

**Personal information**

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**Education**

Medical Graduate, University of Copenhagen (1987), Medical Specialist in Neurology (1998), Doctor of Medical Science (2003), Clinical Associate Research Professor in Clinical Neurobiology (2005), Clinical Associate Professor (2010), Clinical Professor, Faculty of Health and Medical Sciences, University of Copenhagen (2013)

**Positions**

Staff specialist and researcher, the Memory Clinic (MC) and the Neurobiology Research Unit (NRU), both Dept of Neurology, Rigshospitalet (1998), Part time senior researcher at NRU funded by The Danish Medical Research Council (2000), Consultant neurologist, half time associated with MC (2002), Senior researcher and consultant neurologist at the Danish Dementia Research Center (DDRC, 2005), Clinical Professor, University of Copenhagen (2013).

**Scientific focus areas**

Biomarkers in CNS disease, increasing diagnostic and prognostic accuracy with the use of new biomarkers in fluid (CSF and blood) and imaging biomarkers, as well as neurophysiological/technological biomarkers. Pathophysiological mechanisms of Alzheimer's disease and related disorders measured in vivo/in vitro. Disease mechanisms in Normal Pressure Hydrocephalus

**Research management**

Principal investigator for the Danish multicentre study ADEX on physical exercise in AD (2012-2016), BIOMARKAPD (EU project, JPND, co-work package leader, 2012-2015): standardization and interpretation of disease biomarkers, PredictND (EU 7FP, work package leader and member of Steering Group, 2014-2018): Data-driven diagnosis in dementia disorders; Brainstem collaboration (Innovation Fund Denmark, work package leader, 2014-2021): Using stem cell research to understand in vivo human pathophysiology.

**Research group**

Heading the biomarker research group at DDRC, and the highly specialized Normal Pressure Hydrocephalus group at DDRC. Current group members: 1 senior researcher, 1 pregraduate student, 2 PhD students

**Other**

Member of: the Board of the Danish Alzheimer Association, the Board of the Danish Alzheimer Research Foundation, and chairman of the Alzheimer Research Committee under the Danish Alzheimer Association, the European Academy of Neurology Scientific Panel on Dementia and cognitive disorders, the Steering Group for the National Danish Dementia Quality Database

**Supervision of PhD students**

Principal (faculty) supervisor: 8 previous students, 2 current. Project (co-)supervisor: 5 previous students.

**Teaching portfolio**

Master programs in: Medicine, Human Biology, Neuroscience, Medicine and Technology, and Health Science. Course or co-course director and teacher at PhD and specialist courses in dementia

**Bibliography**

Link to complete list of publications: <http://orcid.org/0000-0003-4750-4911>

Web of Science (Dec 2021): 219 publications, citations: 5.413, H-Index: 42. PubMed: 160 peer-reviewed publications

**Awards**

Kr. 25.000, Niels A. Lassen Prisen, donated by the Lassen Foundation (2017)

Kr. 500.000, HN-prisen 2018, donated by the Hede Nielsen Family Foundation (2018)

**Recent grants**

Kr. 1.000.000, Savværksejer Jeppe Juhl og Hustru Ovita Juhls mindelegat (2014)

Kr. 2.100.000, Innovation Fund Denmark (co-applicant, BrainStem, 2014).

Kr. 70-140.000 each, The Lundbeck Foundation. Scholarship grants for medical students (2015, 2016, 2017, 2019, 2020)

Kr. 555.000, Rigshospitalet Research Pool (2016)

Kr. 500.000, 500.000, 250.000, The Absalon Foundation, together with prof Gunhild Waldemar and senior researcher Anja Hviid Simonsen (2019, 2020, 2021).

### Ten relevant publications

1. Knorr U, Simonsen AH, Jensen CS, Zetterberg H, Blennow K, Akhøj M, Forman J, **Hasselbalch SG**, Kessing LV. Alzheimer's disease related biomarkers in bipolar disorder - A longitudinal one-year case-control study. *J Affect Disord.* 2022 Jan 15;297:623-633
2. Lolansen SD, Rostgaard N, Andreassen SN, Simonsen AH, Juhler M, **Hasselbalch SG**, MacAulay N. Elevated CSF inflammatory markers in patients with idiopathic normal pressure hydrocephalus do not promote NKCC1 hyperactivity in rat choroid plexus. *Fluids Barriers CNS.* 2021 Dec 4;18(1):54
3. Gjerum L, Frederiksen KS, Henriksen OM, Law I, Bruun M, Simonsen AH, Mecocci P, Baroni M, Dottorini ME, Koikkalainen J, Lötjönen J, **Hasselbalch SG**. Evaluating 18F-FDG-PET in differential diagnosis of dementia using a data-driven decision model. *Neuroimage Clin.* 2020 Apr 24;27:102267
4. Jensen CS, Bahl JM, Østergaard LB, Høgh P, Wermuth L, Heslegrave A, Zetterberg H, Heegaard NHH, **Hasselbalch SG**, Simonsen AH. Exercise as a potential modulator of inflammation in patients with Alzheimer's disease measured in cerebrospinal fluid and plasma. *Exp Gerontol.* 2019 Jul 1;121:91-98.
5. Hou Y, Dan X, Babbar M, Wei Y, **Hasselbalch SG**, Croteau DL, Bohr VA. Ageing as a risk factor for neurodegenerative disease. *Nat Rev Neurol.* 2019 Oct;15(10):565-581.
6. Bruun M, Frederiksen KS, Rhodius-Meester HFM, Baroni M, Gjerum L, Koikkalainen J, Urhema T, Tolonen A, van Gils M, Rueckert D, Dyremose N, Andersen BB, Lemstra AW, Hallikainen M, Kurl S, Herukka SK, Remes AM, Waldemar G, Soininen H, Mecocci P, van der Flier WM, Lötjönen J, **Hasselbalch SG**. Impact of a clinical decision support tool on prediction of progression in early-stage dementia: a prospective validation study. *Alzheimers Res Ther.* 2019 Mar 20;11(1):25
7. Brinkmalm G, Sjödin S, Simonsen AH, **Hasselbalch SG**, Zetterberg H, Brinkmalm A, Blennow K. A Parallel Reaction Monitoring Mass Spectrometric Method for Analysis of Potential CSF Biomarkers for Alzheimer's Disease. *Proteomics Clin Appl.* 2018 Jan;12(1).
8. Jensen CS, Portelius E, Høgh P, Wermuth L, Blennow K, Zetterberg H, **Hasselbalch SG**, Simonsen AH. Effect of physical exercise on markers of neuronal dysfunction in cerebrospinal fluid in patients with Alzheimer's disease. *Alzheimers Dement (N Y).* 2017 Apr 17;3(2):284-290.
9. Zwan MD, Rinne JO, **Hasselbalch SG**, Nordberg A, Lleó A, Herukka SK, Soininen H, Law I, Bahl JM, Carter SF, Fortea J, Blesa R, Teunissen CE, Bouwman FH, van Berckel BN, Visser PJ. Use of amyloid-PET to determine cutpoints for CSF markers: A multicenter study. *Neurology.* 2016 Jan 5;86(1):50-8.
10. Hoffmann K, Sobol NA, Frederiksen KS, Beyer N, Vogel A, Vestergaard K, Brændgaard H, Gottrup H, Lolk A, Wermuth L, Jacobsen S, Laugesen LP, Gergelyffy RG, Høgh P, Bjerregaard E, Andersen BB, Siersma V, Johannsen P, Cotman CW, Waldemar G, **Hasselbalch SG**. Moderate-to-High Intensity Physical Exercise in Patients with Alzheimer's Disease: A Randomized Controlled Trial. *J Alzheimers Dis.* 2015;50(2):443-53.