



News from the chair

We are pleased to announce this first issue of the Inflammation Network newsletter, which we expect to publish approximately four times a year. One of the purposes of having a regularly published newsletter is to increase the visibility of infection & inflammation research at the faculty of Health, Aarhus University and beyond – both internally and externally and, at the same time, keep researchers informed about ongoing research projects and initiatives. The newsletter is one of several initiatives launched by the Inflammation Network to work towards our [network vision](#) that, overall, aims at promoting and strengthening the infection & inflammation field at Aarhus University.

The Inflammation network was established in 2020 by the faculty management at Health, but its upstart has been challenged by the COVID-19 situation. Therefore, it was a great pleasure, when we in November 2021 finally were able to meet in person and celebrate the inauguration of the network. We believe that we had an outstanding day with excellent scientific presentations by internal as well as external invited speakers that fully met our expectations of bridging basic and clinical research in infection and inflammation and facilitating new collaborative interactions across disciplines. The 1st Inflammation Network Day underscored the breadth and depth of the network, covering research within infection immunology, tumor immunology, autoimmunity, COVID pathogenesis, vascular immunology, inflammatory biomarkers, and macrophages – just to mention a few. Read more about the network and [Research Environments](#) at our [website](#). We will be happy to include your research group at our website too! If you would like your research group added, please submit a short text (max. 300 words), keywords, and an illustration of your research to research-networks.health@au.dk.

Finally, we like to call your attention to the new Dean Anne-Mette Hvas' Merry Christmas letter describing her vision for the AU networks. As evident, the Dean envisions that the professional networks at Health will receive a lot of attention in the future and increasingly become a focus point for new interdisciplinary collaborations and teaching – both nationally and internationally. We, therefore, hope you would consider engaging actively in the Inflammation Network. Please reach out to us if you have ideas for new network activities and initiatives, such as PhD courses, seminar series, core facilities, research collaborations, grant applications etc.!

Trine Mogensen, Managing Professor

Dean's remarks

I am very impressed by all the activity already on track in the Inflammation Network. The stories told below are mainly by senior researchers, but the network also provides room for activities early on in a research carrier. I can strongly encourage being active within the Inflammation Network – also if you are a (very) junior researcher.

Anne-Mette Hvas, Dean of the Faculty of Health

Annual Inflammation Network Day | 2021 & 2022



On 11 November 2021, more than 100 researchers from different university departments, research units, and hospital departments met to launch the Inflammation Network. The day included, among others, excellent keynotes from Professor Alexandre Belot from University of Lyon and Professor Niels Ødum from the LEO Foundation Skin Immunology Research Center at University of Copenhagen as well as inspiring talks by local experts and flash talks by younger researchers from Aarhus University (AU) and Aarhus University Hospital (AUH). Read more about the [network inaugural meeting](#), where we were finally able to meet face-to-face, interact, discuss research and, most importantly, have informal conversations. Congratulations to the winner of the Flash Talk Competition PhD student Sofie Fonager!



**31
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The next annual meeting – 2nd Inflammation Network Day- is scheduled for 31 August 2022. Please mark the calendar for this meeting and stay updated at the Inflammation Network [website](#).

A Memoir from Travelling in the Neighborhood

Among many scientists of all flavors, one of the significant sparkles of the trade is resolute internationalism. No doubt, our scientific work, especially in the health sciences, takes a needed and necessary input this way, also in Aarhus. But sometimes, you may not need to go very far to find an

interested and relevant audience for your thoughts. On a September afternoon, one of us (TV-J) took to travel by using the indefiable Light Rail from Dept. of Biomedicine to Aarhus University Hospital – Skejby. The visit came out of meetings in the Inflammation Network, where Ellen-Margrethe Hauge kindly made this invitation. The conference room was full, the questions were numerous, and the discussions were driven by scientific curiosity. It was clear to the audience that the departments of Biomedicine and Rheumatology represent a particular strength in having medical doctors sharing their professional lives between the university and the hospital. Bent Deleuran, as a professor and consultant, has been the initiator of this unique collaboration. Large and well-characterized clinical cohorts with associated biobanks provide systematic clinical information for basic science. Several young medical doctors are now travelling the bridge between Biomedicine and Rheumatology, they are establishing themselves as research group leaders, and they are becoming trained rheumatologists. Let us mention [Tue Wenzel Kragstrup](#), [Stinne Ravn Greisen](#) and [Anne Margrethe Troldborg](#). Fortunately, this is not unusual for the Health Faculty, least in the inflammation area. However, maybe the novel aspect was the appreciation of the worth of a talk by one investigator in one environment now physically appearing in the other. The talk stimulated a fascinating discussion, for example on biomarkers versus the broader picture of clinical manifestation recorded by the treating physician. Both in its detailed scientific parts or the presentation of the perspectives of younger compared to more senior medical staff, this was the perfect setting for an informal discussion in a way you rarely find elsewhere. Altogether, it was felt that such an interaction was informative, valuable and fun to all parties involved. We strive to collaborate outside our organizations, so much that we tend to forget what is right in front of us. The Inflammation Network at Aarhus University is an inspiring opportunity to be stronger by building internal collaboration.

Thomas Vorup-Jensen, Dept. of Biomedicine & Ellen-Margrethe Hauge, Dept. of Rheumatology, AUH

Collaborations news – inspiring stories from the Inflammation Network

The Danish Ramazzini Centre, Karolinska Institutet and Lund University

The Danish Ramazzini Centre (a research collaboration between Dept. of Occupational Medicine at AUH, Regional Hospital West, Aalborg University Hospital and Dept. of Public Health at AU) deals with how environmental and occupational exposures affect health. The Danish Ramazzini Centre recently organized a meeting focusing on exposure and inflammatory markers, where professor Trine Mogensen, head of the Inflammation Network, contributed as lecture. This meeting inspired the invitation of Professor Karin Broberg from Karolinska Institutet and Lund University as guest professor funded by Aarhus University Research Fund (AUFF). Together with Karin, we will strengthen the use of omics and other biomarkers in our inflammatory research.

Henrik Kolstad, Dept. of Occupational Medicine AUH & Vivi Schlünssen, Dept. of Public Health

Health Professor will be heading a large EU Horizon project on COVID-19

Professor [Trine Mogensen](#) from Dept. of Biomedicine and Dept. of Clinical Medicine, Infectious Diseases will be heading a large collaborative European research project on COVID-19 that has received 50 million DKK from the Horizon Europe Programme. [Read more about the project](#), which will be conducted in collaboration with the global consortium COVID Human Genetic Effort, and aims at solving the enigma of why some COVID-19 patients become critical ill and develop long-term complications, whereas others do not get sick at all.

Paper of the Month

Every month the steering committee of the Inflammation Network selects one paper as their chosen “Paper of the Month” for publication at the website. By selecting “Paper of the Month”, the committee wants to highlight interesting papers as well as showcasing the academic breadth of the Inflammation Network. [Read more about this month’s paper](#) “The cGAS-STING pathway drives type I IFN immunopathology in COVID-19” (Domizio *et al.*), which has been selected by Professor [Trine Mogensen](#) from the Dept. of Biomedicine, AU, and Dept. of Infectious Diseases, AUH.

If you would like to nominate a paper for “Paper of the Month”, please send a nomination letter via email to research-networks.health@au.dk.

New “Omics” focus group at Health

In recent years, “omics” techniques have emerged as a powerful tool in the life and biomedical sciences, and have already changed the way we think about gene regulation, cell identity and tissue heterogeneity. Therefore, we would like to establish a “single cell/spatial transcriptomics” group that would connect researchers within AU and AUH, who are using these technologies in their projects. The aim of this focus group is to provide a platform where everyone could discuss experimental planning, data generation, analysis, and interpretation. We envision having regular in-person meetings, where everyone could get to know each other. Further, we wish to establish a “rapid-knowledge-exchange” online platform, where everyone could post/share their questions and receive rapid feedback. The further needs of the network will be tailored based on the feedback received from participants. If you would like to be part of the network, please contact us at focus.omics@au.dk.

Joanna Kalucka, AIAS, Dept. of Biomedicine & Christian Damsgaard, AIAS, Dept. of Biology

Ongoing infection & inflammation research at AU Health

June 2021

Associate Professor [Rikke Nørregaard](#) from Dept. of Clinical Medicine received 3 million DKK from Karen Elise Jensen Foundation to investigate the role of uremic toxins in cardiovascular disease.

Associate Professor [Tue Wenzel Kragstrup](#) from Dept. of Biomedicine, Clinical Professor [Ellen-Margrethe Hauge](#) from Dept. of Clinical Medicine, Section for Rheumatology and colleagues reviewed all clinical trials of targeted drugs used in the treatment of vasculitis. Based on the [systematic review, which has been published in *Autoimmunity Reviews*](#), the authors suggested categorizing diseases, in which inflammation of the blood vessels is the hallmark feature, according to cause of inflammation rather than according to vessel size, as has been the hitherto practice.

MD and PhD [Ole Schmeltz Søgaard](#), who is affiliated with the Dept. of Infectious Diseases, has been appointed professor at the Dept. of Clinical Medicine. [Read more about his research](#), which is centered on in the interaction between viral infections (e.g. HIV) and the immune system.

August 2021

Clinical Associate Professor [Christian Lodberg Hvas](#) from the Dept. of Clinical Medicine and colleagues showed in a recent study that the use of faecal microbiota transplantation (FMT) in treatment of recurrent infections varies considerably among European centers, Denmark being at the forefront. Read more about the [study published in *The Lancet Regional Health – Europe*](#) that revealed a significant gap in the usage of FMT activity.

PhD [Martin Roelsgaard Jakobsen](#) from Dept. of Biomedicine has been appointed Professor in infection and immunology. [Read more about his research](#) that is centered on the innate immune systems and its involvement of development of diseases such as cancer.

September 2021

Associate Professor [Rikke Nørregaard](#) and Associate Professor [Lene Niemann Nejsum](#) from Dept. of Clinical Medicine received 4.5 million DKK from the Open Discovery Innovation network (ODIN), AU to identify novel biomarkers as well as drug targets in human chronic kidney disease. The project will be performed in collaboration with Astra Zeneca, Novo Nordisk, and Nordic Bioscience.

PhD and consultant [Henrik Birn](#), who is also affiliated with Dept. of Medicine and Nephrology, has been appointed Professor at the Dept. of Clinical Medicine. [Read more about his research](#) in kidney diseases, failures, and transplantations.

October 2021

Postdoc [Kristian Juul-Madsen](#) and Professor [Thomas Vorup-Jensen](#) from Dept. of Biomedicine and collaborators showed in a paper published in [Proceedings of the National Academy of Sciences USA](#) that the technique Nanoparticle Tracking Analysis can be used to identify large particles in the blood

from patients with the autoimmune disease Lupus. The fact that the researchers observed an elevated level of these particles in Lupus patients compared to healthy controls makes it a promising diagnostic tool.

The research groups of Professor [Martin Roelsgaard Jakobsen](#) and Associate Professor [Rasmus Bak](#) at Dept. of Biomedicine and collaborators have, as the first in the world, succeeded in growing an important subtype of immune cells – the so-called plasmacytoid dendritic cells – in the laboratory. [Read more about their groundbreaking results](#) published in *eLife*.

November 2021

Associate Professor [Holger Brüggemann](#) from Dept. of Biomedicine received [2.2 million DK from the Leo Foundation](#) to explore the potential of using microbiome transplant in the treatment of acne vulgaris.

PhD student [Simon Mark Dahl Baunwall](#) from Dept. of Clinical Medicine was awarded the 2022 [Lundbeck Talent Prize](#) for his research on faecal microbiota transplantation.

December 2021

Professor [Karina Dalsgaard Sørensen](#) from Dept. of Clinical Medicine received 1.8 million DKK from the Novo Nordisk Foundation to **Stratify ProstAte Cancer aggrEssiveness through spatial molecular mapping of the Tumor mIcroenvironMEnt** (SPACETIME project).

Associate Professor [Rikke Nørregaard](#) and colleagues from Dept. of Clinical Medicine showed in a [paper published in ACTA Physiologica](#) that the inflammatory prostaglandin E2 EP1 receptor is a promising target for preventing both the onset and late stage of renal fibrosis in human chronic kidney disease.

Associate Professor [David Olganier](#) and colleagues from Dept. of Biomedicine showed in collaboration with a Canadian research group in a [paper published in ACS Infectious Diseases](#) that the FDA-approved antimalarial molecule Atovaquone protects lung cells against COVID-19.

Associate Professor [Tue Wenzel Kragstrup](#) and colleagues from Dept. of Biomedicine and the Dept. of Clinical Medicine, Section for Rheumatology showed in [paper published in open ACR Open Rheumatology](#) that the effectiveness of medicine in treatment of severe rheumatic diseases is determined by the composition of cells in the joint of the individual patient.

Professor [Søren Riis Paludan](#) from the Dept. of Biomedicine received [28.2 million DKK from the Lundbeck Foundation](#) to conduct research within, among others things, disease prevention, immunology, and viral infections of the brain.

January 2022

Professor [Trine Mogensen](#) from Dept. of Biomedicine and Dept. of Clinical Medicine, Infectious Diseases and Professor [Søren Riis Paludan](#) from the Dept. of Biomedicine published a [review in Science Immunology](#) that summarizes the current knowledge of the how the innate immunological

pathways drive host defense and pathological inflammation in the lungs of critically ill COVID-19 patients.

AIAS Incoming Fellow Professor Fulvio Reggiori received a [Laureate Grant of 50 million DDK from the Novo Nordisk Foundation](#) to start his own laboratory at Dept. of Biomedicine to strengthen autophagy research at Health in the areas infection, immunity, and neurodegeneration.

Postdoc [Paul Vinu Salachan](#), Professor [Karina Dalsgaard Sørensen](#) from Dept. of Clinical Medicine and colleagues revealed in an exploratory [study published in Genome Medicine](#) an important biological link between prostate cancer aggressiveness and dysbiosis of the prostate microbial ecosystem. Read more about the current knowledge of the role of the human microbiome in prostate cancer development, progression, and treatment response in a recent [review by the same authors in Journal of Experimental & Clinical Cancer Research](#).

Upcoming PhD courses

Below you will find a list of upcoming PhD courses related to infection & inflammation at Danish and NorDoc Universities. AU has entered into a [national agreement](#) that allows PhD students at a Danish university to attend a subject-specific PhD course free of charge at another Danish university. Furthermore, all PhD students enrolled at the Graduate School of Health can participate in PhD courses in the [NorDoc course database](#) at the NorDoc partner institutions free of charge.

March 2-4, 2022	Cancer immunology and immunotherapy (KU)
March 7-18, 2022	Infection microbiology: virulence and molecular microbiology (KU)
March 22-24, 2022	C283/04 Extracellular vesicles – an introduction (AU)
March 28-April, 2022	Shape the world with phage biology: isolation, sequencing, transduction and engineering of phages (KU)
April 19-21, 2022	B226/09 Molecular Immunology (AU)
April 27-29, 2022	B288/03 Host pathogen interactions – from basic microbiology and immunology to medicine (AU)
May 2-3, 2021	C307/01 Bacterial infections in implants and bone (AU)

Job opening within inflammation research

Dept. of Biomedicine, Health, Aarhus University invites applications for a position as [Assistant Professor in the field of infection and immunology](#). Application deadline: 23 February 2022.

Current funding opportunities for inflammation research

Independent Research Fund Denmark has an open call for Sapere Aude. Application deadline is 23 March 2022: [Sapere Aude: DFF-research leader – health and disease](#)

The Danish Cancer Society has an open call for younger researchers. Application deadline is 22 June 2022: [Young talented cancer researcher's grants](#)

European Molecular Biology Organisation has postdoctoral fellowships that enable lab visits worldwide. Application deadline is open: [European Molecular Biology Organisation – postdoctoral fellowships](#)

The Danish Cardiovascular Academy has open calls for PhD scholarships and postdoctoral fellowships. Application deadline is 1 March 2022: [DCAcademy PhD scholarships and postdoctoral fellowships](#)

Upcoming events

May 25, 2022	Danish Immunology Society Annual Meeting
August 31, 2022	2 nd Inflammation Network Day
September, 2022	Infection & Inflammation Day, Dept. of Biomedicine

Relevant links

The Research Support Office publishes a newsletter monthly. Register for and read the newsletter at the [Research Support Office website](#).

Link to newsletter archive at the [Inflammation Network website](#).

Input for the newsletter

The Inflammation Network would like to share and promote all relevant news and activities within the network via our newsletter. The newsletter is published 4 times a year.

We therefore encourage you to submit any input and news of interest to the network (e.g. publications, grants, conferences, seminars, open positions) to research-networks.health@au.dk .
Deadline for input to the next newsletter: **4 May 2022**
