



Jacob J. Christensen

PHD, POSTDOCTORAL RESEARCHER

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I am a clinical dietitian and postdoctoral researcher at Oslo University Hospital and University of Oslo.

My academic interests span several topics. My main focus is how genetic and lifestyle exposures, such as variation in SNPs and dietary fatty acid consumption, affect plasma lipid levels and other cardiovascular disease (CVD) risk factors. My research involves both healthy children and adults, as well as pregnant women and families with genetically elevated cholesterol (FH). I am involved in both clinical interventions (e.g. NOMA) and epidemiological studies (e.g. MoBa and STORK), where my main responsibility is related to data analysis. For example, I apply principles of biostatistics and bioinformatics to leverage knowledge from various *omics*-type datasets to examine potential biomarkers of dietary intake or CVD risk. I particularly study the early-life exposures to elevated levels of CVD risk factors. Additionally, I am part of The Nordic Nutrition Recommendations 2022 (NNR2022) Committee, working on the update of NNR2012.

Education

University Education and Authorization

Oslo University Hospital and University of Oslo

Oslo, Norway

DOCTORAL DEGREE (PHD)

2014 - 2017

- Supervisors: Prof. Kirsten B. Holven (main supervisor), PhD, Prof. Kjetil Retterstøl, MD, PhD, and Prof. Leiv Ose, MD, PhD. Title of doctoral thesis: Early life cholesterol exposure in children with familial hypercholesterolemia and healthy children (approved 30.05.2017, defended 21.08.2017).

Norwegian Directorate of Health, Registration Authority for Health Personnel

Oslo, Norway

AUTHORIZATION

2013 - 2061

- Authorized Clinical Dietitian (License: 6182046).

University of Oslo

Oslo, Norway

MASTER THESIS

2012 - 2013

- Supervisors: Christian A. Drevon (main supervisor) and Anders Kielland. Title of master thesis: Differentiation of skeletal muscle cells in culture – Experimental conditions and expression of myokines.

University of Oslo

Oslo, Norway

MASTER OF CLINICAL NUTRITION

2011 - 2013

University of Oslo and University of Stellenbosch

Oslo, NO; Cape Town, SA

BACHELOR OF SCIENCE

2008 - 2011

Selected Courses

2020	Leadership course 1: Career development	University of Oslo
2019 - Pr	DataCamp E-Courses	DataCamp
2019	Workshop: Applied Machine Learning	RStudio
2018	Workshop: Introduction to Data Science in the Tidyverse	RStudio
2017	MF9155 - Introduction to statistics and bioinformatics for the analysis of large-scale biological data	University of Oslo
2017	Nature Masterclass: Scientific Writing	NORHEART
2017	Introduction to nutritional metabolomics	NUGO, Uni CPH
2016	Post-graduate course: Use of large scale data in dietary intervention studies	NUGO
2016	MF9030E – Introductory course to the medical PhD programme, INTRO I	University of Oslo
2016	Communicating Scientific Research (CSR)	SIMULA
2015	Pregnancy and programming and later risk of obesity and related disease	Uni CPH
2014	MF9010E – Introductory course to the medical PhD programme, INTRO I	University of Oslo
2014	MF9115 - Helseforskningsrett; Etikk og personvern	UoO, OUH, NIPH
2014	MF9130 – Introduction to statistics	University of Oslo

Work Experience

Professional Positions

Jean Mayer United States Department of Agriculture (USDA) Human Nutrition Research Center on Aging (HNRCA), Tufts University

Boston Massachusetts, USA

POSTDOCTORAL RESEARCHER

2018 - 2019

- Postdoctoral fellowship in the group of José Ordovás, working with various research projects in the intersection of nutrition, genomics and cardio-metabolic diseases.

Oslo University Hospital and University of Oslo

Oslo, Norway

POSTDOCTORAL RESEARCHER

2018 - Present

- Statin use in pregnancy, nutrition data science.

Department of Nutrition, Institute of Basic Medical Sciences, University of Oslo

Oslo, Norway

RESEARCHER

2017 - 2018

- Data analysis-centered research projects.

Oslo and Akershus University College and University of Oslo

Oslo, Norway

UNIVERSITY COLLEGE LECTURER/PROJECT COORDINATOR

2013 - 2014

- Coordination and implementation of practical aspects of a clinical nutrition research study.

Student Welfare Organization in Oslo (SiO)

Oslo, Norway

LECTURER/NUTRITIONIST

2012 - 2013

- Weekly dietary counseling sessions for healthy subjects, as well as lectures about general nutrition topics.

Other Positions

Lommelegen (lommelegen.no), Aller Media AS

Oslo, Norway

CLINICAL DIETITIAN (KEF)

2013 - Present

- Answering questions related to clinical dietetics, nutrition, physical activity and health.

The Sleep Laboratory, Lovisenberg Diakonale Sykehus (LDS)

Oslo, Norway

ASSISTANT

2011 - 2013

- Examination of individuals with sleep disorders (using polysomnography).

Naval Home Guard (Sjøheimevernet, SHV)

Karljohansvern, Horten, Norway

DIVER

2009 - 2012

- Diver for the SHV task force at the eastern part of Norway.

The Norwegian Navy, Haakonsvern

Bergen, Norway

DIVER

2006 - 2007

- Military service, diver for the Coast Guard KV Ålesund.

Publications

Scientific Publications

1. Telle-Hansen, VH, JJ Christensen, GA Formo, KB Holven, and SM Ulven (Dec. 2020). A Comprehensive Metabolic Profiling of the Metabolically Healthy Obesity Phenotype. *Lipids in Health and Disease* **19**(1), 90. (Visited on 05/12/2020).
2. Christensen, JJ, SM Ulven, M Thoresen, K Westerman, KB Holven, and LF Andersen (Jan. 2020). Associations between Dietary Patterns and Gene Expression Pattern in Peripheral Blood Mononuclear Cells: A Cross-Sectional Study (Preprint). *medRxiv*.
3. Narverud, I, JJ Christensen, SS Bakke, SM Ulven, A Rundblad, P Aukrust, T Espevik, MP Bogsrud, K Retterstøl, T Ueland, B Halvorsen, and KB Holven (Nov. 12, 2019). Profiling of Immune-related Gene Expression in Children with Familial Hypercholesterolaemia. *Journal of Internal Medicine*, joim.13001. (Visited on 12/19/2019).
4. Mangano, KM, SE Noel, CQ Lai, JJ Christensen, JM Ordovás, B Dawson-Hughes, KL Tucker, and LD Parnell (Aug. 2019). Diet-Derived Fruit and Vegetable Metabolites Suggest Sex-Specific Mechanisms Conferring Protection against Osteoporosis in Humans (Preprint). *medRxiv*.
5. Ulven, SM, JJ Christensen, O Nygård, A Svardal, L Leder, I Ottestad, V Lysne, J Laupsa-Borge, PM Ueland, Ø Midttun, K Meyer, A McCann, LF Andersen, and KB Holven (May 1, 2019). Using Metabolic Profiling and Gene Expression Analyses to Explore Molecular Effects of Replacing Saturated Fat with Polyunsaturated Fat-a Randomized Controlled Dietary Intervention Study. *The American Journal of Clinical Nutrition* **109**(5), 1239–1250. pmid: 31051508.

6. Christensen, JJ, SS Bakke, SM Ulven, K Retterstøl, T Henriksen, J Bollerslev, T Espevik, P Aukrust, B Halvorsen, and KB Holven (Feb. 11, 2019). Serum Omega-6 Fatty Acids and Immunology-Related Gene Expression in Peripheral Blood Mononuclear Cells: A Cross-Sectional Analysis in Healthy Children. *Molecular Nutrition & Food Research*, 1800990. (Visited on 02/11/2019).
7. Christensen, JJ, SM Ulven, K Retterstøl, I Narverud, MP Bogsrud, T Henriksen, J Bollerslev, B Halvorsen, P Aukrust, and KB Holven (Nov. 2017). Comprehensive Lipid and Metabolite Profiling of Children with and without Familial Hypercholesterolemia: A Cross-Sectional Study. *Atherosclerosis* **266**, 48–57. pmid: 28963918.
8. Narverud, I, JJ Christensen, IO Ottestad, SM Ulven, and KB Holven (Oct. 31, 2017). [Misleading about diet in a new national guideline for the prevention of cardiovascular disease]. *Tidsskrift for Den Norske Lægeforening: Tidsskrift for Praktisk Medicin, Ny Raekke* **137**(20). pmid: 29094560.
9. Gjevestad, GO, H Hamarsland, T Raastad, I Ottestad, JJ Christensen, K Eckardt, CA Drevon, AS Biong, SM Ulven, and KB Holven (Mar. 3, 2017). Gene Expression Is Differentially Regulated in Skeletal Muscle and Circulating Immune Cells in Response to an Acute Bout of High-Load Strength Exercise. *Genes & Nutrition* **12**(1), 8. (Visited on 02/04/2019).
10. Christensen, JJ, L Osnes, B Halvorsen, K Retterstøl, MP Bogsrud, C Wium, A Svilaas, I Narverud, SM Ulven, P Aukrust, and KB Holven (Feb. 2017). Data on Circulating Leukocyte Subpopulations and Inflammatory Proteins in Children with Familial Hypercholesterolemia and Healthy Children. *Data in Brief* **10**, 587–592. pmid: 28070551.
11. Christensen, JJ, LT Osnes, B Halvorsen, K Retterstøl, MP Bogsrud, C Wium, A Svilaas, I Narverud, SM Ulven, P Aukrust, and KB Holven (Jan. 2017). Altered Leukocyte Distribution under Hypercholesterolemia: A Cross-Sectional Study in Children with Familial Hypercholesterolemia. *Atherosclerosis* **256**, 67–74. pmid: 28024183.
12. Telle-Hansen, VH, JJ Christensen, SM Ulven, and KB Holven (2017). Does Dietary Fat Affect Inflammatory Markers in Overweight and Obese Individuals?—A Review of Randomized Controlled Trials from 2010 to 2016. *Genes & Nutrition* **12**, 26. pmid: 29043006.
13. Christensen, JJ, K Retterstøl, K Godang, MCP Roland, E Qvigstad, J Bollerslev, T Ueland, T Henriksen, and KB Holven (Nov. 2016). LDL Cholesterol in Early Pregnancy and Offspring Cardiovascular Disease Risk Factors. *Journal of Clinical Lipidology* **10**(6), 1369–1378.e7. pmid: 27919354.
14. Ulven, SM, L Leder, E Elind, I Ottestad, JJ Christensen, VH Telle-Hansen, AJ Skjetne, E Raael, NA Sheikh, M Holck, K Torvik, A Lamglait, K Thyholt, MG Byfuglien, L Granlund, LF Andersen, and KB Holven (Oct. 2016). Exchanging a Few Commercial, Regularly Consumed Food Items with Improved Fat Quality Reduces Total Cholesterol and LDL-Cholesterol: A Double-Blind, Randomised Controlled Trial. *The British journal of nutrition* **116**(8), 1383–1393. pmid: 27737722.
15. Narverud, I, JR van Lennep, JJ Christensen, J Versmissen, JM Gran, PO Iversen, P Aukrust, B Halvorsen, T Ueland, SM Ulven, L Ose, MB Veierød, E Sijbrands, K Retterstøl, and KB Holven (Nov. 2015). Maternal Inheritance Does Not Predict Cholesterol Levels in Children with Familial Hypercholesterolemia. *Atherosclerosis* **243**(1), 155–60. pmid: 26386212.

Other Publications

Popular Science Articles

11 POPULAR SCIENCE ARTICLES OR VIDEOS RELATED TO CLINICAL DIETETICS AND NUTRITION

2015 - 2017

- UiO, forskning.no, Dagens medisin, FH Norge, Norsk tidsskrift for ernæring, BestPractice - faglig dialog mellom leger, FH-magasinet, Lommelegen.no, YouTube, and Forbrukerinspektørene

Articles, Chronicles or Commentaries

6 PUBLISHED ARTICLES, CHRONICLES OR COMMENTARIES RELATED TO CLINICAL DIETETICS AND NUTRITION

2016 - 2018

- Dagbladet, Dept of Nutrition UiO, Nor Tannlegeforen Tid, and Bergens Tidende

Expert Opinions/Statements

27 EXPERT OPINIONS OR STATEMENTS RELATED TO CLINICAL DIETETICS AND NUTRITION

2013 - 2017

- NRK, VG-nett, Dagbladet, Klikk.no, KK, TV2.no, abcnyheter, Lommelegen.no, and Adressa

Lommelegen Q&A

102 PUBLISHED ANSWERS RELATED TO CLINICAL DIETETICS AND NUTRITION

2013 - 2020

- Lommelegen.no

Grants and Awards

Award

Throne-Holst stiftelse

BEST ARTICLE 2016

05/2017

- Christensen JJ J Clin Lipidol 2016 (shared)
- Christensen JJ J Clin Lipidol 2016 (personal)

Travel grant

COURSE TRAVEL GRANT

- Travel grant to participate at the course 'Introduction to nutritional metabolomics' in Copenhagen, Denmark

NuGO

02/2017

Travel grant

CONFERENCE TRAVEL GRANT

- Travel grant to participate at the 17th International Symposium on Atherosclerosis (ISA 2015) in Amsterdam, the Netherlands

ISA

02/2015

Previous Grant Support

Mills DA (1 kr til Hjertesaken)

THE STORK CHILDREN PROJECT

04/2015

- To examine the long-term effect of in utero hypercholesterolemic, pro-thrombotic and pro-inflammatory environment on risk markers of disease in children 6-12 years after birth.

Presentations

Invited Presentations

NORDIC METABOLOMICS SOCIETY WORKSHOP AND THRONE HOLST SYMPOSIUM (FACULTY OF MEDICINE)

10/2019

- Diet-derived fruit and vegetable metabolites suggest sex-specific mechanisms conferring protection against osteoporosis in humans

DEPARTMENT SEMINAR (INST. INTERNAL MEDICINE, OUH)

01/2018

- Statistics and bioinformatics for translational research

THRONE HOLST STIFTELSE FESTAFTEN (DEPARTMENT OF NUTRITION)

05/2017

- LDL cholesterol in early pregnancy and offspring cardiovascular disease risk factors

ERNÆRINGSUTDANNINGEN 50 ÅR (DEPARTMENT OF NUTRITION)

11/2016

- Hva har ernæringsutdanningen betydd for meg? (What did my training in nutrition and dietetics mean to me?)

NUGO WEEK (COPENHAGEN, DENMARK)

09/2016

- High maternal LDL-C in pregnancy and offspring CVD risk factors at 6-13 years

THRONE HOLST STIFTELSE FESTAFTEN (DEPARTMENT OF NUTRITION)

05/2016

- What is the impact of maternal inheritance of FH on lipids and CRP in children with FH?

Other Contributions

SEMINARS

2016-2020

- 4 contributions for Department Seminar at Department of Nutrition; Department of Immunology

POSTERS

2014-2019

- 13 contributions for The American Society for Bone and Mineral Research Conference, Scandinavian Society of Atherosclerosis Research (SSAR) Conference, Throne Holst Stiftelse Festaften, Norwegian Association of Clinical Dietitians (KEFF) Conference, Nordic Nutrition Conference (NNC), International Atherosclerosis Society (IAS) at Orlando, FL, USA; Humlebæk, Denmark; Department of Nutrition; Oslo, Norway; Gothenburg, Sweden; Amsterdam, The Netherlands

MODERATED POSTERS

2017-2017

- 1 contributions for European Atherosclerosis Society (EAS) at Prague, Czech Republic

Activities

Educational Activities

MASTER THESIS OPPONENT (NORWEGIAN UNIVERSITY OF LIFE SCIENCES (NMBU))

05/2020 - Present

- External supervisor for a data science-oriented Master Thesis.

GROUP TEACHING (LSB) (UNIVERSITY OF OSLO)

04/2020 - 06/2020

- LSB teaching for nutrition students. Topics: molecular biology, cell biology, and the like.

RESEARCH SEMINAR (UNIVERSITY OF OSLO)

03/2020 - Present

- Weekly gettogether in the form of a short 'kollokvie'; see github.com/jacobjchristensen/research-seminars.

WORKSHOP (UNIVERSITY OF OSLO)

12/2019 - 12/2019

- Hands-on session of data science topics: data analysis, data visualizations, forestplots, and R in general.

GROUP TEACHING (UNIVERSITY OF OSLO)

09/2016 - 11/2016

- Clinical communication skills, teaching for under-graduate students.

LECTURE (UNIVERSITY OF OSLO)

2014 - 2016

- 3 contributions: Short introduction lecture for new students in nutrition and dietetics.

Service Activities

MEMBER OF THE NORDIC NUTRITION RECOMMENDATIONS 2022 COMMITTEE

03/2019 - Present

- Nordic Nutrition Recommendations 2022, Norden, Helsedirektoratet

LEADER KEFF NOMINATION COMMITTEE

03/2019 - Present

- Norwegian Association of Clinical Dietitians affiliated with The Norwegian Association of Researchers (KEFF)

MEMBER OF ORGANIZING COMMITTEE FOR SSAR 2019

04/2018 - 04/2019

- Scandinavian Society of Atherosclerosis Research (SSAR) Conference

MEMBER OF ORGANIZING COMMITTEE FOR KEFF CONFERENCE 2017

04/2016 - 04/2017

- Norwegian Association of Clinical Dietitians affiliated with The Norwegian Association of Researchers (KEFF)

VICE PRESIDENT KEFF BOARD OF DIRECTORS

03/2015 - 03/2019

- Norwegian Association of Clinical Dietitians affiliated with The Norwegian Association of Researchers (KEFF)

Editorial Activities

PEER REVIEW ACTIVITIES

2016 - 2020

- Nutrition, Metabolism and Cardiovascular Diseases, British Journal of Nutrition, Food & Nutrition Research, BMC Bioinformatics, Norwegian Journal of Nutrition