

Front cover: Surfers standing in sea foam at a beach in Thy, Denmark. Photo by Jens Wilhelm Jørgensen, STRANDET, 2023.

Concerns about high levels of PFAS in sea foam at the Danish West Coast have initiated a Danish Ramazzini Centre study on the serum levels of these substances among surfers in the area.

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Danish Ramazzini Center

Board of directors

Chief Medical Officer Jens Friis Bak
Gødstrup Hospital

Medical Director Michael Bräuner Schmidt
Aarhus University Hospital

Head of Research Egon Toft
Faculty of Medicine
Aalborg University Hospital

Head of Department Jørgen Frøkiær
Department of Clinical Medicine
Aarhus University

Head of Department Ole Bækgaard Nielsen
Department of Public Health
Aarhus University

Elected Confederal Secretary Leif Vestbjerg-Nielsen
FOA trade union Northern Jutland

District chair Anja Laursen
Danish Nursing Council in Central Jutland

Professor Henrik A. Kolstad
Occupational Medicine
Aarhus University Hospital

Scientific Advisory Board

Associate Professor Susan Peters
Department Population Health Sciences
Institute for Risk Assessment Sciences (IRAS)
Utrecht University, Netherlands

Professor Lode Godderis
Environment and Health
KU Leuven, Belgium

Professor Emeritus Jens Peter Bonde
Department of Public Health
University of Copenhagen

Preface

2023 has been another good year for the Danish Ramazzini Centre. The 12th Annual Ramazzini Seminar was held on October 3-4 2023, where 43 participants met at Sandbjerg Manor. Christine Wulff Cramer, Pernille Bach Steen, Allan Jakobsen, Annett Dalbøge, and Kirsten Pughdahl organized the seminar.

For the first time, the seminar was attended by the newly established Scientific Advisory Board with the three distinguished members Susan Peters, Utrecht University, Lode Godderis, KU Leuven, and Jens Peter Bonde, University of Copenhagen, who based on the Ramazzini report 2022 and their observations and talks with participants during the seminar, provided valuable feedback and recommendations for the centre.

Different aspects of cognitive and physical changes of the aging population were addressed by excellent presentations by Gunhild Tidemann Okholm, University of Copenhagen and Kaare Christensen, University of Southern Denmark. Sadie Costello, University of California and Roel Vermeulen, IRAS, Utrecht University gave inspiring online talks on healthy worker survival bias and working life exposome. Also researchers from each of the centre's four departments presented ongoing projects. The seminar received financial support from Aarhus University Research Fund.

Aarhus, Aalborg and Herning, January 22, 2024

Danish Ramazzini Centre Coordination Board:

Henrik Kolstad, professor	Occupational Medicine, Aarhus University Hospital
Vivi Schlünssen, professor	Department of Public Health, Aarhus University
Johan Hviid Andersen, professor	Occupational Medicine – University Research Clinic, Goedstrup Hospital
Jakob Hjort Bønløkke, consultant	Occupational and Environmental Medicine, Aalborg University Hospital
Torben Sigsgaard, professor	Department of Public Health, Aarhus University

Alexandra Golabek Christiansen and Linda Christie Andrea defended their PhD theses and one new PhD students were enrolled. In total, 17 PhD students were attached to the centre

101 peer-reviewed publications covering a wide range of topics within occupational and environmental health were published.

Rikke Damkjær Maimburg was appointed professor in the first professorship in midwifery and prevention at Department of Clinical Medicine, Aarhus University, and is a valuable new member of the Danish Ramazzini Centre.

We arranged for the second time a mixed models course with professor Jos Twisk from Amsterdam University Medical Centers as the course leader and with 18 participants from the centre.

At eight online Ramazzini Forum meetings, we had presentations on epidemiological methods, labour market participation after stroke, environmental omics, and other topics.

The departments of occupational and environmental medicine at Esbjerg and Grindsted Hospital and Odense University Hospital were affiliated with the centre and participate at the Ramazzini Forum meetings.

Figure 1: Annual Publications 2008-2023

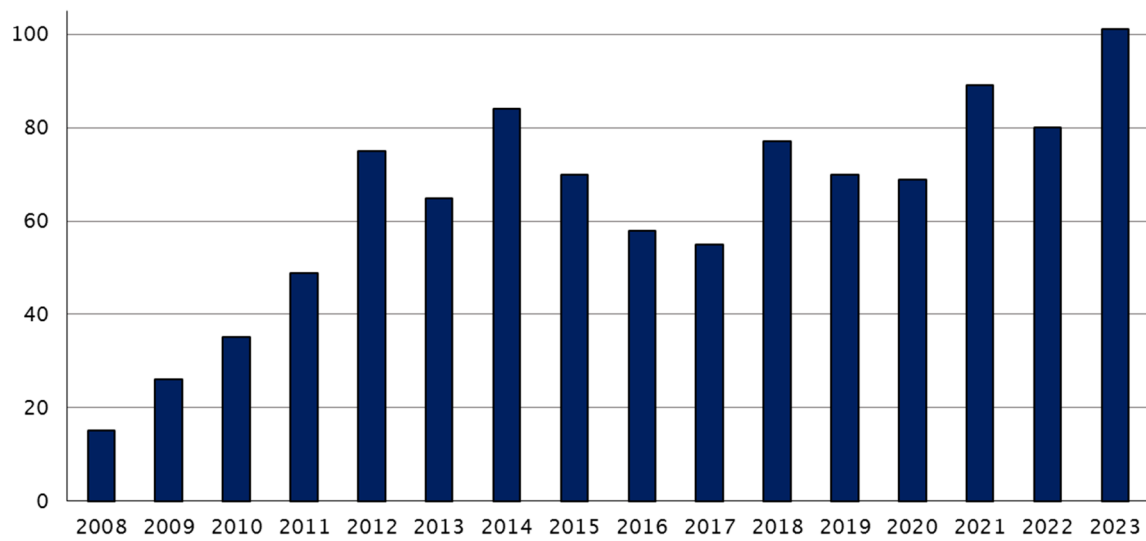


Figure 2: Annual PhD and Research Year Defences 2008-2023

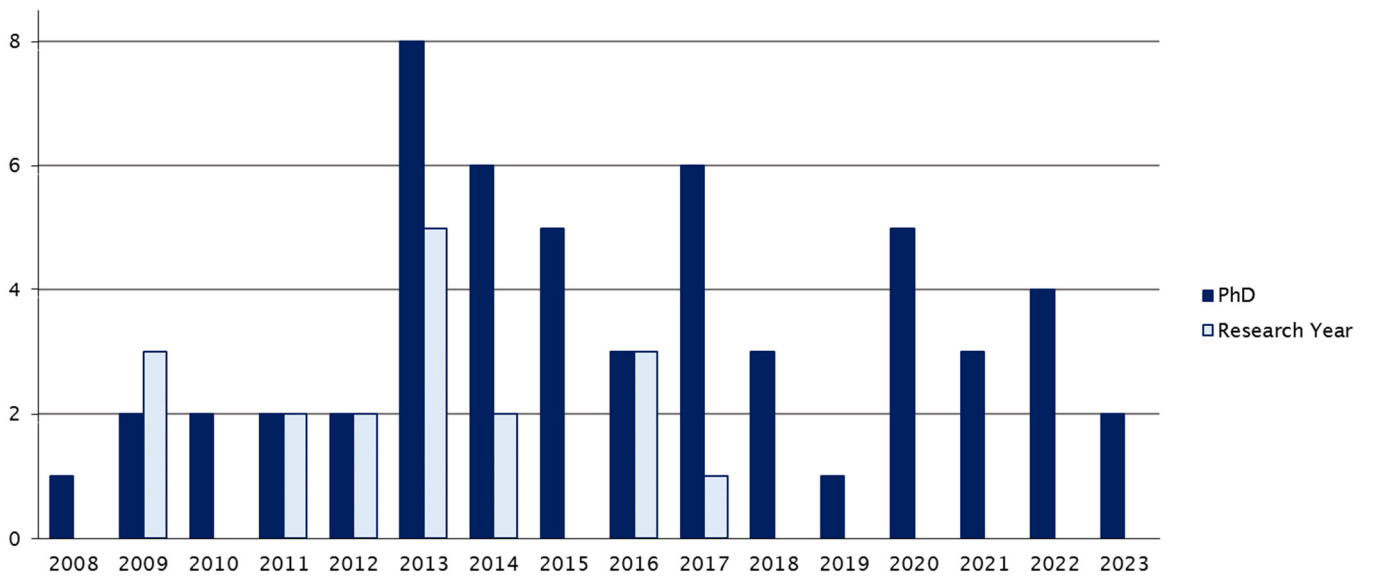
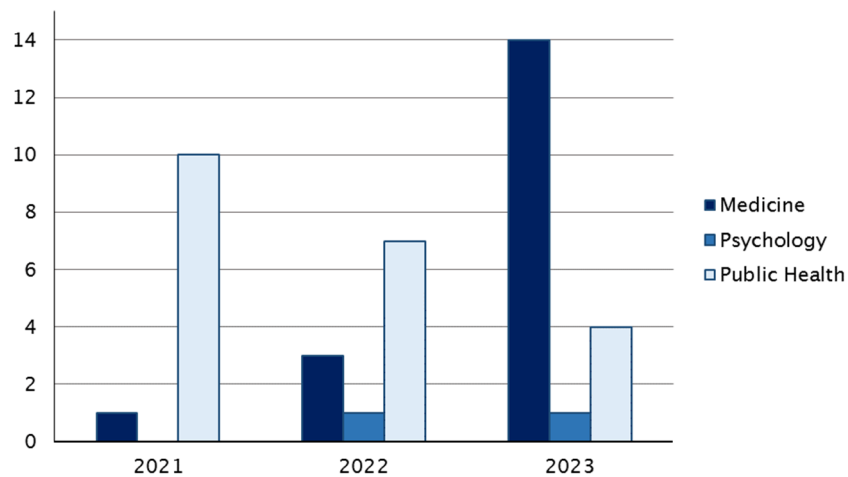


Figure 3: Annual Masters Theses 2021-2023



PhD dissertations

Alexandra Golabek Christiansen (Cand. med.)

Risk and prevention of dermatitis and skin sensitization following occupational exposure to epoxy components

Components of epoxy resin systems are well-known skin sensitizers and a common cause of allergic contact dermatitis. High prevalences have been reported among epoxy-exposed workers. In Denmark considerable attention has been devoted to regulation, education, new procedures and protective equipment.

The thesis aimed to examine the risk and prevalence of sensitization and dermatitis among epoxy-exposed workers using comprehensive protective equipment. Furthermore, to develop a computerized fluorescence-based system for measuring skin exposure to epoxy to increase worker alertness and prevent repeated and prolonged skin exposure.

The project concluded that despite comprehensive protective measures, sensitization and dermatitis are still common among epoxy-exposed workers in the wind turbine industry. Sensitization and dermatitis occur early in employment stressing the need for intensified education of new workers in order to establish a healthy work behaviour at the early career. Interestingly, even though a 6-fold increased risk of developing dermatitis when sensitized were observed, only 40% of the sensitized had dermatitis. This high number of asymptomatic sensitized workers suggests a need for continuously and persistent focus on safety procedures in order to minimize the risk of future onset of dermatitis. We propose a computerized fluorescence-based system visualizing exposure, giving immediate feedback and information about exposure patterns to the worker. The system offers a preventive strategy against repeated and prolonged exposure among exposed workers.



Date of defence: August 25, 2023

Assessment Committee:

Professor Hans Jürgen Hoffman
(Chairman and moderator of the defence)
Dept. of Clinical Medicine
Aarhus University

Professor emeritus An Goossens
Dept. of Dermatology
K.U. Leuven
Belgium

Professor Jeanne Duus Johansen Dept. of
Dermatology and Allergu
Gentofte Hospital
University of Copenhagen

Professor Henrik Kolstad
(main supervisor)
Dept. of Occupational Medicine
Danish Ramazzini Centre
Aarhus University Hospital

Linda Christie Andrea (Cand. med.)

Subacromial impingement syndrome:
radiographic, health related, occupational,
and sociodemographic predictors of pain and
disability

Patients suspected of subacromial impingement syndrome (SIS) are referred from general practice to orthopaedic evaluation. Potential predictors of persistent shoulder pain and disability may include radiographic findings, symptoms at time of referral, work-related mechanical exposures, occupational status, or other sociodemographic factors.

The thesis' overall aim was to report the prevalence of specific radiographic findings in orthopaedic patients with SIS and to study predictors for shoulder pain and disability.

The specific aims were: 1) To report the prevalence of specific radiographic findings in orthopaedic patients examined on suspicion of SIS, and to evaluate the inter- and intrarater reliability of the radiographic findings; 2) To study the association between specific radiographic findings and shoulder pain and disability in patients examined on suspicion of SIS; and 3) To study the association between health-related, sociodemographic, and occupational factors and continued shoulder pain and disability in patients diagnosed with SIS.

The project concluded that calcification on shoulder radiographs is a frequent and reliable finding in patients suspected with SIS. Patient reported shoulder pain and disability at time of referral was associated with presence of a lateral spur, Bankart/Hill-Sachs lesion, and a high acromial tilt. Continued shoulder pain and disability was associated with high baseline Oxford shoulder score, long duration of shoulder pain and disability as well as temporary transfer income and on-going insurance casework.



Date of defence: November 6, 2023

Assessment Committee:

Associate professor Kresten Krarup Keller
(Chairman and moderator of the defence)
Dept. of Clinical Medicine
Aarhus University

Professor Ann Cools
Dept. of Rehabilitation Sciences
Ghent University
Belgium

Associate professor Philip Hansen
Dept. of Radiology, Bispebjerg &
Frederiksberg Hospital
Dept. of Clinical Medicine
University of Copenhagen

Associate professor Annett Dalbøge
(main supervisor)
Dept. of Occupational Medicine
Danish Ramazzini Centre
Aarhus University Hospital

Ramazzini Forum 2023

Ramazzini Forum was initiated in 2021. The aim is to gather the entire centre once a month for a one-hour virtual meeting. The topic is decided by the organising department and can cover all aspects of research, from discussion of project ideas to the presentation of final results.

Programme

13.01.2023: Torben Sigsgaard, Department of Public Health – Environment, Occupation and Health, Aarhus University

"BERTHA meets Bernadino"

10. 92.2023: Bodil Hammer Bech, Department of Public Health – Department of Epidemiology, Aarhus University

"Directed Acyclic Graphs (DAGs) - which variables to adjust for?"

10.03.2023: Nils Skajaa, Department of Clinical Epidemiology, AUH

"Labour market participation and retirement after stroke in Denmark: registry based cohort study"

14.04.2023: Jakob Hjort Bønløkke, Department of Occupational and Environmental Medicine, AAUH

"Air pollution, climate change, and health"

09.06.2023: Karin Broberg, Lund University and Karolinska Institute

"Omics in Occupational and Environmental Medicine"

08.09.2023: Morten Frydenberg, MF Stat

"Analysis of time to event data"

10.11.2023: Inge Brosbøl Iversen, Department of Occupational Medicine, AUH

"Occupational dust exposure and risk of interstitial lung diseases"

08.12.2023: Mathias Bruun, Statistics Denmark, Research Service

"Transferring of analysis results from Statistics Denmark"

Mixed Models Course

In February 2023, 18 participants from Danish Ramazzini Centre joined an applied statistics course on mixed models with professor Jos Twisk from Amsterdam University Medical Centers as course leader. The three-days course was held at Aarhus University Hospital as a mixture of lectures and hands-on exercises.

Mixed Models Course

This three-day course will explain the basic concepts of mixed models. It is an applied course, so the emphasis lies on the interpretation of the results from the mixed model analyses and not on the mathematical background. The course centres on the two most important applications of mixed models – multilevel analysis and longitudinal data analysis.

Lectures are given in the morning and in the afternoon a computer practical is given. The examples will be in STATA, but when participants have experience in R or SPSS, it is also possible to use these programs.

The course is designed for researchers who work with mixed model analysis or researchers who plan to work with mixed model analysis.

Course director:



Jos W.R. Twisk, PhD, Professor of Applied Biostatistics in the Department of Epidemiology & Data Science. Amsterdam University Medical Centers, Amsterdam.

Professor Jos Twisk is head of the expertise center for applied longitudinal data analysis and he wrote textbooks for applied longitudinal data analysis, multilevel analysis and an introduction to applied biostatistics. Furthermore, he is director of the Master Epidemiology program in Amsterdam.

Dates: February 14-16, 2023. 8.30-16 all days

Venue: Aarhus University Hospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N Entrance J, J116-111/112

Course fee: 1000 kr. – Lunch included.

To sign up for the course: kirpug@rm.dk. Application deadline January 22, 2023.

Course language: English

Max number of participants: 20

Course prerequisite: It is assumed that the participants are familiar with the principles of linear and logistic regression analysis.

Ramazzini Research Grants

In 2023 the following researchers was awarded grants for participating in conferences or courses. A maximum of 5.000 kr. was provided per grant.

Spring

- Lea Nørgaard Sørensen: Epidemiology in Occupational Health (EPICOH) Conference, 2023, Mumbai, India
- Jesper Medom Vestergaard: Epidemiology in Occupational Health (EPICOH) Conference, 2023, Mumbai, India
- Christine Cramer: Visualize your Science, 2023, Online

Autumn

- Theresa Møller Kynde: Research stay at TNO, 2024, Utrecht, Holland
- Trine Nøhr Winding: European Public Health (EPH) Conference, 2023, Dublin, Ireland
- Christine Cramer: BRuSH/RHINE/RHINESSA meeting, 2023. Bergen, Norway
- Christine Leonhard Birk Sørensen: Nordic Conference on Epidemiology and Register-Based Research (NordicEpi), 2024, Copenhagen, Denmark

Programme

Tuesday 3 October 2023

- 09.30–10.00 Registration and coffee
- 10.00–10.15 Welcome and presentation of the new Scientific Advisory Board
- 10.15–10.45 Relation between work-related mechanical exposure and hip arthrosis
Alexander Jahn Jensen
Dept. of Occupational Medicine
Aarhus University Hospital
- 10.45–11.15 PFAS exposure in surfers at the Danish West Coast
Mette Hyllegaard Madsen
Dept. of Occupational and Environmental Medicine
Aalborg University Hospital
- 11.15–12.15 Walk / social event
- 12.15–13.00 Lunch
- 13.00–14.15 Cognitive aging – more experienced or less sharp as we age?
Gunhild Tidemann Okholm
Section of Environmental Health
University of Copenhagen
- 14.15–14.30 Break
- 14.30–15.45 Are we approaching the limits to human health and lifespan?
Kaare Christensen
Dept. of Public Health
University of Southern Denmark
- 15.45–16.00 Break
- 16.00–17.15 Healthy worker survivor bias (Online)
Sadie Costello
Berkeley Public Health
University of California
- 17.15–18.30 Break
- 18.30–19.00 Dry Ramazzini
- 19.00– Dinner

Wednesday 4 October 2023

- 08.00–09.00 Breakfast and check-out
- 9.00–09.30 The role of high physical demands in the working life for functional limitations after retirement – can physical activity mitigate limitations? A longitudinal ageing study in 18 European countries
Karin Biering
Dept. of Occupational Medicine
Goedstrup Hospital
- 09.30–10.00 AiRMA – the Airborne Microbiome and Allergic Diseases
Christine Cramer
Dept. of Public Health
Aarhus University
- 10.00–10.15 Break
- 10.15–11.30 Where chemistry meets biology (Online)
Roel Vermeulen
Institute for Risk Assessment Sciences (IRAS)
Utrecht University
- 11.30–12.00 Evaluation by the Scientific Advisory Board
Susan Peters, Utrecht University
Lode Godderis, KU Leuven
Jens Peter Bonde, University of Copenhagen
- 12.00–13.00 Lunch and goodbye

Please register before 11 July 2023
to Kirsten Pughahl: kirpug@rm.dk

Danish Ramazzini Centre
Dept. of Public Health
Aarhus University

Dept. of Occupational Medicine
Aarhus University Hospital

Dept. of Occupational Medicine,
University Research Clinic, Goedstrup Hospital

Dept. of Occupational and Environmental Medicine
Aalborg University Hospital

Ramazzini Group at Sandbjerg Gods

October 3 2023



Projects

Ongoing PhD Projects 2023

PhD student	Project title	Main supervisor	Department	Enrolled	Funding
Mette Hyllegaard Madsen	Environmental exposures and risk of hematologic cancers.	Jakob Bønløkke	AAUH	01.08.2023	Sygesikring Danmark
Mathias Moselund Rønnow	Occupational mechanical exposures and severe low back disease	Johan Hviid Andersen	RHG	01.12.2022	AMFF
Pernille Bach Steen	The trajectory of stress from adolescence to young adulthood	Karin Biering	RHG	01.08 2022	Sygeforsikringen "danmark"
Christine Leonhard Birk Sørensen	Better mental health in adolescence	Karin Biering	RHG	02.02 2022	Sygeforsikringen "danmark" og KV fonden
Theresa Møller Kynde	Working-life exposome and the association with lung function and obstructive lung disease among men and women	Vivi Schlünssen.	AU	01.02 2022	EPHOR (Exposome Project for Health and Occupational Research)
Jesper Medom Vestergaard	Shift work and risk of cardiovascular disease, breast cancer and depression, a 14-year follow-up study on payroll data	Henrik Kolstad	AUH	01.01 2022	AMFF
Jane Bjerregaard Lauridsen	Systematic evaluation of working conditions and organisation of individual work - a model to decrease sick leave during pregnancy	Rikke Damkjær Maimburg	AUH	01.05 2021	Sundhedsstyrelsen, Arbejdsmiljøforskningsfonden og Region Midtjylland
Karoline Kjærgaard Hansen	The chemical and biological work environment when recycling municipal waste: The RECYCLE-project	Henrik Kolstad	AUH	01.12 2020	AMFF
Vivi Just-Nørregaard	The role of psychosocial stressors and social inequality in adolescence and young adulthood and later risk of prediabetes or type 2 diabetes	Johan Hviid Andersen	RHG	01.09 2020	IKM, AU
Inge Brosbøl Iversen	Occupational dust exposure and early pulmonary diseases. A study of dust levels and CT findings, the EkSACT-study	Henrik Kolstad	AUH	01.06 2020	AMFF
Asbjørn Kloppenborg	How to synchronize Big Data in health care research in an ethically acceptable manner?	Torben Sigsgaard	AU	01.09 2019	Novo Grand Challenges, BERTHA

PhD student	Project title	Main supervisor	Department	Enrolled	Funding
Christine Cramer	AiRMA - the Airborne and the Respiratory Microbiome and Allergic Diseases	Vivi Schlünssen	AU, AUH	01.07 2019	AU Health
Birgith Engelst Grove	Anvendelse af patientens egne oplysninger (PRO) til ambulant opfølgning hos patienter med kronisk nedsat nyrefunktion	Niels Henrik Hjöllund	RHG	01.09 2018	Karen Elise Jensens Fond, Trygfonden, Helsefonden
Charlotte Gabel	Health effects from dwelling retrofitting projects in Denmark - A real-life longitudinal intervention study in an interdisciplinary framework.	Torben Sigsgaard	AU	01.06 2017	Innovationsfonden, Realdania
Mette Jørgine Kirkeby	Unge introduktion på arbejdsmarkedet og arbejdsmarkedstilknytning - betydningen af sårbarhed, arbejdsmiljø og arbejde-privatliv konflikter.	Johan Hviid Andersen	RHG	01.04 2014	AMFF

Completed PhD Projects 2009-2023

Candidate	Thesis title	Main supervisor	Department	Defence	Funding
Linda Christie Andrea	Impingement-related shoulder disorders – prognosis and choice of treatment: a prospective cohort study	Annett Dalbøge	AUH/RHG	06.11 2023	AMFF
Alexandra Golabek Christiansen	Risk and prevention of dermatitis and skin sensitization following occupational exposure to epoxy components	Henrik Kolstad	AUH	25.08 2023	AMFF
Cecilie Rud Budtz	Physiotherapists' use of red flags as a screening method for detection of serious pathology in primary care	David Høyrup Christiansen	RHG	09.12 2022	Danske Fysioterapeuters Fond for forskning, uddannelse og praksisudvikling, Fysioterapi-praksisfonden, RMs Praksis-forskningsfond, Forskningsfond Hospitalsenheden Vest og Aarhus Universitet
Søren Mose	Trajectories of health care service utilisation in people with musculoskeletal disorders in Denmark	Johan Hviid Andersen	RHG	28.10 2022	VIA University College, Gigtforeningen, NIDO, RHG
Mia Klinkvort Kempel	The impact of social inequality and insecurity on the risk of early signs of cardiovascular and metabolic disease in young adults	Johan Hviid Andersen	RHG	23.09 2022	Karen Elise Jensens Fond, RMs sundhedsvidenskabelige forskningsfond
Birgitte Hamann Laustsen	Occupational asthma and allergy in the Greenlandic fish processing industry	Jakob Bønløkke	AAUH	27.06 2022	Polar Seafood, Royal Greenland, Grønlands Sundhedsvidenskabelige Forskningsråd, Arbejdsmarkedets parter, Arbejdsmiljørådet, Grønlandsbanken, AMFF
Karin Rosenkilde Laursen	Acute health effects of fine and ultrafine particles in indoor air – A human exposure study among vulnerable population subgroups	Torben Sigsgaard	AU	10.12 2021	Realдания, AU
Signe Hjuler Boudigaard	Occupational Exposure to Respirable Crystalline Silica, Styrene and risk of Autoimmune Rheumatic Diseases.	Henrik Kolstad	AUH	24.02 2021	AMFF

Candidate	Thesis title	Main supervisor	Department	Defence	Funding
Signe Timm	Asthma and farm exposure in early life and across generations.	Vivi Schlünssen	AU	29.01 2021	Sektion for Miljø, Arbejde og Sundhed, AU
Martin Rune Hansen	VEctor Control, Asthma and Diabetes in Uganda (VECADU)	Vivi Schlünssen	AU	16.06 2020	AU, NFA
Kristoffer Norheim	Physical fitness among older manual workers	Pascal Madeleine	AAUH, AAU	12.06 2020	AMFF
Liv Marit Valen Schougaard	Liv efter apopleksi	Niels Henrik Hjøllund	RHG	04.06 2020	RM
Kathrine Pape	Stress faktorer på arbejde og i privatliv hos gravide kvinder: Betydning for astma og andre allergiske sygdomme hos børnene	Vivi Schlünssen	AU	15.05 2020	AMFF
Per Høgh Poulsen	Social inequality in childhood and later effects on mental health and overweight	Johan Hvid Andersen	RHG	24.02 2020	Karen Elise Jensens fond og Herning kommune
Sofie Büneman Dalsgaard	Environmental Asbestos Exposure During Childhood and Cancer Risk Later in Life – A Long-term Register-based Cohort Study.	Øyvind Omland	AAUH	30.04 2019	Health, AU
Sorosh Tabatabaeifar	Carpal tunnel syndrome and work: time course of nerve impairment, incidence rates as sentinels of harmful occupational exposure, and prognosis	Poul Frost	AUH	30.11. 2018	AMFF
Marie Vestergaard Vad	Predictors of inguinal hernia repair and chronic postoperative pain - impact of occupational mechanical exposures	Poul Frost	AUH	29.10. 2018	AMFF
Dorte Raaby Andersen	Fængselsbetjentes håndtering af følelsesmæssige krav og belastninger i arbejdet	Thomas Lund	RHG	18.04 2018	AMFF
Stine Daugaard	Occupational light exposure, melatonin, and vitamin D	Henrik Kolstad	AUH	15.12 2017	KI
Pia Viuf Ørby	Cross-Disciplinary studies on pollen in health and environmental sciences	Vivi Schlünssen	AU	13.12 2017	AU
Anita Eskildsen	Work-related stress and cognitive impairments – a longitudinal clinical study	Johan Hviid Andersen	RHG	05.05 2017	AMFF
Ligaya Dalgaard	Treating patients on sick leave due to work-related stress – Two randomized controlled trials of a stress-management intervention	Johan Hviid Andersen	RHG	07.04 2017	AMFF

Candidate	Thesis title	Main supervisor	Department	Defence	Funding
Thomas Winther Frederiksen	Occupational Noise Exposure and Individual Risk Factors for Hearing Loss and Tinnitus	Henrik Kolstad	AUH	24.03 2017	AMFF
Anneli Clea Bolund	Change in lung function – The impact of organic dust exposure as well as associations with DNA methylation signatures	Vivi Schlünssen	AU	20.01 2017	AU
Mette Skovgaard Christensen	Styrene exposure and cancer risk in reinforced plastics workers – A long-term cohort study	Henrik Kolstad	AUH	02.9 2016	AMFF
Mette Lausten Hansen	Sick leave in pregnancy - risk factors and prognosis – Studies among Danish employed women	Cecilia Ramlau-Hansen	AUH	23.05 2016	Ramazzini, AU
Louise Pape Larsen	Life after Stroke – Self-rated health and return to work in a Danish cohort following stroke	Niels Henrik Hjøllund	RHG	02.03 2016	AU
Helene Tilma Vistisen	Short term effects of night shift work on risk of overall breast cancer and breast cancer classified by oestrogen and HER2 receptor status	Henrik Kolstad	AUH	18.12 2015	AMFF
Charlotte Rasmussen	Interpersonal behaviour and risk of workplace violence and threats	Annie Høegh	RHG	17.11 2015	AMFF
Annett Dalbøge	Occupational cumulative mechanical exposures as risk factors for surgery for subacromial impingement syndrome	Johan Hviid Andersen	AUH	25.04 2015	Ramazzini, AMFF, GRASPH, Gigtforeningen, Forsknings-Apparatur-fonden
Else Toft Würtz	Occupational Exposure and COPD – A Danish population-based study	Øyvind Omland	AAUH	24.03 2015	Region Nordjylland
Tanja Kirkegaard	Stress as a sociocultural phenomenon – Exploring the distributed nature of stress in an organizational context	Svend Brinkmann	RHG	06.01 2015	AMFF
Susanne Lund Kristensen	Reproductive function of young Danish women – Long-term effects of prenatal exposure to persistent environmental pollutants	Erik Ernst	AUH	17.11 2014	DSF, Beckett-Fonden, Div. legater og fonde
Birgit Bjerre Høyer	Prenatal exposure to persistent organic pollutants and physical, mental and motor development in young children	Gunnar Toft	AUH	31.10 2014	Ramazzini, AU, FP7
David Høyrup Christiansen	Physiotherapy and shoulder surgery – Exercise treatment before and after decompression	Susanne Wulff Svendsen	RHG	28.10 2014	Ramazzini, DSF

Candidate	Thesis title	Main supervisor	Department	Defence	Funding
	surgery in patients with subacromial impingement syndrome				
Trine Nøhr Winding	The transition from school to work life – Educational attainment and work environment in a Danish youth cohort	Johan Hviid Andersen	RHG	10.10 2014	AMFF
Zara Ann Stokholm	Occupational Noise Exposure, Physiological Stress, and Cardiovascular Health	Henrik Kolstad	AUH	21.02 2014	AMFF
Anne Vested	Reproductive health of young Danish men following prenatal exposure to persistent organic pollutants	Gunnar Toft	AUH	29.01 2014	FSS
Regine Grytnes	Tryghed i nuet – Arbejdssikkerhed blandt tømrerlæringer i Danmark	Anne Line Dalsgård	RHG	22.10 2013	AMFF
Matias Grynderup	Psychosocial working conditions, physiological stress, and the risk of depression	Henrik Kolstad	AUH	20.08 2013	Ramazzini, Lundbeck A/S
Grethe Elholm	The Effect of Farming Exposure on Allergy and Atopy	Øyvind Omland	AU	10.07 2013	Ramazzini, AU
Simon Grandjean Bamberger	Globalization, pressure to change and psychosocial work environment: the implication of management on mental health	Øyvind Omland	AAUH	25.06 2013	AMFF
Stine Yde Nielsen	Q fever in pregnancy and fetal health: Epidemiological studies	Niels Henrik Hjøllund	RHG	21.06 2013	Ramazzini, AMFF
Louise Møller Pedersen	Integreret ulykkesforebyggelse, delprojekt C	Peter Nielsen	RHG	05.06 2013	AMFF
Berit Hvass Christensen	Maternal occupational exposure during pregnancy and the risk of allergic disease in the children	Vivi Schlünssen	AU	03.06 2013	AAMF, AU
Karin Biering	Life after Heart Disease – Patient-reported health measures and prognosis following PCI treatment	Niels Henrik Hjøllund	RHG	31.05 2013	AMFF, Hjerteforeningen
Jens Christian Jensen	Predictors of care-seeking in general practice for back pain and upper extremity pain – A Danish population-based study	Johan Hviid Andersen	RHG	09.11 2012	AMFF

Candidate	Thesis title	Main supervisor	Department	Defence	Funding
Morten Søndergaard Jensen	Cryptorchidism in Denmark: Studies of Registry Validity, Disease Etiology, and Timing of Corrective Surgery	Ane Marie Thulstrup	AUH	17.08 2012	AU
Ioannis Basinas	Dust and endotoxin exposure in animal farming populations – Formulating the basis for a model-based exposure assessment approach	Torben Sigsgaard	AU	01.11 2011	AU, GRASPH
Morten Vejs Willert	Measures against work-related stress – results from a randomized, wait-list controlled trial of a group-based, cognitive behavioural stress management intervention	Ane Marie Thulstrup	AUH	01.10 2011	AMFF
Tine Rubak	Cumulative physical exposure in the work environment as a risk factor for primary osteoarthritis leading to total hip replacement	Poul Frost	AUH	28.05 2010	AMFF
Claus Dalsgaard Hansen	En sociologisk fortælling om sygefravær	Lisbeth B. Knudsen	RHG	09.04 2010	AMFF
Tine Halsen Malling	Glutathione Peroxidase 1 and asthma. A cross-sectional analysis of associations between genetic polymorphism, enzymatic activity, selenium concentration, oxidative stress and inflammatory disease in a population sample	Øyvind Omland	AAUH	29.06 2009	
Torsten Munch-Hansen	Prevention of Sickness Absence – A study of associations between psychosocial work conditions and health outcomes in a large public services population	Jens Peter Bonde	AUH	12.02 2009	AMFF

Completed Master Projects 2023

Candidate	Faculty	Thesis title	Supervisors	Department
Anna Rind	Medicine	Occupational exposure to respirable crystalline silica and the risk of glomerulonephritis	Inge Brosbøl Iversen Zara Ann Stokholm	AUH
Anne Clemmesen	Medicine	Personlighedstræk og coping strategier hos sygemeldte med arbejdsrelateret stress	Ole Carstensen	RHG
Anne Sofie Kjær Madsen Luise Birkekær Jensen	Public Health	Erhvervsrelateret eksponering for træstøv og risiko for kontaktdermatitis blandt møbelindustriarbejdere	Theresa Møller Kynde Vivi Schlünssen	AU
Christine M. Eggertsen	Medicine	Respiratory symptoms among epoxy exposed workers in the wind turbine industry: A cross-sectional study	Alexandra G. Christiansen Annett Dalbøge	AUH
Daniel Damm Matthiesen	Medicine	Shift work and its potential negative impact on male fertility	Mette Wulf Christensen Annett Dalbøge	AUH
Ea Korsgaard Thorsen Nicholas Hovgaard	Medicine	Sammenhængen mellem fysisk belastning i arbejdet og udvikling af artrose (slidgigt) i skulder (herunder acromioklavikulærled og glenohumeral led)	Alexander Jahn Jensen Annett Dalbøge	AUH
Jákup F. Hansen	Medicine	Associations between serum amyloid A and ischemic heart disease – a review	Karoline Kærgaard Hansen Henrik Kolstad	AUH
Jesper Haug	Medicine	Validity of self-reported exposure to night shift work by breast cancer status	Jesper M. Vestergaard Henrik Kolstad	AUH
Jim Nørgaard Bøjstrup Stine Juul	Public Health	The association between friendship and self-rated health in a young danish cohort	Vivi Just-Nørregaard Trine Nøhr Winding	RHG
Julie Honoré	Public Health	Prenatal air pollution exposure and adverse pregnancy outcomes: A Danish nationwide register-based cohort study	Jörg Schullehner Karin Rosenkilde Laursen Torben Sigsgaard	AU
Julie Mols	Medicine	Association between workplace bullying and depression	Lea Nørgaard Sørensen Zara Ann Stokholm	AUH
Lasse L. Jørgensen	Medicine	Occupational noise and testosterone	Zara Ann Stokholm	AUH
Mads L. Persson	Psychology	Arbejdsstatus i patienter diagnosticeret med arbejdsrelateret ptsd: et prognostisk studie	Morten Vejs Willert	AUH

Candidate	Faculty	Thesis title	Supervisors	Department
Candidate	Faculty	Thesis title	Supervisors	Department
Mathilde Sidsel Nielsen	Medicine	Night work and prostate cancer: A systematic review	Alexander Jahn Jensen Annett Dalbøge	AUH
Michelle Vendelhaven	Medicine	Associations between ACEs and inflammation development (of the pro-inflammatory cytokine IL-6) in young adults	Mia Klinkvort Kempel Trine Nøhr Winding	RHG
Staseharan Srivijayasekaran	Medicine	Occupational exposure to inorganic dusts and risk of sarcoidosis	Inge Brosbøl Iversen Henrik Kolstad	AUH
Vemund Vestbakken Nilsen	Medicine	Pelvic pain during pregnancy	Jane B. Lauridsen Henrik Kolstad	AUH

Ongoing Research Projects 2023

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
AiRMA: Airborne Microbiome and Allergic diseases	The study explores the relationship between the airborne and respiratory microbiome and their relation to the occurrence of respiratory allergy.	The study is designed as a cross-sectional study among 600 men; 200 homing pigeon breeders, 200 farmers, and 200 urbanites. From all, swaps from tonsils and nose and airborne dust from sleeping rooms are collected for microbiome analysis. They will also answer questionnaires and have a clinical exam.	AUH (Christine Cramer, Henrik Kolstad) AU (Christine Cramer, Vivi Schlünssen, Torben Sigsgaard, Grethe Elholm)	AU: Dept of Biology, Section for Microbiology. AUH: Dept of Otorhinolaryngology, Head and Neck Surgery.	AU. Ørelæge Hans Skouby's og Hustru Emma Skouby's Fond. 1.800.000	2019-2023
Arm elevation and shoulder complaints	The aim is to examine the relationship between work with arms elevated and the risk of shoulder disorders.	The project comprises four epidemiologic studies, that uses an existing cohort of app 2½ million Danes. The outcome is surgery for subacromial impingement syndrome. Data about work with elevated arms are obtained by linking individual job information (1993-now) to a validated shoulder database with exposure targets based on technical measurements. The exposure-response relationship is examined by logistic regression controlled for other risk factors.	AUH (Annett Dalbøge) RHG (Johan Hviid Andersen)	Bispebjerg Hospital: Dept of Occupational and Environmental Medicine. Washington University. IRSET. University of Angers.	AMFF. Gigtforeningen. 2.163.364	2020-2023
ARMIE: Arrhythmia, Myocardial infarction & the Environment	The main aim of ARMIE is to examine the effect of fluctuating levels in air pollution on cardiovascular patients' risk of various cardiovascular outcomes.	The studies are mainly conducted using the case-crossover method. We include two cohorts. The first one is a cohort of ICD patients with an outcome of arrhythmias. The other cohort includes 14.000 cases of acute myocardial infarction.	AU (Asbjørn Kloppenborg, Torben Sigsgaard, Rasmus Østergaard Nielsen)	AUH: Dept of Cardiology Christoffer Witt, Jens Cosedis, Michael Mæng)	Karen Elise Jensens Fond 3.170.000	2021-2024

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
ASBYG: Is there harmful exposure to asbestos in the building industry in Denmark? Optimised methods for quantification and health monitoring	Collect samples and measure asbestos exposure in a representative part of work tasks within demolition and renovation of buildings in Denmark. To optimise and if possible partly automatize measurement and registration methods. To estimate the occurrence of fibrosis on CT scans of construction workers.	Wearable and stationary measurements at the construction sites. Development of app and lab techniques.	AAUH (Jakob Bønløkke) AU (Vivi Schlünssen, Torben Sigsgaard) AUH (Henrik Kolstad, Inge Iversen)	Joblife Kolding. AMI.	AMFF 3.000.000	2019-2023
Association between occupational mechanical exposures and Dupuytren's disease: a systematic review and meta-analysis	Identify and evaluate the current epidemiological knowledge on relation between chronic low back pain and work related exposure.	Systematic review and meta-analysis of existing epidemiological literature.	AUH (Annett Dalbøge, Alexander Jahn Jensen) HEV (Johan Hviid Andersen)	Angers University hospital, France Donald and Barbara Zucker School of Medicine, Hofstra-Northwell, USA	AMFF 593.018 kr.	2023-2024
Association between occupational exposures and hip arthritis: A systematic review	Identify and evaluate the current epidemiological knowledge on relation between development of hip arthritis and work related exposure.	Systematic review of existing literature.	AUH (Annett Dalbøge, Alexander Jahn Jensen) RHG (Johan Hviid Andersen, David Høyrup Christiansen)	Technische Universität Dresden (Prof. Andreas Seidler)	AMFF 738.299	2022-2023
BERTHA (Big Data Centre for Environment and Health).	BERTHA aims to explore the environment's (air, water and soil) effect on somatic disorders.	Studies of the Danish population via registers, including health-, social-, and environmental registers.	AU (Vivi Schlünssen, Torben Sigsgaard, Signe Frandsen, Jörg Schullehner, Rasmus Østergaard, Asbjørn Kloppenborg)	AU: ENVS CIRRAU. AUH: DBDS, Heart. Utrecht University. Harvard School of Public Health.	Novo Nordisk Fonden 15.000.000	2019-2024

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
Better mental health in adolescence			RHG (Christine Leonhard Birk Sørensen, Karin Biering)		Sygeforsikringen "danmark", KV fonden	2022-2024
CARDit: Shift work and risk of cardiovascular disease and breast cancer, a 10-year follow-up study based on daily work hour recordings.	To explore the relationship between shift work and cardiovascular disease and breast cancer, the importance of duration and intensity of work time patterns and potentially vulnerable groups of workers.	Follow-up study of 260.000 regional employers 2007-2015. Daily data about work time from Danish Working Hour Database, outcome data from the National Patient Register. Rate ratios are estimated in Poisson models adjusted for a series of covariates.	AUH (Jesper Medom Vestergaard, Annett Dalbøge, Henrik Kolstad)	Finnish Institute of Occupational Health. NFA. KU: Dept of Public Health. The Danish Cancer Society. AUH: Dept of Plastic and Breast Surgery. Bispebjerg Hospital: Dept of Occupational and Environmental Medicine.	AMFF 2.820.000	2019-2023
COBRA: COVID-19 among Regional Employers.	The aim is to identify risk factors for SARSCov-2 infection among hospital workers.	A longitudinal study with daily questionnaires linked to PCR and serology for SARS-CoV-2 and other register-based information of health and work.	AUH RHG AU	Bispebjerg Hospital: Dept of Occupational and Environmental Medicine. AUH: Depts of Infectious Diseases, Clinical Immunology, and Clinical Microbiology.	Region Midtjylland 525000. AMFF 1.800.000	2020-2025
DOC*X DUST Working in dust and ischemic heart disease. A national register-based follow-up study from 1970-2020			AUH (Zara Ann Stokholm, Henrik Kolstad)¶AU (Vivi Schlünssen)	Bispebjerg Hospital: Dept of Occupational and Environmental Medicine.	AMFF 3.408.000	2022-2023
EKSACT: Occupational dust exposure and early pulmonary diseases.	The study aims to analyse the relationship between dust levels and early COLD and lung fibrosis and to determine the occurrence of early COLD and lung fibrosis in professions and fields	A cross-sectional study of 25.000 employers who have had a lung CT scan. The extent of lung changes is decided by CT-analysis software. Dust exposure is estimated from the	AUH (Inge Brosbøl Iversen, Henrik Kolstad, Else Toft Würtz, Zara Ann Stokholm)	Bispebjerg Hospital AUH: Depts. of Radiology, Respiratory Diseases and Allergy, Medical Technology. Herlev and Gentofte Hospital Utrecht University:	AMFF 3.600.000	2020-2023

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
	in the Danish labour market.	participants' work history and job exposure matrices.	AU (Vivi Schlünssen). AAUH (Jakob Bønløkke)	Institute for Risk Assessment Sciences.		
EPHOR: Exposome project for health and occupational research.	This EU project seeks to explore the relationship between all work related exposures (working life exposome) and chronic diseases. DRC is partner in more work packages, the most important being WP6 (Working life exposome, lung function and COPD), WP2 (Assessment of multiple exposures in large populations), and WP5 (EPHOR mega cohort).	EPHOR applies existing data from cohorts with occupational information in combination with the collection of new data of both exposure and outcome focusing on night work (WP7) and respiratory disease (WP6). JEMs are central in EPHOR, including the development of a EuroJEM.	AU (Anne Mette Lund Würtz, Theresa Kynde Møller, Kirsten Østergaard, Christine Cramer, Vibeke Heitmann Gutzke, Torben Sigsgaard, Vivi Schlünssen) AUH (Henrik Kolstad, Annett Dalbøge, Else Toft Würtz, Kirsten Pugdahl, Morten Vejs Willert, Mette Wulf Christensen).	18 European partners. The coordinating centre is TNO from Holland.	Horizon 2020. Sci-BHC-2018-2020 8.600.000	2020-2024
EPOXY VISION: Working safely with epoxy – can visualisation reduce skin contact and risk of eczema?	To examine if UV-visualisation of skin contact with epoxy can reduce the risk of skin exposure, epoxy sensitization, and eczema.	A randomised controlled study of 200 workers in the wind turbine industry. All participants have quantified epoxy-fluorescence, but only the intervention group gets to know the result. Outcomes are later epoxy-fluorescence and skin sensitization determined by a patch test.	AUH (Alexandra Golabek Christiansen, Henrik Kolstad) AU (Vivi Schlünssen) RHG (Ole Carstensen). AAUH (Jakob Bønløkke).	AUH: Dept of Dermatology. NFA. Lund University. Siemens-Gamesa.	AMFF 3.399.035	2018-2023
Importance of psychosocial stressors and social inequality in adolescence and early adulthood for the risk of developing prediabetes (PD)	1) To examine the relationship between psychosocial stress in adolescence and early adulthood and the risk of PD and T2D. 2) To examine the importance of loneliness and stigmatisation for weight in adolescence and early	All sub-studies in this ph.d.-project use data from the Vestliv cohort, including data from a new collection round in 2021. Register data will also be applied. Information of the participants' PD or T2D status is collected via blood tests, measuring the HbA1c level etc.	RHG (Vivi Just-Nørregaard, Trine Nøhr Winding, Johan Hviid Andersen)	AU: Dept of Psychology and Behavioural Sciences. Steno Diabetes Center Aarhus.	Klinisk medicin, AU 1.800.000	2020-2023

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
and type 2 diabetes (T2D).	adulthood. 3) To identify psychosocial risk factors in adolescence and early adulthood as predictors of PD and T2D.					
Intermittent sickness absence in two large organisations.	The aim is to identify patterns and reasons for repeated episodes of intermittent sickness absence in two large Danish organisations to develop guidelines for leaders/organisations to help them find a more appropriate approach for this type of sickness absence.	Questionnaires and qualitative interviews.	RHG (Regine Grytnes, Trine Nøhr Winding)	AU: Dept of Psychology and Behavioural Sciences. AAU: Dept of Sociology and Social Work	AMFF 2.600.000	2020-2023
Measuring precarious work among young Danish employees.	The overall aim is to develop and validate a Danish questionnaire to measure precarious work among young employees in the Danish labour market. The aim is also 1) to explore the organisational work environment and the mental health of precarious workers, and 2) to identify psychological and social risk factors in adolescence and early adulthood for precarious work among young employees.	Method: Literature search, Operationalisation and adaptation of the term precarious work via theoretical discussions with sociologists and the labour market parties, Formulation of questions and answer scales based on above and available validated measuring tools, a Pilot test of a new measurement tool, Distribution of a questionnaire in the existing cohort study VestLiv year 1983+1989. Examine the reliability and validity of the developed questionnaire.	RHG (Per Høgh Poulsen, Johan Hviid Andersen, Trine Nøhr Winding, Karin Biering)	AAU: Dept of Sociology and Social Work (Rasmus Juul Møbjerg)	Velliv Foreningen 2.385.136	2021-2024

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
Mechanical exoskeletons to reduce shoulder strain in Danish slaughterhouses – a field study.	The aim is to examine the use of mechanical exoskeletons in industrial slaughterhouses, including the ability of the exoskeletons to reduce shoulder strain, as well as possible barriers for their use in the daily work at Danish slaughterhouses.	The project is conducted as a mixed-methods-study, where reduction in physical shoulder exposures and possible applications of exoskeletons are examined by both a quantitative study (EMG and accelerometer) and a qualitative sub-study (observations and interviews).	RHG (David Høyrup Christiansen, Regine Grytnes, Jeppe Frist Andersen) AUH (Annett Dalbøge)	Danish Crown Ringsted. Université Laval Canada.	AMFF 2.462.830	2020-2023
Muscle- and skeletal problems – Impacted by the workplace culture?	The aim is to explore how the workplace culture affects the approach of muscle- and skeletal problems (MSP-culture), and how the MSB-culture impacts workability and sickness absence in professions with high physical work demands.	The project is conducted as a mixed-method study, where quantitative (questionnaires) and qualitative (observation and interview) methods are combined. The study is done among workers in two fields with high physical work demands: Slaughterhouse workers and employees in the nursing sector.	RHG (David Høyrup Christiansen, Johan Hviid Andersen, Dorte Raaby Andersen, Kent J. Nielsen)	Danish Crown. Tican. Ringkøbing-Skjern municipality.	AMFF 2.999.860	2018-2023
Occupational mechanical exposures and severe low back disease			RHG (Mathias Moselund Rønnow, Johan Hviid Andersen, David Høyrup Christiansen)		AMFF 2.200.000	2022-2024
Prevention of cattle handling related accidents – Development of measurable indicators.	This project aims to develop measurable indicators for safe work with dairy cattle in farming with a special focus on the physical environment, the behaviour of the animals, and interaction between humans and animals.	Analyses of earlier accidents, technology assessment, video recordings of the handling of cattle.	RHG (Kent Nielsen)	SEGES. AU: Dept of Engineering and Danish Centre For Food and Agriculture.	AMFF 2.300.000	2020-2023

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
PRO-MENTA: Consequences of organisational changes for productivity and mental health.	The project aims to examine the consequence of major organisational changes for employee sickness absence and mental health and workplace productivity and staff turnover to identify risk factors for negative consequences.	A cohort study based on all employees at Aarhus University Hospital in the period 2013-2020. The persons are embedded in their departments and the departments are set equal at an index month 0 defined by moving time. The cohort is followed-up in regional and national registers from 2 years before and 2 years after the move. The exposure is divided into move, move+division, and move+merging.	AUH (Morten Vejs Willert, Lea Nørgaard Sørensen) RHG (Marianne Kyndi)	AU: Dept of Psychology and Behavioural Sciences. Bispebjerg Hospital: Dept of Occupational and Environmental Medicine.	Velliv Foreningen 2.120.134	2021-2023
PRO-RISK: Prognosis for future work life and health and identification of groups at risk for work-related disorders	Aim: 1) To establish a national occupational medicine cohort. 2) To explore the long-term prognosis for the major patient groups. 3) To develop prognostic models for work and health for patients with occupational mental health problems.	The cohort is established in collaboration with DOC*X and includes app. 160.000 patients examined at the occupational medicine clinics from the year 2000 and forwards. Register data are obtained from 5 years before inclusion and forwards from the National Patient Register, the Public Health Insurance Register and DREAM and other registers. Furthermore, matrices of mental work environment, lifestyle etc. developed by DOC*X is used. The project is solely register-based.	AUH (Morten Vejs Willert) RHG (Marianne Kyndi)	AU: Dept of Psychology and Behavioural Sciences.	AMFF 1.647.000	2019-2024
Ramazzini guest professor	To establish the Danish Ramazzini Centre Bio-bank, a research infrastructure compiling nine Ramazzini cohorts with biobanked material with the objective to delineate work life exposures, biological mechanisms and chronic diseases.	Close collaboration with Karin Broberg, Lund University and Karolinska Institutet as a visiting professor at Danish Ramazzini Center.	AUH, RHG, AU, AAUH	Lund University, Karolinska Institutet, NFA	AUFF 223.000	2022-2023

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
RHINE: Risk factors for asthma in adults	RHINE aims to analyse risk factors for respiratory disease and allergy.	Cohort study based on questionnaires and clinical evaluations.	AU (Vivi Schlünssen, Torben Sigsgaard, Signe Timm, Kathrine Pape Madsen)	Nordic Multicentre study, 7 centres.	Træstøvsfonden 460.000	2010-2023
RHINESSA: Trans-generational study of asthma, allergy and inflammatory bowel disease	RHINESSA aims to analyse risk factors for respiratory disease and allergy in generations.	Cohort study based on questionnaires and clinical evaluations.	AU (Vivi Schlünssen, Torben Sigsgaard, Signe Timm, Kathrine Pape Madsen)	International multi-centre study, 12 centres.	AU Træstøvsfonden 2.000.000	2013-2023
Safe and allergy-friendly housing in Lisbjerg	Interdisciplinary research project focusing on collecting qualitative and quantitative knowledge from persons with diverse chemical hypersensitivity before and after moving into new allergy-friendly housing.	The qualitative study comprises interviews with app. 7 of the persons wishing to move into the new housing. The quantitative study comprises a questionnaire regarding symptoms and self-reported health sent to all occupants and repeated after 6, 12 og 24 months.	AU (Grethe Elholm, Torben Sigsgaard are advisors of the project)	AAUH: Center for funktionelle lidelser, Foreningen Sunde Boliger (Mette Feldmeier), MOE rådgivende ingeniører.	Realdania 500.000	2022-2025
Safe work with Enzymes, Allergy, and Athma – the EnzymA-project	To uncover exposure-response relations between enzymes in the work environment, enzyme allergies, and asthma, as a basis for health-based exposure limit values. We will: 1) Map exposure levels to enzymes and the prevalence of enzyme allergies and asthma in the animal feed industry and agriculture; 2) Analyse exposure-response relations between enzymes, enzyme allergies and asthma in	800 measurements of enzyme levels for 550 employees in the animal feed industry and agriculture, evaluating enzyme allergies and asthma using skin prick tests, blood samples, and lung function tests. Enzyme measurements from 15-year-old frozen dust samples from agriculture, coupled with participants' work histories, will be used to estimate their long-term exposure.	AUH (Zara Ann Stokholm, Karoline Kærgaard Hansen, Henrik Kolstad) AU (Vivi Schlünssen, Torben Sigsgaard)	SEGES, International Flavors & Fragrances (IFF), Institute for Prevention and Occupational Medicine of the German Social Accident Insurance (IPA), AUH (Lunge-medicin), AU (Institut for Ingeniørvidenskab)	AMFF 3,7 mio. kr. og Karen Elise Jensen Fonden 1 mio	2024-2027

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
	the animal feed industry and agriculture, 3) Analyse exposure-response relations for various industrial enzymes and the incidence of enzyme allergies and asthma based on our analyses and published data from other sectors					
SERMAB: Styrene Exposure and Risk of Malignant Blood diseases	To examine if exposure to styrene, a versatile plastic, increases the risk of malignant blood diseases in humans.	Follow-up study of 100.000 persons, who since 1947 have worked in 762 fibreglass companies in Finland, Italy, Great Britain, USA and Denmark. Malignant blood diseases are identified in national registers of causes of death and cancer registers. Exposure levels are determined using an industry-specific quantitative JEM.	AUH (Mette Wulf Christensen, Henrik Kolstad) AU (Vivi Schlünssen)	AUH, Haematology, Finnish Cancer Registry, San Martino Teaching Hospital, Liguria Mesothelioma Registry, Emilia-Romagna University Hospital, Turin MRC, Life Course Epidemiology Unit Southampton, IOM, NIOSH, IsGloba, University of Nebraska, IARC, STAMI.	Karen Elise Jensens Fond 2.500.000	2021-2023
SPRINT: Sustainable plant protection products and their effects on ecosystems, plants, animals and humans	SPRINT aims at exploring pesticides (plant protection products) in humans, animals, plants and ecosystems in 11 European countries and Argentina.	Among conventional and ecological farms, neighbours and closely living families, we will examine the pesticides levels. Based on these results we will develop a tool to evaluate the pros and cons of pesticide use in the EU.	AU (Anne Vested, Kirsten Østergaard, Vibeke Heitmann Gutzke, Torben Sigsgaard, Vivi Schlünssen)	21 European partners. The coordinating centre is Wageningen University in Holland.	Horizon 2020. H2020-SFS-2018-2020. 1.567.000	2020-2024

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
Stress and mental health in adolescents	<p>Stress: To develop and validate a prediction model to identify adolescents with a risk of high levels of stress in early adulthood.</p> <p>Mental health: To identify protective factors during adolescence and early adulthood that mitigate the associations between risk factors and poor mental health.</p> <p>Other related purposes: To validate and to test the reliability of the perceived stress scale (PSS) in a youth population</p>	Vestliv, FOCA, register, questionnaires	RHG (Karin Biering, Christine LB Sørensen, Pernille Bach Steen)	<p>AUH: Depts of Psychiatry and Clinical Epidemiology (KEA)</p> <p>AU: Dept of Psychology University of Groningen</p>	<p>Sygeforsikringen Danmark.</p> <p>5.000.000</p>	2022-2026
Systematic evaluation of working conditions and organisation of individual work - a model to decrease sick leave during pregnancy	The project aims to start and evaluate an intervention focusing on work organisation for pregnant employees at AUH via tripartite dialogue, and thus possibly reduce the sickness absence.	The intervention is conducted in a cluster randomised design with the participation of departments at AUH. Half of the departments receive the intervention while the other half follows usual procedures. The primary effect of the intervention is measured by the number of days with sickness absence in the intervention and control groups.	AUH (Jane Bjerregaard Lauridsen, Rikke Damkjær Maimburg, Mette Lausten Hansen, Ane Marie Thulstrup)†RHG (Dorte Raaby Andersen).	AUH: Dept of Obstetrics and Gynaecology.	<p>Sundhedsstyrelsen, AMFF, RM Folkesundhed i Midten, Jordemoderforening en</p> <p>6.064.175</p>	2019-2024
The chemical and biological work environment when recycling municipal waste: The RECYCLE-project	The study aims at documenting exposure levels and early health effects by recycling the municipal waste in Denmark. Furthermore, the study aims at identifying factors in production that can lead to increased	The study is designed as a cross-sectional study among 150 selected workers from 30 small and large, private and municipal sorting- and recycling companies. Exposure levels are estimated from person worn measurements and blood samples, and early	AUH (Karoline Kærgaard Hansen, Henrik Kolstad) AU (Vivi Schlünssen, Torben Sigsgaard)	<p>NFA. Karolinska Institutet. 3F. Dansk Industri. Dansk Kompetencecenter for Affald (DAKOFA).</p>	<p>AMFF</p> <p>4.000.000</p>	2020-2023

Title	Aim	Materials and Methods	Internal partners	External collaboration partners	Funding	Time period
	exposure levels by re-cycling municipal waste.	health effects by lung function test and questionnaire etc.				
The trajectory of stress from adolescence to young adulthood			RHG (Pernille Bach Steen, Karin Biering)		Sygeforsikringen "danmark"	2022-2024
"Trods alt - på arbejdet med et smil". Workplace protection of employees against stress reactions and high emotional demands.	1. To identify workplace protective factors for reducing the relation between emotional demands and mental health problems. 2. To explore how workplaces with high emotional demands effectively at the individual, group, and workplace level prevent mental health problems 3. To develop and validate guidelines for prevention of mental health problems in occupations with high emotional demands.	Three rounds of questionnaires in professions with high work demands. Qualitative interviews at selected workplaces with successful preventive strategies.	RHG (Lars Peter Andersen, Dorte Raaby Andersen)	Odense University Hospital: Occupational and Environmental Medicine.	AMFF 2.132.000	2020-2023
UVScan	To examine the relationship between occupational exposure to solar UV-radiation and risk of skin cancer among Danish workers.	Register-based follow-up study on the entire Danish working population from 1976-2015 (DOC*X cohort). Exploring dosis-response relationships. Using the the Danish Cancer Registry.	AUH (Ida Kristen-sen, Zara Ann Stokholm, Henrik Kolstad, Alexandra Golabek Christian-sen, Inge Brosbøl Iversen) AAUH (Else Toft Würtz)	AU: Department of Clinical Epidemiology	Kræftens Bekæmpelse 120.000	2023-2024

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