



SUMMARY PAPER OF THE VISIONARY SEMINAR AGEING WITH A HEALTHY BRAIN

7 March | Faculty Club | University of Copenhagen | Denmark

SUMMARY OF THE VISIONARY SEMINAR

This paper sums up the discussions and perspectives from the International Visionary Seminar arranged by KU Leuven, Leuven.Inc, Leuven Mindgate and University of Copenhagen 7 March 2016.

The seminar had a focus on the potential for research and business within the theme "Ageing with a healthy brain". The aim was to spur innovative thinking into novel research, new products and innovative services that could radically improve the quality of life for citizens with cognitive disorders in the coming 5-10 years. The seminar featured presentations from academia combined with novel insights from industry and was summed up in a panel debate discussing the next steps in bridging research and industry.

Dean and Professor Ulla Wewer opened the meeting. She highlighted the common vision between this seminar and the ambition of EIT Health to implement tools to identify at-risk populations and develop life-long prevention strategies which can protect against or delay cognitive impairment and dementia. Following Ulla Wewer was keynote speaker Professor Maiken Nedergaard addressing the newly discovered impact of the glymphatic system and the potential for future health solutions and Professor Rudi Westendorp speaking who highlighted the enigma of the relations between a better brain and better health.

Then, Managing partner in Lundbeckfond Ventures Mette Kirstine Agger presented their outlook for new ventures for healthy ageing focusing on the future needs and opportunities within neuroscience. She was followed by two presentations from business namely Managing Director of ReMYND Koen De Witte who asked the question "Will we ever be able to reverse Alzheimer's Disease?" and director of NERF Sebastian Haesler on the promise of nanotechnology for better research, diagnosis and treatment of brain disorders.

The visionary seminar concluded in a panel debate by the presenters and Professor Bart De Moor from KU Leuven. The panel debate was hosted by Corporate Vice President of Novo Nordisk A/S Søren Bregenholt and the main topic was the potentials and possibilities within ageing with a healthy brain the coming 5-10 years.

Based on the panel debate and the presentations at the Visionary Seminar, especially three areas stood out as those which must be addressed if we wish to accelerate and improve "Ageing with a healthy brain" in the coming years.



IMPORTANT THEMES RECOGNIZED AND ADDRESSED AT THE VISIONARY SEMINAR

The following themes were recognized and addressed through the presentations and the panel debate.

1. ENHANCE CROSS-DISCIPLINARY AND INNOVATIVE COLLABORATIONS

- There is an increasing willingness to foster interdisciplinary work. Out-of-the-box projects need out-of-the-box entrepreneurs with the requisite skills and necessary means.
- We can take a new step, using the novel techniques rapidly emerging e.g. new technical equipment to look into brain function, look at the correlation between small vessels, brain and diabetes and the ability to make sense out of complicated systems and the complex interactions between those systems.
- We may be looking in the wrong direction and therefore it is important to bridge different scientific disciplines to challenge the normative thinking.
- There is no such thing as easy solutions. We need innovative thinking across disciplines.

2. COLLABORATE ACROSS BORDERS AND SECTORS TO UTILIZE STRENGTHS AND RESOURCES

- Academia, business and the clinical would should collectively step up and approach the politicians with an ambitious vision on how to cure Alzheimer's Disease in a foreseeable future.
- There is a need for a paradigm shift that put citizens in the middle by giving them the right tools to achieve more and reducing the professional inertia.
- The approach to the elderly population should be personalized and needs driven instead of generic and medical driven.
- When measuring the costs of Alzheimer's disease, we need to take into account the overall cost e.g. include the burden on relatives, volunteers and professional caretakers.

3. EXPLORE NEW FRONTIERS IN NEUROSCIENCE

- There was consensus on the necessity for a new approach to the brain, different from the yet existing. We have a good understanding of the characteristics of Alzheimer's Disease, but less knowledge of the drivers behind and why it occurs in the first place.
- The overall description is to arrive at a new nosology of (dys)-function of the brain when growing older as the idea of yes/no amyloid only is clearly insufficient.
- The approach which was brought forward in the field of oncology could act as inspiration in terms of how we could access and develop neuroscience in the future.
- The world is complex, but building on new technology and the newest scientific breakthroughs, we should revisit the clinical research through new explorative methodologies and open minds.

SPEAKER PRESENTATIONS

Ulla Wewer is Dean of Faculty of Health and Medical Sciences at University of Copenhagen. She is Professor of experimental pathology and earlier in her career, she held a clinical post at Copenhagen University Hospital. She worked in the United States for several years as a researcher at La Jolla Cancer Research Foundation and the National Institutes of Health (NIH), Bethesda. Since 1996, she has worked at Faculty of Health and Medical Sciences – from 2002 as associate dean and from 2006 as dean. She has been heavily involved in establishing EIT Health as interim Director of Education.

Ulla Wewer



Maiken Nedergaard



Maiken Nedergaard is a Professor at the University of Copenhagen and Head of Center for Basic and Translational Neuroscience focusing on the development of new approaches for treating neurological diseases, primarily using cell and gene therapy. She is known around the world due to her recent research published in Science showing how sleep rids the brain of some of the proteins connected to dementia and was elected in 2008 to the Royal Danish Academy of Sciences in recognition for her role as a pioneer in brain research. More recently, she was elected member of Academia Europaea and the Royal Academy of Pharmacy of Spain.

Rudi Westendorp is professor of Medicine at Old age at the Faculty of Health and Medical Sciences at University of Copenhagen. He is part of the steering board of Center of Healthy Ageing exploring ageing from cells to society. Trained at Leiden University, he became a consultant in internal medicine and epidemiology and later dedicated himself into geriatrics and gerontology. He was founding director of the privately funded Leyden Academy on Vitality and Ageing that conducts research, provides education and pursues societal innovations to improve quality of life of older people.

Rudi Westendorp



Mette Kirstine Agger



Mette Kirstine Agger is Managing Partner at Lundbeckfond Ventures. She was previously co-founder and CEO of 7TM Pharma A/S and has a broad international experience within biotech and life science. She graduated as a Biologist from the University of Copenhagen and has an MBA. Lundbeckfond Ventures is an evergreen life science venture fund established in 2009 and wholly owned by the Lundbeck Foundation. They make venture investments within lifescience, focusing on pharmaceutical, biopharmaceutical and medtech companies.

Koen De Witte



Koen De Witte is the managing director of reMYND NV, founded in 2002 as a spin-off from the University of Leuven. reMYND develops as well its own pre-clinical treatments against Alzheimer's, Diabetes, and Parkinson's, as performs testing of novel Alzheimer treatments for its clients worldwide, and hence has a good view on future developments in Alzheimer's. Further, Koen is a Director at LeuvenInc (the permanent bridge between knowledge centers, high-tech entrepreneurs, enterprises and their socio-economic partners around Leuven) and at FlandersBio vzw (the Flemish biotech industry representative with more than 210 members).

Sebastian Haesler



Sebastian Haesler is Director of Neuro-Electronics Research Flanders (NERF) and an Assistant Professor in the department of Neuroscience at KU Leuven. NERF is a young academic research initiative, located on the campus of imec in Leuven. The goal of NERF is to advance our understanding of brain function in health and disease, by using and developing novel technologies which integrate neurobiology and nano-scale engineering.

Bart De Moor



Bart De Moor is a Full Professor at the Department of Electrical Engineering at KU Leuven. His scientific disciplines are numerical linear algebra, dynamical systems theory and modeling, advanced control theory, data mining and bioinformatics, digital health and clinical genomics. He is also a Steering group member of Leuven Mindgate, and a Member of Board, remuneration and investment committees Flanders Biotech Research Institute. Renowned in technology transfer, Bart De Moor is Co-founder of 7 spin-off companies, 6 of which still active and he is also Member of the Board of Trustees of the Danish National Research Foundation.

Søren Bregenholt



Søren Bregenholt is Corporate Vice President and Head of R&D External Relations, Innovation Sourcing, and Strategy at Novo Nordisk A/S. At Novo Nordisk A/S, his primary responsibility is to secure access to external innovation, through in-licensing, university collaborations and public private partnerships. He is also responsible for the company's global R&D-based PhD and Post Doc programmes, as well as research, innovation and educational policy. In 2000, he received his PhD degree in biomedical research from the University of Copenhagen and continued with a post-doctoral research position at the Pasteur Institute in Paris, France. Since 2015, Søren has been the Chair of MVA (Medicon Valley Alliance), the Danish-Swedish life science cluster organisation. Søren is a member of the Supervisory Board in EIT Health under the European Institute of Innovation & Technology. In addition, he was the first-appointed Honorary Industrial Ambassador of the University of Copenhagen.



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