-development through a strength-based approach to Greenland
3. advancing Arctic research in a more ethical and beneficial direction

Overview of current projects and activities as of September 2021

Assistant Professor (25% position) at Ilisimatusarfik with responsibility for the development and implementation of biology bachelor program.

UMAMI project (project owner): postdoc grant and primary research project mapping the microbiome and metabolome of traditional Inuit fermented foods. Collaboration with professor Dennis S. Nielsen (KU), professor Søren Balling (KU) and associate professor Violetta Aru (KU).

GUTCYCLES (project leader): gut microbiome project owned by professor Anders Albrechtsen. Collaboration with among others professor Torben Hansen and professor Simon Rasmussen (KU). The project combines metagenomics, amplicon sequencing, transcriptomics, heavy metal measurements and in-depth understanding of Inuit foods in a longitudinal study over 15 months.

Alchemist8 collaboration (project owner): Fermented seal blubber project in collaboration with Michelin two-star restaurant Alchemist8 in Copenhagen. The primary partner is head of R&D Diego Prado. The project characterizes fermented seal blubber and explores the opportunity for the use of fermented seal blubber in international fine dining.

Forgotten Friends (project co-owner with Inge Seiding, Ph.D., head of institute, Ilisimatusarfik): preliminary project searching for historical traces of lost members of the Inuit human microbiota. Building up for large grant application in 2022 based on preliminary results.

UC Davis Transcollege cluster (project co-owner): network funded by University of California, Davis where collaborations and grant opportunities around Inuit fermentation are explored. Collaboration with professor Maria Marco, associate professor Jessica Perea and Stephanie Maroney Ph.D. (all UC Davis faculty) <https://radicalfermentation.ucdavis.edu/>

ALEPH (expert member): Animal Source Foods in Ethical, Sustainable & Healthy Diets, initiative lead by professor Frédéric Leroy (Vrije Universiteit Brussels). <https://aleph-2020.blogspot.com/>

Greenland Research Council, appointed member 2020-2023.

Arctic Education Alliance advisory board member 2020-2022.

Inuit Circumpolar Council (ICC) representative on Food Sovereignty issues.

Member of the advisory board on research (rådgivende forskningsudvalg) to the board of the Greenland Institute of Natural Resources.

Not listed above are ongoing collaborative research projects lead by other researchers incl. collaborations with the Arctic Monitoring and Assessment Programme (AMAP), professor Marit Eika Jørgensen (gut microbiome) and postdoc Tatiana Feuerborn (dog oral microbiome).

Education

March 2017	Ph.D., DTU Bioinformatics, Technical University of Denmark. Focus of project: microbial ecology and genetics of cold environments of Greenland and the Arctic using a metagenomics approach
December 2012	MSc. in general biology, University of Copenhagen, Faculty of Science. Final weighed average grade of complete education including Bachelor and Master courses was 11.3
2010	BSc. in general biology, University of Copenhagen, Faculty of Science

Work Experience and Leave

Jul 2021 – Sep 2022	Assistant professor Ilisimatusarfik responsible for upcoming biology bachelor program.
Oct 2020 – Sep 2022	International postdoc at University of California Davis, funded by the Carlsberg Foundation.
Feb 2020 – Sept 2020	Assistant professor at University of Greenland – Ilisimatusarfik. Project leader Inaarsaavik-initiative for Ilisimatusarfik master's thesis students
Maternity leave	June 2018 – Dec 2018
May 2017 – Nov 2019	The Greenland Diet Revolution - Postdoctoral researcher and project leader at University of Greenland - Ilisimatusarfik, on microorganisms from traditional Greenlandic foods. Project manager on research project at University of Copenhagen on Inuit gut microbiota.
Feb 2017 – May 2017	Project manager at University of Greenland, Ilisimatusarfik, leading the InnoLab/FoodLab project on increasing innovation activities between the Greenlandic industry, scientific community and the public
Maternity leave	Apr 15 – May 16
2013-2016	Ph.D. student in microbial ecology and bioinformatics at DTU Bioinformatics, Technical University of Denmark.
2014-2015	External stay at Lawrence Berkeley National Laboratory, Berkeley, CA, and Pacific Northwest National Laboratory, Richland, Washington, USA.
2015-2016	Co-founded the first biotechnological company in Greenland, ColdZymes.

2014	Founded AL Hauptmann, a company relating to participation in public debates and public speaking and writing about subjects relating to Greenland as a consequence of the blog on the Danish engineer's homepage www.lng.dk/blogs/groenlandsbloggen .
2010-2011	Freelance translator from Danish to English and professional speaker of Greenlandic for language software for the company EuroTalk, UK and for Greenland.com.
2009-2012	Project assistant in governmental organization concerning development of aluminum industry in Greenland, Greenland Development A/S.

List of Publications

First-authored works:

Waples, RK⁺, **Hauptmann, AL⁺**, Seiding, I, Jørsboe, E, Jørgensen, ME, Grarup, N, Andersen, MK, Larsen, CVL, Bjerregaard, P, Hellenthal, G, Hansen, T, Albrechtsen, A, Moltke, I. (2021) The genetic history of Greenland-European contact. *Current Biology* 31, 1-6
<https://doi.org/10.1016/j.cub.2021.02.041> (+shared first-authorship)

Hauptmann, AL . (2020) A taste for nature in an Inuit perspective. Conference abstract. *International Journal of Food Design* 5(1-2) 167-196

Hauptmann, AL, Paulová, P., Hansen, LH., Sicheritz-Pontén, T., Mulvad, G., Nielsen, DS. (2020) Microbiota in foods from Inuit traditional hunting. *PLoS ONE* 15(1): e0227819. <https://doi.org/10.1371/journal.pone.0227819>

Hauptmann, AL, Paulová, P., Castro-Mejía, JL., Hansen, LH., Sicheritz-Pontén, T., Mulvad, G., Nielsen, DS. (2020) The Microbial composition of dried fish prepared according to Greenlandic Inuit traditions and industrial counterparts. *Food Microbiology* 85 (2020) 103305

Hauptmann, AL, Sicheritz-Pontén, T., Cameron, KA., Bælum, J., Plichta, DR., Dalgaard, M., Stibal, M (2017) Contamination of the Arctic reflected in microbial metagenomes from the Greenland ice sheet *Environ. Res. Lett.* 12 074019 <https://doi.org/10.1088/1748-9326/aa7445> The publication received extensive attention from international media: <https://iop.altmetric.com/details/21747112>

Hauptmann, AL, Markussen, TN., Stibal, M., Olsen, NS., Elberling, B., Bælum, J., Sicheritz-Pontén, T., and Jacobsen, CS. (2016) Upstream freshwater and terrestrial sources are differentially reflected in the bacterial community structure along a small Arctic river and its estuary. *Front. Microbiol.* DOI:10.3389/fmicb.2016.01474

Hauptmann, AL, Stibal, M., Bælum, J., Sicheritz-Pontén, T., Brunak, S., Bowman, JS., Hansen, LH., Jacobsen, CS., Blom, N. (2014). Bacterial diversity in snow on North Pole ice floes. *Extremophiles*. 2014 Nov;18(6):945-51.

Hauptmann, AL., Glaring, MA., Hallin, PF., Priemé, A., Stougaard, P. (2013) Draft Genome Sequence of the Psychrophilic and Alkaliphilic *Rhodospirillum rubrum* Strain GCM71T. *Genome Announc.* 2013 Dec 5;1(6).

Co-authored works:

Katz, Sandor Elliz (2021) *Sandor Katz's Fermentation Journeys*. Chelsea Green Publishing. ISBN: 9781645020349 (**Hauptmann, A.** single author on book chapter *Kiviak* personally invited by the main author Sandor Katz)

Møller, G, Lind, MV, **Hauptmann, AL**, Senftleber, N, Hansen, CB , Hansen, T, Jørgensen, ME , Lauritzen, L. (2021) The role of a traditional and western diet on glucose homeostasis in Greenlandic Inuit carriers and non-carriers of type 2 diabetes variant in the TBC1D4 gene: A protocol for a randomized clinical trial. *Contemporary Clinical Trials Trials Communications* vol. 21: 100734

Bryndís Björnsdóttir, Margrét Geirsdóttir, Elísabet Eik Guðmundsdóttir, Guðjón Þorkelsson, Rósa Jónsdóttir, Gunnar Þórðarson, René Groben, Stephen Knobloch, **Aviaja Lyberth Hauptmann**, Janus Vang, Ingunn Gunnarsdóttir, Ragnar Jóhannsson, Lisbeth Due Schönemann-Paul, Sigrún Elsa Smáradóttir (2018) *Biorefining and Biotechnology Opportunities in the West Nordic Region*. Matis Technical Report ISSN 1670-7192

Personal Grants and Awards

Aase og Jørgen Münters Fond, 63,000.00 DKK travel grant (2021)

Dudo and Povl Brandts Foundation 31,600.00 DKK travel grant (2021)

The Carlsberg Foundation international postdoc grant of 850,000 DKK for visiting scholar exchange at the University of California, Davis (2020)

University of Greenland research fund (1% puljen) 56,945.00 DKK for UMAMI project (2020)

Novo Nordisk Foundation 236,150.00 DKK project GUTCYCLES and project KIVIAQ (2020)

The Jens Peder Hart Hansen award for emerging researchers in the field of circumpolar health (2018)

Danish government's funding for Arctic research: 1,572,944 DKK postdoctoral grant (2017-2019)

Grønlandsbankens Erhvervsfond: 200,000 DKK, research grant for postdoctoral work (2017-2019)

Outreach- and travel grants summed to a total of 283,400.00 DKK (2011-2018)

Oticon Foundation: 100,000 DKK, research grant for master's thesis (2011)

Academicus Arcticus, Second prize for master's thesis communication (2011)

Collaborative grants

2021: National Science Foundation (NSF) \$298,287 grant, award number (FAIN) 2127438, title NNA Planning: Developing community frameworks for improving food security in Greenland through fermented foods, co-PI with Maria Marco and Jessica B. Perea (UC Davis).

2021: Grønlandsbankens Erhvervsfond 76,000 DKK for collaborative project with Alchemist8 Michelin-star restaurant in Copenhagen.

2021: Grant for Advancing Sustainable Development Goals entitled *Community Mentorship Program Pilot for Radical and Relational Approaches to Inuit Food Security* \$7500 from University of California, Davis.

2020: Greenland Research Council 100,000 DKK grant for Forgotten Friends project co-lead with Inge H. Seiding, Ph.D.

2020: Transcollege Research Cluster grant of \$5000, University of California, Davis, collaboration with Professor Maria Marco, Assistant Professor Jessica Perea and Dr. Stephanie Maroney

2020: SHAPE course selective for conducting course work on Radical Storywork: Performing Food Sovereignty through Inuit Fermentation Culture in collaboration with Professor Maria Marco (UC Davis) and Associate Professor Jessica B. Perea (UC Davis).

2019: UArctic Project Call for Networking Activities on Arctic Research and Education, 468,900.00 DKK

H2020-LC-CLA-2019-2 call application moved on to second round, submitted for deadline 4th of September 2019. Role as work package lead for one of seven work packages and responsible for data analysis on other work packages.

Invited Talks

2021	ArktiskMat conference (September)
2021	Fermentology lecture series (June)
2021	Invited Keynote, Breaking the Ice Ceiling, Arctic Institute (April)
2021	Invited Keynote, Student Conference, University of Alberta, Canada (February)
2020	Invited speaker, Methods and Ethics in Arctic Research, Potsdam, Germany
2020	Invited speaker, 1 st Arctic Indigenous Peoples Food Congress, Kautokeino, Norway

2019	Invited Panel speaker, <i>It Tastes Like Home</i> , gastro-tourism conference, Nuuk, Greenland
2019	Invited Panel speaker together with renowned fermentation expert Sandor Katz, The Good Life Experience Festival, Wales
2019	Invited Keynote at Zonta district conference, Copenhagen, Denmark,
2018	Invited Keynote speaker, 17 th International Congress on Circumpolar Health, Copenhagen, Denmark
2017	Invited speaker, Green Growth Dialogue, Tórshavn, Faroe Islands
2016	Invited Keynote speaker, Nunamed Medical Conference, Nuuk, Greenland
2016	Invited speaker, side session on Greenlandic science, Arctic Science Summit Week, Fairbanks, USA
2015	Invited Panel speaker, Conference on Commercialization of Science, Nuuk, Greenland

Most recent public media appearances

Remarkable Women Powerful Stories featured online broadcast interview with Zonta International, September 2021

Front-cover feature in Greenlandic magazine Arnanut, September 2021

Podcast: Ferment Radio, January 2021

WWF Arctic Magazine The Circle, feature, October 2020

Podcast: Peak Human Podcast, July 2020

Five Media Magazine interview, June 2020

Podcast: Nordic Foodtech, February 2020

Gut Microbiota and nutrition newsletter interview, November 2019

Suluk Magazine, in-flight magazine Air Greenland, August 2019

KNR, National broadcasting Greenland, radio interview, June 2019

DR P1, National Radio Denmark, science radio program, June 2019

Nunatsiaq News, newspaper article, August 2018

KNR, National broadcasting Greenland, news, March 2018

TEACHING & STUDENT SUPERVISION

Teaching

Radical Storywork: Performing Relational Approaches to Inuit Food Fermentation and Food Security, co-organizer and lecturer, University of California, Davis, fall 2021

Radical and Relational approaches to Inuit fermentation class, co-organizer and lecturer, University of California, Davis, spring 2021

Emnefag A: Ilisimatusarfik, guest lecture, spring 2021

Mentor, seminar on multidisciplinary exploration of the polar regions, Maggie L. Walker Governor's School in Richmond, Virginia, USA

Emnefag D: Food Anthropology, Ilisimatusarfik, guest lecture, fall 2020

Inaarsaavik course, Ilisimatusarfik, main organizer and lecturer, spring 2020

Nunamed Ph.D. course, Ilisimatusarfik, guest lecture, fall 2019

Patenting and Biotechnology class, DTU, planning and teaching, 2015

JSEP summer school, Kangerlussuaq, 2013 and 2014

Currently supervised students

Previously supervised students

Master student, Ilisimatusarfik, Vivi Vold, 2019-2020

Coaching and supervision of 23 master's students, Ilisimatusarfik, 2020

Bachelor student, University of Copenhagen, Siff Sabinsky, 2019-2020

Fullbright student, Ilisimatusarfik, Augusta Finzel, 2019-2020

Conference-organizing

2017 Main organizer, Public Seminar on Greenland Health Research funded by the Danish Government Ministry for Education and Research

2015-2017 Co-organizer of the 7th Polar and Alpine Microbiology Conference (PAM) held in September 2017 in Nuuk, Greenland

Voluntary work

2021 - Inuit Circumpolar Council representative on food sovereignty issues

2021 - Advisory council member, research advisory board GINR

2021 -	Advisory council member, Arctic Education Alliance (AEA)
2020 – 2023	Appointed board member of the Greenland Research Council
2020	Expert member of ALEPH: Animal Source Foods in Ethical, Sustainable & Healthy Diets https://aleph-2020.blogspot.com/p/authors.html
2019 - 2020	Board member PinkPolarBearFoundation by Greenland Ruby A/S.
2019 - 2020	Board member Foreningen Grønlandske Børn, union for ensuring the well-being of all Greenlandic children
2012 - 2019	Blogger at the Danish Engineers Homepage Ing.dk about Greenland's future with regards to science, industry, nature and society. The blog has led to several publications both online and in printed newspapers in Denmark, Greenland and Faroe Islands. The blog has led to several participations in conferences in Denmark and internationally as well as debates both live as well as in Danish radio and TV.
2012	Co-founded REBBLS (Rising Entrepreneurs in BioBusiness and Life Science) network for promising entrepreneurs and intrapreneurs in biotechnology and life science.
2010-2011	Mentee in Kubulus University of Copenhagen alumni association mentor program with career mentor from Novozymes. The mentor-mentee meetings were used to discuss experience within starting up a small biotech company with a perspective of starting up a biotech company in Greenland.
2006-2010	Volunteer at environmental NGO Nepenthes (today named Verdens Skove). 2008 to 2010: chairman of local board of Copenhagen department and central coordinator of new volunteers.

Peer-review contributions

Review has been conducted for Extremophiles Journal (2015), FEMS Microbiology Ecology (2017), Applied and Environmental Microbiology (AEM) (2018), Marine Policy (2019), International Journal of Food Design (2020), Springer book chapter review (2021)

Further details

Personal webpage www.greenlanddietrevolution.wordpress.com

Personal blog at Danish Engineer's homepage: www.ing.dk/blogs/groenlandsbloggen

Profile on University of Greenland's homepage: <https://da.uni.gl/find-personale/institut-for-sygepleje-sundhedsvidenskab/aviaja-lyberth-hauptmann.aspx>

LinkedIn profile: <https://www.linkedin.com/in/aviaja-lyberth-hauptmann-6a483926/>

Greenland Diet Revolution social media: <https://www.instagram.com/agreenisland/?hl=en>

References

Gert Mulvad, MD, GP, Doctor h.c. Dronning Ingrid's Hospital and Ilisimatusarfik

gm@peqqik.gl

Dr. Mulvad was a mentor during postdoc project at Ilisimatusarfik

Jacob Bælum, Ph.D., Chr. Hansen A/S

dkjabm@chr-hansen.com

Dr. Bælum supervised Ph.D. project at The Technical University of Denmark

Carsten Suhr Jacobsen, Professor, Aarhus University

csj@envs.au.dk

Professor Jacobsen is a previous collaborator on several projects