

Curriculum Vitae – Stig P. Cramer, MD, PhD

Affiliations

Functional Imaging Unit, Dept. of Clinical Physiology, Nuclear Medicine and PET, Rigshospitalet, Nordre Ringvej 57, 2600 Glostrup.

Education and academic Degrees

- 2015 PhD, “Permeability of the blood-brain barrier as measured by dynamic contrast-enhanced perfusion MRI”, School of Neuroscience, University of Copenhagen
- 2008 MD, University of Copenhagen

Appointments and Training

- 2019 – 22 Specialist training in Clinical physiology and Nuclear Medicine.
- 2015 – present: Postdoc at Functional Imaging Unit, Dept. of Clinical Physiology, Nuclear Medicine and PET, Rigshospitalet, Glostrup
- 2011 – 15 PhD student at Functional Imaging Unit, Dept. of Clinical Physiology and Dep. of Neurology, Glostrup Hospital
- 2010 – 11 First year residency in neurology at Roskilde Hospital

Honors and Major Grants

- 2016 Sápere Aude Research Talent Award. Awarded from The Danish Council of Independent Research (Det Frie Forskningsråd).
- 2016 Post Doc Grant from The Danish Council for Independent Research granted to the project “New Magnetic Resonance method for detecting early inadequate treatment response in Multiple Sclerosis”
- 2013 Certificate of Merit Award for the Oral presentation at ESMRMB 2013 conference in Toulouse, France. Selected from among more than 400 posters

International relations

I have extensive collaborations with Professor in Neuroimmunology Ian Galea, Southampton University, Great Britain, and Dr. Hiroki Masuda, Assistant professor, Department of Neurology, Graduate School of Medicine, Chiba University, Japan.

Supervision

I am currently supervising three PhD students.

Research management and experience

I have ten years of experience in research management, having independently initiated and raised funding for four major research projects, enlisting one PostDoc and three PhD student.

Publications: Total publications: **17**, in **The Lancet Neurology** (1 paper), **Brain** (2 papers) and **Annals of Neurology** (1 paper). Book chapters: 1. H-index: **9**, Total citations: **645**. Most cited paper has **152 citations** as of November 2022.

Cramer, S. P., Larsson, H. B. W., Knudsen, M. H., Simonsen, H. J., Vestergaard, M. B., & Lindberg, U. (2022). Reproducibility and Optimal Arterial Input Function Selection in Dynamic Contrast-Enhanced Perfusion MRI in the Healthy Brain. *Journal of Magnetic Resonance Imaging*, 1–12. <https://doi.org/10.1002/jmri.28380>

Knudsen, M. H., Lindberg, U., Frederiksen, J. L., Vestergaard, M. B., Simonsen, H. J., Varatharaj, A., Galea, I., Blinkenberg, M., Sellebjerg, F., Larsson, H. B. W., & **Cramer, S. P.** (2022). Blood-brain barrier permeability changes in the first year after alemtuzumab treatment predict 2-year outcomes in relapsing-remitting multiple sclerosis. *Multiple Sclerosis and Related Disorders*, 63(May), 103891. <https://doi.org/10.1016/j.msard.2022.103891>

Stuart, C. M., Varatharaj, A., Winberg, M. E., Galea, P., Larsson, H. B. W., **Cramer, S. P.**, Fasano, A., Maherally, Z., Pilkington, G. J., Keita, Å. V., & Galea, I. (2022). Zonulin and blood–brain barrier permeability are dissociated in humans. *Clinical and Translational Medicine*, 12(7). <https://doi.org/10.1002/ctm2.965>

Vestergaard, M. B., Frederiksen, J. L., Larsson, H. B. W., & **Cramer, S. P.** (2022). Cerebrovascular Reactivity and Neurovascular Coupling in Multiple Sclerosis—A Systematic Review. *Frontiers in Neurology*, 13(June), 1–15. <https://doi.org/10.3389/fneur.2022.912828>

Filippi M, ..., **Cramer SP**, et al. Performance of the 2017 and 2010 Revised McDonald Criteria in Predicting MS Diagnosis After a Clinically Isolated Syndrome. *Neurology*. 2022; 98(1):e1–e14.

Hindsholm AM, **Cramer SP**, et al. Assessment of AI Automatic MS Lesion Delineation Tool for Clinical Use. *Clin. Neuroradiol*. 2021.

Cramer, S. P., Vestergaard, M. B., Lindberg, U., & Larsson, H. B. W. (2020). Physical and Physiological Principles of Perfusion and Permeability. In *Quantitative Magnetic Resonance Imaging* (1st ed., Vol. 1). Elsevier Inc. <https://doi.org/10.1016/b978-0-12-817057-1.00013-5>

Varatharaj A, Liljeroth M, Darekar A, Larsson HBW, Galea I*, **Cramer SP***. BBB permeability measured using DCE-MRI: a validation study. *J. Physiol.*(*Shared last authors)

Cramer SP, et al. Permeability of the BBB predicts no evidence of disease activity at two years after natalizumab or fingolimod treatment in RRMS. *Ann. Neurol*. 2018

Filippi M, ..., **Cramer SP**, et al. Prediction of a MS diagnosis in patients with CIS using the 2016 MAGNIMS and 2010 McDonald criteria. *Lancet Neurol*. 2017 Dec; (high Impact paper; 5 years IF 26.2)

Amin FM, Hougaard A, **Cramer SP**, et al. Intact BBB during spontaneous attacks of migraine without aura: a 3T DCE-MRI study. *Eur. J. Neurol*. 2017;24(9): :1116–24.

Hougaard A, ..., **Cramer, SP**, Larsson HBWL, Ashina M. Increased brainstem perfusion, but no BBB disruption, during attacks of migraine with aura. *Brain* 2017;1–10. (high Impact paper; 5 years IF 10.4)

Larsson HBW, Vestergaard MB, Lindberg U, Iversen HK, **Cramer SP**. Brain capillary transit time heterogeneity in healthy volunteers measured by DCE-MRI. *J Magn Reson Imaging*. 2017 Jun;45(6):1809–20.

Cramer, SP. Modvig, H. J. Simonsen, J. L. Frederiksen, and H. B. W. Larsson. Permeability of the BBB predicts conversion from optic neuritis to MS. *Brain*, vol. 138, no. Pt 9, pp. 2571–83, Sep. 2015. (high Impact paper; 5 years IF 10.4)

Cramer SP, Larsson HB. Accurate determination of BBB permeability using DCE-MRI: a simulation and in vivo study on healthy subjects and MS patients. *J Cereb Blood Flow Metab* 2014; 1-11

Modvig S, Degn MS, Horwitz H, **Cramer SP**, et al. Relationship between Cerebrospinal Fluid Biomarkers for Inflammation, Demyelination and Neurodegeneration in Acute Optic Neuritis. *PloS One* 2013;8(10):e77163.

Cramer SP, Simonsen H, Frederiksen JL, Rostrup E, Larsson HB. Abnormal BBB permeability in normal appearing white matter in MS investigated by MRI. *Neuroimage Clin* 2013;4:182-189. (134 citations by March 2022)