



LUND
UNIVERSITY

EPIHEALTH

COMMUNICATIONS STRATEGY

NO. 1 | 2021

LUND UNIVERSITY | FACULTY OF MEDICINE | DEPARTMENT OF CLINICAL SCIENCES, MALMÖ



Epidemiology for Health

How do genes interact with the environment for risk of disease?

What links dietary intake, gut microbiota and organ function?

How does early life factors influence adult health?

Why do patients with the same disease have different prognosis?





EpiHealth 2021-2025

Epidemiology for Health - EpiHealth is a joint strategic research initiative between Lund University and Uppsala University with the aim to achieve and maintain national and international excellence in the field of epidemiological research.

The purpose of this communications strategy is to outline the approach we will take to ensure that existing research within the national and international communities are developed and communicated to relevant stakeholders.

The communications strategy has been approved by the EpiHealth Board with the intention to coordinate joint initiatives and to communicate the mission, vision and goals of this cooperation. It covers the years 2021-2025 and links with all other strategies across the organisation. It is based on the EpiHealth strategic plan 2020-2025.

OUR PRIORITIES

The EpiHealth network has a vision with a clear set of priorities which we wish to develop within three main research areas;

- Basic epidemiological research which aims to clarify the causal relationship between disease and ill health in the population based on the influence of genetic and environmental factors, and in the interaction between these..
- Applied epidemiology which aims to develop monitoring systems for prognosis, care processes and cost-effectiveness around what health care delivers and its preventive programs.
- A third priority is the expansion of the necessary infrastructures for epidemiological research, e.g. concerning national biobanks, research databases and human resources (biostatistics, informatics, pedagogy).

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”Our vision is to enable research developments and teachings of the latest findings in epidemiological methodology and technology and thus be able to advance science further”

THE EPIHEALTH EXECUTIVE BOARD

WHAT WE ARE TRYING TO ACHIEVE

The Strategic Research Area Epidemiology for Health - SRA EpiHealth has been active since 2010 and is funded by the Research Council (“Vetenskapsrådet”) of Sweden with the aim to promote national and international excellence in epidemiology.

The SRA has a leadership structure with a Steering Committee involving representatives from both universities, as well as an Executive Board. It is led by Lund University.

SRA EpiHealth is a very heterogeneous field of research and the need for epidemiological evidence and health statistics is increasing, both for academic and societal purposes. We wish to expand our communication with the research community and develop our research strategy based on cohorts, biobanks and register linkages with local, regional and national registers.

Access to big data, in combination with novel machine learning algorithms and solid epidemiologic reasoning, opens up vast new possibilities in medicine and public health research. It is our intention to benefit from advances in technology to help us develop the necessary infrastructures and processes to accomplish this.

In addition, we want to open up to new academic positions (tenure track), and to attract young researchers both with and without a medical professional training background. Also, we need to promote translational research based on our genetic studies.

Epidemiology attracts many researchers irrespective of gender and social or ethnical background. This means that we possess a great opportunity to find good collaborations both within Sweden and on the international arena. We intend to create collaborations that include joint projects with experimental researchers as well as international joint projects for validation and replication of our findings.

5 GOALS

THE AREAS BELOW SUM UP OUR COMMUNICATIONS WORK, WHICH WILL CONTRIBUTE TO THE DELIVERY OF ALL ACTIVITIES IN THE EPIHEALTH COOPERATION.

1. We pursue long-term scientific excellence in the field of epidemiological research
2. We aim to achieve strategic investments in new materials and methods as well as making existing data resources for epidemiological research visible and available
3. We want to ensure the development of knowledge and human resources. We intend to continue to develop and support various forms of knowledge transfer and information based on IT solutions (web page, e-learning) as well as a range of courses and seminars in advanced epidemiology
4. It is of utmost importance to us to collaborate with the surrounding society, with authorities, companies, organizations and institutions, such as HTA, SBU, Cochrane, but also with the general public to popularize findings in epidemiological research
5. We intend to develop our forms of governance, as well as systems for internal feedback. SRA EpiHealth differs from other strategic research areas by its cross-border nature as epidemiological research is represented in many different scientific disciplines and institutions



Interview with board member and faculty representative, Deputy Dean Martin L. Olsson



“The genetically upgraded EpiHealth cohort is a gold mine that could help more researchers excel”

A representative from the strategic research area (SRA) EpiHealth has talked to Martin L. Olsson, who is the faculty management representative on the EpiHealth board and Deputy Dean with special responsibility for research infrastructure and strategic issues at the faculty. Martin is also a Professor of Transfusion Medicine at the Department of Laboratory Medicine and a consultant in transfusion medicine at the Office for Medical Services in Region Skåne.

For his research, he was named a Wallenberg Clinical Scholar 2016–2026 and given 30 MSEK for his translational research about blood groups. He recently stepped down after serving as the President of the International Society of Blood Transfusion (ISBT) during the period 2018-2020. When asked what his assignment as an EpiHealth board member is, he answers,

“All strategic research areas (SRA) have a Faculty management representative who is a member of the board and my task is to ensure that SRA EpiHealth has a short and open communications channel to the Fa-

culty leadership and that it is easy for us to understand the challenges and successes of SRA EpiHealth. By being part of the Board, I aim to continue constituting this direct link.”

During the interview, we talk about how the Faculty of Medicine’s research is met within SRA EpiHealth and Martin brings up the fact that SRA EpiHealth is not only an SRA for Lund University (LU) but also a strategically important collaboration between LU and Uppsala University.

“Our collaborations with other universities are important. We need to know what is happening within the SRAs and in the case of EpiHealth, Uppsala University contributes with their view on developments. At the national Deans’ meetings, we meet with the managements of the other Faculties of Medicine in Sweden, and the joint SRAs are natural points of contacts and an essential part of our work together. In the longer run, I look forward to even more collaborative efforts between the different SRAs locally and

nationally, which can benefit both SRA EpiHealth and LU as a whole."

We are also talking about the ongoing work within the university to produce an overall communications strategy for the SRA environments in the spring of 2021, since a need has been identified to boost and display existing SRA environments even more. It is discussed how the communications strategy for EpiHealth can be used in this context.

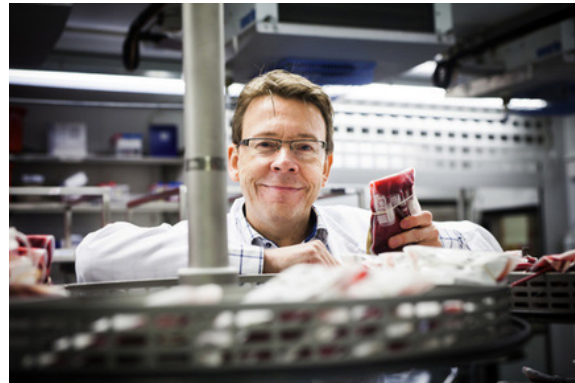
"It is important that we have an overall communications strategy that ensures that we share our successes and that it also contributes to a better communication between the SRAs. Furthermore, I think researchers in general would benefit from a better understanding of our strengths, and SRA EpiHealth is an important part of the overall work to make this happen. In addition to the overall communication strategy, all SRAs have been challenged with producing a communication plan specific for them, an ambition that will ensure that we become even better at communicating our successes. This could also facilitate future recruitment efforts", says Martin.

We also discuss what the most important messages of SRA EpiHealth are, and Martin says that *"SRA EpiHealth is a large cohort that could be used by even more investigators for even better outcomes. However, there are many resources around and at present it is not easy to stand out from all the noise with our messages. It would be great if we can spread the word what a gold mine SRA EpiHealth really is and how it could improve yet other fields of study and inspire other researchers. We need to help researchers see the potential of SRA EpiHealth, and part of that is to communicate the good examples, our success stories as show cases"*.

The conversation makes us talk about what the best way is to reach out with our messages and which communication channels we can use. *"When it comes to which communication channels to use, it is really up to each SRA to use the channels that best correspond to the needs they see most pressing. They say social media is the way to go but I'm certainly not the expert there but I think the dedicated communications officers within or outside the SRAs know best."*

As a completely different example, Martin continues: *"Before the pandemic, we started the "Brown Bag Lunch" concept, which is an hour-long workshop over lunch where researchers had the opportunity to*

meet, exchange knowledge and ask questions about specific research resources and infrastructures, such as epidemiological research and databases".



Martin L. Olsson

"The purpose was to display hidden gems among our research infrastructures and other resources with a potential to facilitate excellent research, also by simply creating new contact surfaces over a lunch sandwich. Looking ahead, and in view of the ongoing pandemic, we may need to replace these meetings with digital meetings but hope to start them up later this year or next. Perhaps we could arrange an in-depth webinar or lunch seminar with EpiHealth in focus", says Martin.

During the interview, we discuss whether there are barriers that may prevent us from reaching out with our messages and Martin explains his view on this: *"I see the SRAs as one of the major driving forces of excellent research at LU but it is essential that they can shine a light and be seen as sources of inspiration rather than an exclusive club for a few elite members. In the case of EpiHealth, the SRA leadership has been strategic in opening the doors and realized that the success of EpiHealth relies on the success not only of its original Principal Investigators (PI) but also the extended network created as time goes by."*

When asked how we can get more members within the network, Martin answers *"Currently, one of the major, new attraction of the EpiHealth cohort is that it has been genetically profiled. Once this becomes common knowledge in the science community, I expect more research ideas to inspire more investigators to seek contact. Of course, it is really important that we make sure, this possibility is advertized profusely going forward. Even if there is an increasing number of cohorts out there, the new and genetically upgraded EpiHealth is a gold mine waiting for more prospectors to join the rush - I think we have a role to help them to see what their EpiHealth nugget could look like!"*



We want to develop contacts with our surroundings

EPIHEALTH.LU.SE

Our website www.epihealth.lu.se is the place that we want our stakeholders to visit when they want news or information about epidemiological research, upcoming events, or if they have a query or need to complete a transaction with us. We continue to develop our website and new online services in order to meet stakeholder expectations and needs.

MARKETING AND SOCIAL MEDIA

We manage the EpiHealth brand and develop creative promotional materials including brochures, publications, and videos.

SRA EpiHealth provides strategic direction and governance for EpiHealth's audience-specific social media accounts in accordance with university-specific guidelines.

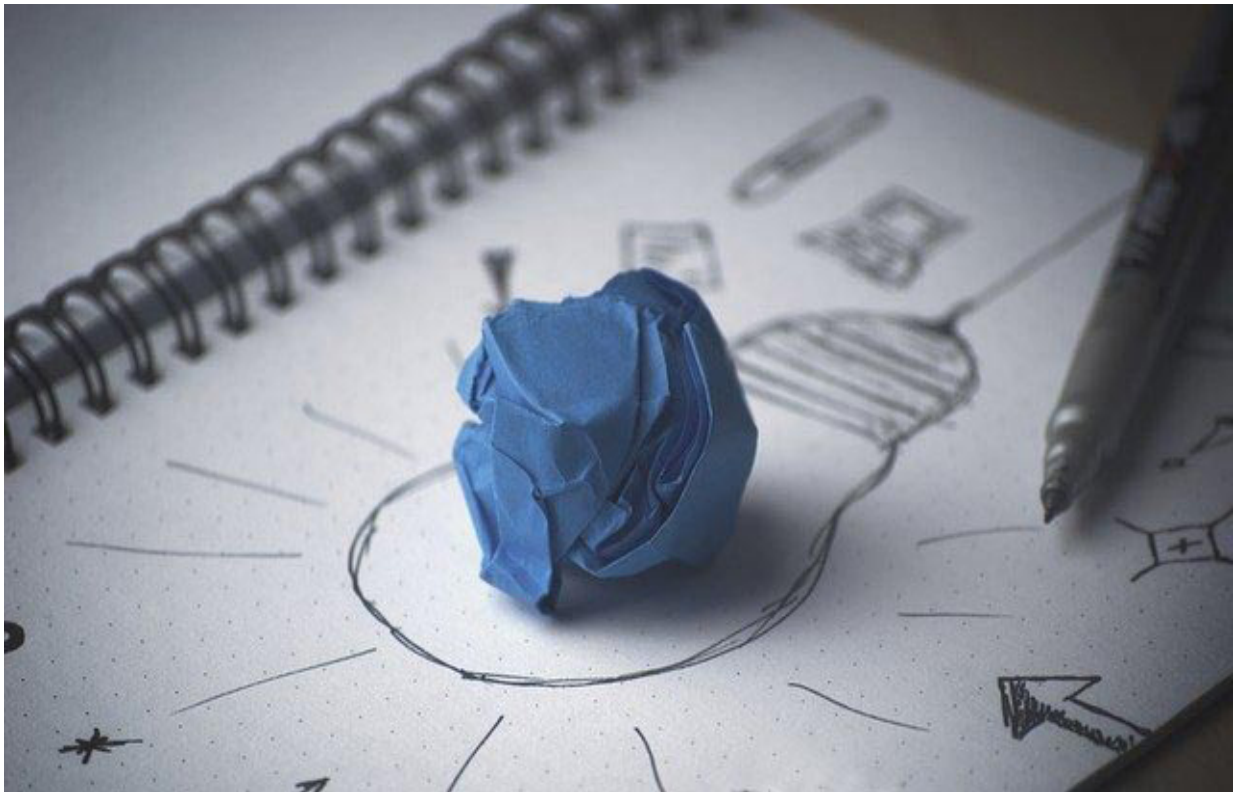
NETWORKING AND MEMBERSHIPS

It is an important strand of our communications work as an organisation to form effective and valuable partnerships and collaborations with research communities, authorities, companies, organizations and institutions as well as the general public. Planning and organising how we communicate with our stakeholders is vital to our research and success.

Our vision

- We guide strategic communications
- We communicate clearly, concisely, openly and proactively
- We ensure opportunity for participation in our network
- We partner with relevant stakeholders
- We inform and engage the public

Interview with board member and Ph.D. student, Kajsa Brolin



“The EpiHealth network is a platform where researchers can receive support from each other”

As a Ph.D. student, Kajsa works at the Translational Neurogenetics unit under the Faculty of Medicine at Lund University. Kajsa studies genetic and epidemiological factors that can help determine who is at risk of developing Parkinson’s disease. We ask Kajsa how she meets the interests of the Ph.D. students and other students as a member of the board.

“One of my main tasks as a board member is to form a link between the Ph.D. students and the board, and to support new Ph.D. students who wish to join the EpiHealth network. Through this, we can contribute to raising the quality of epidemiological research by spreading the board’s messages and discussing important issues in the Medical Doctoral Council which the board can take a position on. It is important that the board meets the views and interests of Ph.D. students.”

When asked what information the Ph.D. students wish to receive from SRA EpiHealth, Kajsa answers, “We appreciate receiving information from the network

about the announcements of new positions and about courses in various research areas that can benefit our research and education. We stay up to date on what is happening on EpiHealth’s website and it is of great importance to us that we receive information in both Swedish and English”.

During the interview, we talk about how SRA EpiHealth best reaches out to the Ph.D. students and Kajsa says that many Ph.D. students do not understand Swedish. *“It is important that there is information on the website www.epihealth.lu.se in both Swedish and English because we have many foreign researchers who do not understand Swedish. Many people keep an eye on the website when they want to know what is going on in the network and when they want to read the latest news”.*

We also ask Kajsa if there is information on the website that is missing. *“It would be good if it highlights who the researchers are in the network. As a Ph.D. student, it is important to know who you can contact*

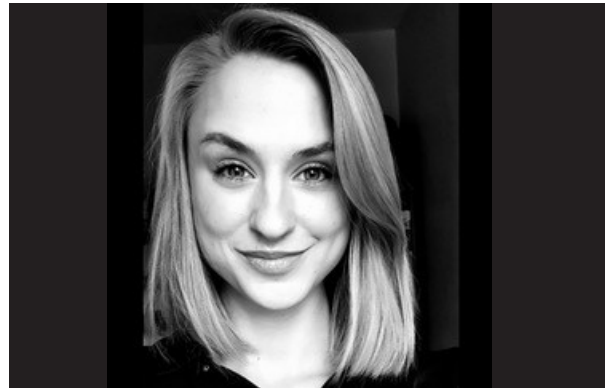
if you need support or if you wish to receive good advice on a research project. Sometimes, we also need to look for reviewers in connection with part-time checks or dissertations and then it would be nice if there was information on the website about different research groups in the network."

The use of different communication channels is also discussed during the interview and Kajsa highlights the following *"It is important that we make our research visible by using different communication channels such as the website, email, or Facebook, Twitter and Instagram. This will most likely make more Ph.D. students and other students want to join the network"*.

We also discuss the two websites www.epihealth.lu.se and www.epihealth.se and that it is necessary that there is a communications strategy that takes a position on how they should be used and what kind of information that should be published on the websites. Kajsa explains *"Right now it is unclear why there are two websites and what purpose they have. It would also be nice to know what information you should look for on each website and to know who you should turn to if you have any questions"*.

We also talk about what messages SRA EpiHealth should highlight and how we can promote our research projects. Kajsa says: *"The fact that the network is a platform where researchers can receive support from each other and contribute to creating more*

epidemiological collaborative projects is an important message that needs to be communicated to our stakeholders.



Kajsa Brolin

It is important that we can learn from each other and within the student network we need to know what is going on at Uppsala University and vice versa because SRA EpiHealth is a collaboration between the two universities. Hopefully, we will be able to create even more collaborative projects between the two universities in the future".

During the interview, we also discuss what the main goals are within SRA EpiHealth and Kajsa explains, *"Organizationally, SRA EpiHealth is part of Uppsala and Lund University and one of the universities' goals is to reach out with our research to the public. An important goal is therefore to highlight popular science research"*.



Interview with professor Martin Englund and postdoc Andreas Dell'Isola



“The EpiHealth cohort gives us access to detailed information on environmental exposures which are typically not available in other registers”

SRA EpiHealth has conducted an interview with board member of EpiHealth Professor Martin Englund and postdoc Andrea Dell'isola about the EpiHealth cohort, how they plan to use it in their research, and what it means to them and SRA EpiHealth.

Martin has been awarded research support from SRA EpiHealth for the employment of Andrea as a postdoc for the project “The role of lifestyle and metabolic health in the pathogenesis and management of osteoarthritis”.



Martin Englund

Martin heads the Clinical Epidemiology Unit (CEU), Orthopedics, which is a cross-disciplinary research group at the Department of Clinical Sciences Lund,

Lund University, www.clinicalepidemiology.se. He is an epidemiologist and translational science investigator. He completed his MD in 1998 and received his PhD in Orthopedics in 2004. He did a two-year postdoctoral training at Boston University, United States, where he also earned his MSc degree in Epidemiology.

Martin focuses on osteoarthritis research, including preclinical experiments as well as clinical studies, imaging and epidemiological research using population-based register data. He is a current consolidator grant recipient by the European Research Council (ERC), and a past Distinguished Young Researcher awardee by the Swedish Research Council.

Andrea is a physiotherapist and postdoc with extensive knowledge of osteoarthritis clinical studies and an interest in using data from the EpiHealth cohort. The EpiHealth cohort comprises a total of 25,104 individuals from Uppsala and Malmö in the age groups 45-75 years. The data was collected during the years 2010-2016 and include lung function (spirometry), 12-lead ECG, blood pressure, body composition, cognitive test (Trail-Making-Test), fasting blood glucose and blood fats. A questionnaire about sociodemographic lifestyle factors, previous illnesses is also included in the EpiHealth cohort. A biobank is also available for

future use and a DNA extraction with GWAS analysis has been carried out throughout the cohort.

Martin explains, *"I have been involved in the EpiHealth cohort steering group since the inception (beginning of 2010) and the beauty with EpiHealth data is that the large number of participants enables the possibility to effectively evaluate risk factors. We also have access to de-identified information about lifestyle factors such as diet and environment exposure which is typically not available in other registers. Also, by now the cohort has a long follow-up time, more than 10 years for many of the participants"*.

We continue the interview by asking Martin to provide us with some information about the expertise of his research team. *"Epidemiology is a cross-disciplinary field, and our team members have a mixed background: Some are molecular scientists, medical physicists or have degrees and expertise in bioinformatics, statistics or health economy. Others are healthcare professionals with a typical clinical background as physician or in physical therapy. The mix gives us a multifactorial view on osteoarthritis and helps bring the field forward"*, says Martin. He further says: *"There are "three legs" in our research focus: molecular mechanisms of the disease, imaging of structural findings, and register-based epidemiologic studies and burden of disease"*.

We ask Andrea if he would like to tell us a bit more about his particular research project and explain to the reader what osteoarthritis is. *"Osteoarthritis is a type of degenerative joint disease typically characterized by the breakdown of joint cartilage, joint inflammation and bone remodeling. The most common symptoms are joint pain and stiffness. Usually, the symptoms progress slowly over the years, but exercise can prevent functional decline."*

"When we use data from the EpiHealth cohort we have the possibility to identify clinical phenotypes which are groups of people with certain characteristics which may influence the joint disease mechanisms. A common subgroup sees OA coexisting with other metabolic diseases such as diabetes, obesity, and high blood pressure, often due to inactive lifestyles and inappropriate diet. Early signs of the disease are usually found in people in their forties but progress when people are 60 years or older. The EpiHealth dataset helps us to look at disease development and how this will impact people over 10 years. Little is known about the interplay between lifestyle factors, metabolic health and osteoarthritis which we are trying to investigate".



Andrea Dell'Isola

During the interview we talk about the scientific research methods that are being used and if barriers have been identified. Andrea explains *"We are doing quantitative research with the use of advanced statistical models to try to understand the causal link(s) between lifestyle factors, overall health and the development of musculoskeletal diseases such as osteoarthritis. However, it is a lengthy process to receive all the data and link data from all registers. It takes time"*.

We are also talking about the key messages of the research project and the use of EpiHealth datasets. Andrea explains *"A single treatment of osteoarthritis is no longer viable and optimal. We are therefore looking at links between diseases since they often come in clusters. Big datasets are therefore essential to us which is why we are using the EpiHealth cohort"*.

We also discuss the use of networks in research and Martin explains that they have a vast network. *"We are collaborating with multiple research groups from Europe, USA, Australia and in Asia, and we use a number of international datasets apart from EpiHealth data. In Sweden we have also created our own Biobank of joint tissues from patients who have undergone total knee joint replacement. Joint tissues from deceased donors are also collected in collaboration with The Tissue Bank and Forensic Medicine, Skåne University Hospital. We also collaborate with EpiHealth members from Uppsala"*.

For more information about CEU, epidemiological research and osteoarthritis, please visit:
www.clinicalepidemiology.se
www.artrosportalen.se

Interview with professor Olle Melander



“The EpiHealth cohort includes a biobank from which we can retrieve important research data”

Professor Olle Melander has been awarded research support from SRA EpiHealth for the employment of a postdoc for the project “Translational epidemiological studies of the cardiometabolic hormones neurotensin and adrenomedullin”.

SRA EpiHealth is interested in knowing how he intends to use the EpiHealth cohort in his research and Olle explains *“The beauty of a big cohort such as the EpiHealth cohort is that its rich set of clinical data is combined with a blood biobank, from which we can retrieve large amounts of data for our research”*.

Olle is a professor of internal medicine at the Faculty of Medicine, Lund University and senior consultant at the Department of Internal Medicine, Skåne University Hospital in Malmö. He is a principal investigator and research team manager of Cardiovascular Research – Hypertension. He completed his MD in 1996 and received his PhD in Genetic factors in primary hypertension in 2000. Olle focuses on novel interventions for prevention and treatment of diabetes-related cardiovascular disease (CVD).

“We use the EpiHealth cohort because it is a population-based cohort which is essential for our kind of research since we first need to map who the high-risk individuals in the population are. Healthy people with

high risk of e.g. cardiovascular disease or diabetes need to be identified before new primary preventive treatments tested specifically in those individuals” says Olle. He continues, *“Once a person gets for example type 2 diabetes there is often already organ damage, but we try to do something before the diagnosis and organ damage occurs. We investigate preventive treatments about 5-10 years before the person gets the disease”*.

We ask Olle to explain to the reader how they can identify high-risk individuals from the EpiHealth cohort and measure these risk factors. *“In our research, this is something that we can measure in the blood by looking at three categories of biomarkers which include genetic factors, hormonal disturbances and metabolites.*

Genetic factors can contribute to cardiovascular diseases or diabetes and the DNA alterations reveals that a person can be predisposed to these illnesses since birth. Hormonal disturbances are not present quite as early but something we can trace 10-15 years before they occur. Metabolites reflect what we eat and reveal our eating habits. We measure small molecules in blood samples from the diet. Metabolites reveal how your body handles nutrients and how well you store fat, among other things. Also, they can be altered due to bad diet habits”, says Olle.

During the interview we discuss how it is possible to measure a "bad diet". Olle elaborates on his explanation above. "We can measure the levels of for example beta-Carotene, one of the metabolites, which reveals how much fruit and vegetables a person eats and if the person has a high risk of getting diabetes in the future. Low levels of beta-Carotene mean a higher risk of getting the disease". He continues "This does not mean that beta-Carotene is the solution to the problem but when we measure it, we can identify people who eat too little fruit and vegetables. This, of course does not mean that we forget about everything else that matters too such as looking at people's physical activity habits".

We continue the interview by discussing obesity since this is a growing problem in the population and we ask Olle if there is a way to measure obesity in the blood. Olle explains "Neurotensin is secreted from the small intestines into the blood stream and is turned on when it contains fat. It makes sure that the fat you eat is absorbed and stored in the fat tissue around the bowel and inside the liver. We believe that having high neurotensin used to be a survival mechanism during e.g. the stone age when we had less access to food and periods with less intake of food and thus efficient storage of fat was a survival benefit. Today, a constant intake of food in individuals with high neurotensin can instead lead to obesity and cause liver diseases, type 2 diabetes, and other illnesses".

We ask Olle how this can be measured in the blood and what preventive measures of obesity they are investigating. "We separate the plasma by adding anti-

bodies that recognize peptide sequences of hormones from which we can determine the plasma concentration of neurotensin.



Olle Melander

A level of over 150 picomoles per liter in the blood indicates an efficient absorption and storage of fat which on the other hand can lead to obesity. Obesity can be prevented by changing diets, but we are also looking at therapeutic measures such as using a drug that can block the secretion of neurotensin which can reduce the amount of fat in the liver. This is an intervention study, and our aim is to prevent people from getting diabetes and metabolic and cardiovascular diseases".

For more information about cardiovascular research and diabetes research in Sweden, please visit: <https://portal.research.lu.se/portal/en>



Information from board member, professor and coordinator, Sölve Elmståhl



“Our target group is primarily the research community, but it is also our goal to reach out to the public”

We are now developing a communications strategy for the strategic research area (SRA) EpiHealth in 2021. Priority areas will be to make the research that is conducted within the EpiHealth network visible and to contribute with knowledge in the form of advanced courses in epidemiology. The target group is primarily the research community, but it is also our goal to reach out to the public.

To achieve this, important tools will be social media channels and the existing network. We are pleased to have more than 40-50 new researchers in the EpiHealth network in 2021. During the year, websites will also be available in both Swedish and English to increase accessibility.

Several initiatives have been taken to stimulate research collaboration between the various SRA environments at Lund University. So-called Seeding Funding for projects, Match-making workshops and a workshop series on sustainability will be carried out in

2021. I hope that many researchers from the EpiHealth network will participate in these activities.

Nutritional epidemiology and reproductive epidemiology have previously been focus areas within SRA EpiHealth and now two new focus areas have been added, mental illness and the health of the elderly.

The genetic mapping (GWAS) of the entire EpiHealth cohort (n=25104) is now complete and is available as a database infrastructure for Lund University and Uppsala University.



LUNDS UNIVERSITETS VISION

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