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Qualifications

Biology, PhD, University of Copenhagen
Award Date: 19 Jun 2008

Research outputs

DNAJB6 is expressed in neurons and oligodendrocytes of the human brain

Hentze, J., Folke, J., Aznar, S., Nyeng, P., Brudek, T. & Hansen, C., Dec 2024, In: *GLIA*. 72, 12, p. 2313-2326 14 p.

Innervation of the pancreas in development and disease

Agerskov, R. H. & Nyeng, P., 15 Jan 2024, In: *Development*. 151, 2, dev202254.

The Effect of Different Time Scales in Cell and Developmental Biology as Recorded by Microscopy

Nyeng, P., 2024, *Multiplicity of Time Scales in Complex Systems: Challenges for Sciences and Communication I*. Booß-Bavnbek, B., Hesselbjerg Christensen, J., Richardson, K. & Vallès Codina, O. (eds.). Springer, p. 205–213 (Mathematics Online First Collections).

Real time quantification of apical polarity protein reveals novel dynamic processes in luminal network establishment and remodeling in the pancreas

Laura Jackson, A., Heilmann, S., Ebied, C., Krivokapic, J. M., Herrer, J. A. R., Semb, H. & Nyeng, P., 11 Aug 2023, bioRxiv.

Quantifying Topology In Pancreatic Tubular Networks From Live Imaging 3D Microscopy

Arnavaž, K., Krause, O., Zepf, K., Bærentzen, J. A., Krivokapic, J. M., Heilmann, S., Nyeng, P. & Feragen, A., Jul 2022, In: *The journal of Machine Learning for Biomedical Imaging (MELBA)*. 2022, June, p. 1-24

Quantifying spatial position in a branched structure in immunostained mouse tissue sections

Heilmann, S., Semb, H. & Nyeng, P., 1 Oct 2021, In: *STAR protocols*. 2, 4, 100806.

Flow cytometry detection of surface and intracellular antigens in pancreas from a single mouse embryo

Nyeng, P., Dela Cruz, G. V. & Semb, H., 17 Sept 2021, In: *STAR protocols*. 2, 3, p. 100636 1 p., 100636.

Semi-supervised, Topology-Aware Segmentation of Tubular Structures from Live Imaging 3D Microscopy

Arnavaž, K., Krause, O., Krivokapic, J. M., Heilmann, S., Bærentzen, J. A., Nyeng, P. & Feragen, A., 20 May 2021, 10 p. ArXiv.org - Cornell University.

p120ctn-Mediated Organ Patterning Precedes and Determines Pancreatic Progenitor Fate

Nyeng, P., Heilmann, S., Öhlin, Z. M. L., Pettersson, N. F., Hermann, F. M., Reynolds, A. B. & Semb, H., 2019, In: *Developmental Cell*. 49, 1, p. 31-47 17 p.

EGFR signalling controls cellular fate and pancreatic organogenesis by regulating apicobasal polarity

Löf-Öhlin, Z., Nyeng, P., Bechard, M. E., Hess, K., Bankaitis, E., Greiner, T., Ameri, J., Wright, C. & Semb, H., 1 Nov 2017, In: *Nature Cell Biology*. 19, 11, p. 1313–1325 13 p.

Growth Factor Independence-1 (Gfi1) Is Required for Pancreatic Acinar Unit Formation and Centroacinar Cell Differentiation

Qu, X., Nyeng, P., Xiao, F., Dorantes, J. & Jensen, J., 2015, In: Cellular and molecular gastroenterology and hepatology. 1, 2, p. 233–247

Notch-mediated post-translational control of Ngn3 protein stability regulates pancreatic patterning and cell fate commitment

Qu, X., Afelik, S., Jensen, J. N., Bukys, M. A., Kobberup, S., Schmerr, M., Xiao, F., Nyeng, P., Albertoni, M. V., Grapin-Botton, A. & Jensen, J., 2013, In: Developmental Biology. 376, 1

Fibroblast growth factor 10 represses premature cell differentiation during establishment of the intestinal progenitor niche

Nyeng, P., Bjerke, M. A., Norgaard, G. A., Qu, X., Kobberup, S. & Jensen, J., 2011, In: Developmental Biology. 349, 1, p. 20-34

Conditional control of the differentiation competence of pancreatic endocrine and ductal cells by Fgf10

Kobberup, S., Schmerr, M., Dang, M.-L., Nyeng, P., Jensen, J. N., MacDonald, R. J. & Jensen, J., 2010, In: Mechanisms of Development. 127, 3-4, p. 220-234

FGF10 maintains distal lung bud epithelium and excessive signaling leads to progenitor state arrest, distalization, and goblet cell metaplasia

Nyeng, P., Norgaard, G., Kobberup, S. & Jensen, J., 2008, In: BMC Developmental Biology. 8, 2, 15 p., 2.

FGF10 signaling controls stomach morphogenesis

Nyeng, P., Norgaard, G., Kobberup, S. & Jensen, J., Nov 2007, In: Developmental Dynamics. 236, 11, p. 295-310

ETS-family genes in pancreatic development

Kobberup, S., Nyeng, P., Juhl, K., Hutton, J. & Jensen, J., 2007, In: Developmental Dynamics. 236, 11, p. 3100-3110

Global gene expression analysis in fetal mouse ovaries with and without meiosis and comparison of selected genes with meiosis in the testis

Olesen, C., Nyeng, P., Kalisz, M., Jensen, T. H., Moller, M., Tommerup, N. & Byskov, A. G., 2007, In: Cell and Tissue Research. 328, 1, p. 207–221

Activities

Biological network formation and cell fate allocation in the developing pancreas

Nyeng, P. (Speaker)

9 Apr 2024

Image analysis from a microscopist's viewpoint

Nyeng, P. (Speaker)

12 May 2023

Multicellular crosstalk: Uncovering the interplay between pancreatic cell lineages by 3D live cell imaging and deep-learning assisted analysis

Nyeng, P. (Speaker)

10 Feb 2023

Multicellular crosstalk: Uncovering the interplay between pancreatic cell lineages by 3D live cell imaging and deep-learning assisted analysis

Nyeng, P. (Speaker)

22 Oct 2022

Is seeing really believing? Emergence of different processes in measurements of living tissue under different time scales

Nyeng, P. (Speaker)

23 Aug 2022 → 24 Aug 2022

Pancreatic tube directed beta cell differentiation

Nyeng, P. (Speaker)

13 Jun 2022

Danish Bioimaging Infrastructure (External organisation)

Nyeng, P. (Member)

1 Apr 2022 → 31 Mar 2027

Projects

Establishment and remodeling of mouse pancreatic tubes revealed by live imaging of apical polarity

Nyeng, P. (Project participant), Heilmann, S. (Project participant), Laura Jackson, A. (Project participant) & Semb, H. (Project participant)

01/12/2019 → 31/07/2023

Investigating the role of neurotransmitters in pancreatic development and islet cell function by simultaneous and continuous high-sensitivity neurotransmitter sensing and 4D bioimaging

Agerskov, R. (Project participant), Nyeng, P. (Supervisor), Lund, T. (Co-supervisor), Alatraktchi, F. A. (Co-supervisor) & Dalgaard, L. T. (Co-supervisor)

15/02/2024 → 14/02/2027

PAC: Pancreatic crosstalk: Does innervation guide pancreatic organogenesis and beta cell formation?

Nyeng, P. (Project participant), Feragen, A. (Project participant) & Agerskov, R. (Project participant)

01/09/2022 → 01/07/2024

Quantifying the topological events connecting tubulogenesis and beta-cell differentiation

Feragen, A. (Project participant), Nyeng, P. (Project participant), Semb, H. (Project participant), Arnavaz, K. (Project participant), Krivokapic, J. M. (Project participant) & Krause, O. (Project participant)

01/08/2019 → 30/11/2021