

デンマーク・オーフス大学研究者による
オンラインセミナーの御案内

BRI-DANDRITE online joint lecture

日 時：令和3年9月10日(金) 17:00~18:00

開催方法：**Zoom**

Structure and mechanism of brain transporters



Prof. Poul Nissen

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We study mechanisms and cell biological functions of membrane transporters that are important for brain functions and associated with brain disorders.

We have a particular focus on P-type ATPases such as ion pumps (Na,K-ATPases, Ca²⁺-ATPases) and lipid flippases, and Na⁺ dependent secondary transporters such as glycine transporter GlyT1 and other neurotransmitter/amino acid transporters. Membrane protein crystallography and single-particle cryo-EM are critical methods for these studies.

We have also embarked structural and mechanistic studies of higher-order organization in subcellular compartments such as axons and presynaptic terminals using cryo-electron tomography.

The seminar will cover current and future perspectives of structural neurobiology.

References

Timcenko M*, Lyons JA*, Janulienė D*, Ulstrup JJ, Dieudonné T, Montigny C, Ash MR, Karlsen JL, Boesen T, Kühlbrandt W, Lenoir G, Möller A, Nissen P (2019). Structure and autoregulation of a P4-ATPase lipid flippase. *Nature* **571**, 366-370

Shahsavari A, Stohler P, Bourenkov G, Zimmermann I, Siegrist M, Guba W, Pinard E, Sinning S, Seeger MA, Schneider TR, Dawson RJP, Nissen P (2021). Structural insights into the inhibition of glycine reuptake. *Nature* **591**, 677-681

Quistgaard EM, Nissen JD, Hansen S, Nissen P (2021). Mind the Gap: Molecular Architecture of the Axon Initial Segment - From Fold Prediction to a Mechanistic Model of Function? *J Mol Biol* Jul 22:167176.

どうぞ奮ってご参加ください。

(司会：脳研究所長 小野寺 理)