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Kort præsentation

Omdrejningspunktet for mine forskningsinteresser er neurodegenerative- og neuroudviklingssygdomme. I min gruppe implementerer vi inducede pluripotente celler (iPSC) fra mennesker og dyr for at forstå sygdomsmekanismer, der fører til neurodegenerative og neuroudviklingssygdomme.

Forskningen i humane iPSC-modeller for neurodegenerative sygdomme omfatter Alzheimers sygdom (AD), Frontotemporal demens (FTD) og glaukom. Desuden arbejder vi med iPSC fra hunde for at forstå fællestræk og forskelle mellem menneskelig AD og hundens kognitive tilbagegang kaldet kognitiv dysfunktions syndrom (KDS) eller hunde demens.

Vores forskning i neuroudviklingssygdomme er fokuseret på at implementere humane iPSC-modeller for epilepsi og skizofreni.

Dernæst arbejder vi udover med hunde-iPSC også med svine- og abe-iPSC. Formålet med at etablere disse in vitro iPSC-modeller og ved at kombinere disse med organoide modeller, er at erstatte og raffinere behovet for in vivo-dyremodeller.

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Ansættelse

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Publikationer

Generation of two patient specific GABRD variants and their isogenic controls for modeling epilepsy

Kamand, M., Taleb, R., Wathikthinnakon, Methi, Mohamed, Fadumo Abdullahi, Ghazanfari, S. P., Konstantinov, D., Hald, Jonas Laugård, Holst, B., Andersen, C. B., Møller, R. S., Lemke, J. R., Krey, I., Freude, Kristine & Chandrasekaran, Abinaya, 1 apr. 2024, I: *Stem Cell Research*. 76

APOE4 IS INSTRUMENTAL IN AUGMENTING RHOA KINASE PHOSPHORYLATION AND CONTRIBUTES THEREBY TO CLASSICAL ALZHEIMER'S DISEASE NEURON PHENOTYPES

Freude, Kristine, Dittlau, Katarina Stoklund & Tao, Ruixin, 5 mar. 2024.

Astrocytes: The Stars in Neurodegeneration?

Dittlau, Katarina Stoklund & Freude, Kristine, 28 feb. 2024, I: Biomolecules.

Implications of SNP-triggered miRNA dysregulation in Schizophrenia development

Mohamed, Fadumo Abdullahi & Freude, Kristine, 26 jan. 2024, I: Frontiers in Genetics.

USP30 inhibition induces mitophagy and reduces oxidative stress in parkin-deficient human neurons

Okarmus, J., Agergaard, J. B., Stummann, T., Haukedal, H., Ambjørn, M., Freude, Kristine, Fog, K. & Meyer, M., 14 jan. 2024, I: Nature.

Fordele og ulemper ved anvendelse af autologe versus allogene stamceller til behandling af artrose

Bagge, J., Freude, Kristine, Lindegaard, Casper, Holst, B. & Hölmich, Per, 2024, I: Ugeskrift for Laeger. 186, 7 s., V06230423.

Generation of Human Induced Pluripotent Stem Cell (hiPSC)-Derived Astrocytes for Amyotrophic Lateral Sclerosis and Other Neurodegenerative Disease Studies

Dittlau, Katarina Stoklund, Chandrasekaran, Abinaya, Freude, Kristine & Van Den Bosch, L., 2024, I: Bio-protocol. 14, 4, 16 s., e4936.

Generation of three isogenic gene-edited Huntington's disease human embryonic stem cell lines with DOX-inducible NGN2 expression cassette in the AAVS1 safe locus

Duque Villegas, Luisana Carolina, Chandrasekaran, Abinaya, Flintholm Andersen, S. A., Nørremølle, Anne, Schmid, B., Pouladi, M. A. & Freude, Kristine, 2024, I: Stem Cell Research. 77, 6 s., 103408.

Increased glucose metabolism and impaired glutamate transport in human astrocytes are potential early triggers of abnormal extracellular glutamate accumulation in hiPSC-derived models of Alzheimer's disease

Salcedo, C., Pozo Garcia, V., Garcia-Adan, B., Ameen, Aisha, Gogelashvili, G., Waagepetersen, Helle S., Freude, Kristine & Aldana, Blanca, 2024, (E-pub ahead of print) I: Journal of Neurochemistry.

The Nav1.5 variant G213D found in patients with MEPPC is associated with increased window current and gating pore current

Magnusson, H. B. D., Geryk, M., Cordeiro, J. M., Lind, J. U., Jensen, H. K., Freude, Kristine & Callø, Kirstine, 16 sep. 2023.

Challenges in Establishing Animal Induced Pluripotent Stem Cells

Enevoldsen, Sara, Magnusson, H. B. D., Lind, J. U., Freude, Kristine & Callø, Kirstine, 15 sep. 2023.

Complexity of Sex Differences and Their Impact on Alzheimer's Disease

Kadlecová, Marion, Freude, Kristine & Haukedal, H., 24 apr. 2023, I: Biomedicines. 11, 5, 29 s., 1261.

3D-organization and spatial localization of chromatin and epigenetic marks in relation to nucleolar activity in porcine oocytes

Fenner, Merle Friederike, Benc, M., Rosenbaum Bartkova, A., Pihl, M., Chebrout, M., Freude, Kristine, Strejcek, F., Hyttel, P., Lucas-Hahn, A., Laurincik, J. & Bonnet-Garnier, A., 2023. 1 s.

FUS-ALS hiPSC-derived astrocytes impair human motor units through both gain-of-toxicity and loss-of-support mechanisms

Dittlau, Katarina Stoklund, Terrie, L., Baatsen, P., Kerstens, A., De Swert, L., Janky, R., Corthout, N., Masrori, P., Van Damme, P., Hyttel, P., Meyer, M., Thorrez, L., Freude, Kristine & Van Den Bosch, L., 2023, I: Molecular Neurodegeneration. 18, 1, 5.

Alteration of microglial metabolism and inflammatory profile contributes to neurotoxicity in a hiPSC-derived microglia model of frontotemporal dementia 3

Haukedal, H., Syshøj Lorenzen, S., Westi, Emil Winther, Corsi, G., Gadekar, V. P., McQuade, A., Davtyan, H., Doncheva, Nadezhda Tsankova, Schmid, B., Chandrasekaran, Abinaya, Seemann, Ernst Stefan, Cirera, Susanna, Bluron-Jones, M.

, Meyer, M., Gorodkin, Jan, Aldana, Blanca & Freude, Kristine, 2023, I: Brain, Behavior, and Immunity. 113, s. 353-373

Chromatin organization, spatial localization of heterochromatin sequences and nucleolar activity, change towards final maturation in porcine oocytes

Bonnet-Garnier, A., Benc, M., Bartkova, A., Pihl, M., Chebrout, M., Strejcek, F., Hyttel, P., Lucas-Hahn, A., Laurincik, J., Freude, Kristine & Fenner, Merle Friederike, 2023. 1 s.

Generation of eight hiPSCs lines from two pathogenic variants in CACNA1A using the CRISPR-Cas9 gene editing technology

Rivera-Sánchez, P., Søndergaard, L., Wathikthinnakon, Methi, B. D. Magnusson, H., Frederiksen, Henriette Reventlow S, Aabæk Hammer, F., Taleb, R., Christian Cassidy, C., Tranholm Bruun, M., Tümer, Asuman Zeynep, Holst, B., Brasch-Andersen, C., Møller, R., Freude, Kristine & Chandrasekaran, Abinaya, 2023, I: Stem Cell Research. 71, 103193.

Golgi fragmentation: One of the earliest organelle phenotypes in Alzheimer's disease neurons

Haukedal, H., Corsi, G. I., Gadekar, V. P., Doncheva, N. T., Kedia, S., de Haan, N., Chandrasekaran, A., Jensen, P., Schiønning, P., Vallin, S., Marlet, F. R., Poon, A., Pires, C., Agha, F. K., Wandall, H. H., Cirera, S., Simonsen, A. H., Nielsen, T. T., Nielsen, J. E., Hyttel, P. & 7 flere, Muddashetty, R., Aldana, Blanca, Gorodkin, Jan, Nair, D., Meyer, M., Larsen, M. R. & Freude, Kristine, 2023, I: Frontiers in Neuroscience. 17, 17 s., 1120086.

Potential Retinal Biomarkers in Alzheimer's Disease

Garcia Bermudez, Mariana Yolotzin, Vohra, Rupali, Freude, Kristine, van Wijngaarden, P., Martin, K. K., Thomsen, M. S., Aldana, Blanca & Kolko, Miriam, 2023, I: International Journal of Molecular Sciences (Online). 24, 21, 26 s., 15834.

Role of S1P-receptor and Rho-kinase in myogenic tone in mesenteric and cerebral arteries of young vs. middle-aged mice

Skovsted, Gry Freja, Aupetit, A., Björling , K., Haanes, K. A., Syberg, S., Jørgensen, N. R., Freude, Kristine, Pearson, J. T. & Jensen, Lars Jørn, 2023, I: Acta Physiologica. 239, S728, e14042.

The transcriptomic landscape of neurons carrying *PSEN1* mutations reveals changes in extracellular matrix components and non-coding gene expression

Corsi, G. I., Gadekar, V. P., Haukedal, H., Doncheva, Nadezhda Tsankova, Anthon, Christian, Ambardar, S., Palakodeti, D., Hyttel, P., Freude, Kristine, Seemann, Ernst Stefan & Gorodkin, Jan, 2023, I: Neurobiology of Disease. 178, 17 s., 105980.

Decreased Glucose Metabolism and Glutamine Synthesis in the Retina of a Transgenic Mouse Model of Alzheimer's Disease

Tams, A. L. M., Sanz-Morello, B., Westi, Emil Winther, Mouhammad, Zaynab Ahmad, Andersen, Jens Velde, Freude, Kristine, Vohra, Rupali, Hannibal, Jens, Aldana, Blanca & Kolko, Miriam, 2022, I: Cellular and Molecular Neurobiology. 42, 1, s. 291–303

Editorial: Metabolic Alterations in Neurodegenerative Disorders

Freude, Kristine, Moreno-gonzalez, I., Rodriguez-ortiz, C. J. & Baglietto-vargas, D., 2022, I: Frontiers in Aging Neuroscience. 14, 3 s., 833109.

Fats, Friends or Foes: Investigating the Role of Short- and Medium-Chain Fatty Acids in Alzheimer's Disease

Ameen, Aisha, Freude, Kristine & Aldana, Blanca, 2022, I: Biomedicines. 10, 11, 2778.

Generic benzalkonium chloride-preserved travoprost eye drops are not identical to the branded polyquaternium-1-preserved travoprost eye drop: Effect on cultured human conjunctival goblet cells and their physicochemical properties

Nagstrup, Anne Hedengran, Freiberg, Josefine, Hansen, Pernille May, Jacobsen, Jette, Larsen, Susan Weng, Rønholt, Stine, Freude, Kristine, Boix-lemonche, G., Petrovski, G., Heegaard, Steffen & Kolko, Miriam, 2022, I: Acta Ophthalmologica. 100, 7, s. 819-827

Prevention of Cell Death by Activation of Hydroxycarboxylic Acid Receptor 1 (GPR81) in Retinal Explants

Vohra, Rupali, Sanz-Morello, B., Tams, A. L. M., Mouhammad, Zaynab Ahmad, Freude, Kristine, Hannibal, Jens, Aldana, Blanca, Bergersen, L. H. & Kolko, Miriam, 2022, I: Cells. 11, 13, 2098.

RhoA Signaling in Neurodegenerative Diseases

Schmidt, S. I., Blaabjerg, M., Freude, Kristine & Meyer, M., 2022, I: Cells. 11, 9, 1520.

The G213D variant in Nav1.5 alters sodium current and causes an arrhythmogenic phenotype resulting in a multifocal ectopic Purkinje-related premature contraction phenotype in human-induced pluripotent stem cell-derived cardiomyocytes
Callø, Kirstine, Geryk, M., Freude, Kristine, Treat, J. A., Vold, V. A., Frederiksen, Henriette Reventlow S., Broendberg, A. K., Frederiksen, T. C., Jensen, H. K. & Cordeiro, J. M., 2022, I: Europace : European pacing, arrhythmias, and cardiac electrophysiology : journal of the working groups on cardiac pacing, arrhythmias, and cardiac cellular electrophysiology of the European Society of Cardiology. 24, 12, s. 2015–2027

A protein-centric view of in vitro biological model systems for schizophrenia

Chandrasekaran, Abinaya, Jensen, P., Mohamed, Fadumo Abdullahi, Lancaster, M., Benros, Michael Eriksen, Larsen, M. R. & Freude, Kristine, 2021, I: Stem Cells. 39, 12, s. 1569-1578

APOE4 affects basal and NMDAR mediated protein synthesis in neurons by perturbing calcium homeostasis

Ramakrishna, S., Jhaveri, V., Konings, S. C., Nawalpuri, B., Chakraborty, S., Holst, B., Schmid, B., Gouras, G. K., Freude, Kristine & Muddashetty, R. S., 2021, I: The Journal of neuroscience : the official journal of the Society for Neuroscience. 41, 42, s. 8686-8709

Astrocytic reactivity triggered by defective autophagy and metabolic failure causes neurotoxicity in frontotemporal dementia type 3

Chandrasekaran, A., Dittlau, K. S., Corsi, G. I., Haukedal, H., Doncheva, N. T., Ramakrishna, S., Ambardar, S., Salcedo, C., Schmidt, S. I., Zhang, Y., Cirera, S., Pihl, M., Schmid, B., Nielsen, T. T., Nielsen, J. E., Kolko, M., Kobolák, J., Dinnyés, A., Hyttel, P., Palakodeti, D. & 5 flere, Gorodkin, Jan, Muddashetty, R. S., Meyer, M., Aldana, Blanca & Freude, Kristine, 2021, I: Stem Cell Reports. 16, 11, s. 2736-2751

Cellular bioenergetics in human iPSC-derived glutamatergic neurons in health and disease

Aldana, Blanca, Salcedo, C., Freude, Kristine & Waagepetersen, Helle S., 2021, *Current Progress in iPSC-derived Cell Types*. Birbrair, A. (red.). Elsevier, s. 205-221 17 s. (Advances in Stem Cell Biology, Bind 10).

Downregulation of GABA Transporter 3 (GAT3) is Associated with Deficient Oxidative GABA Metabolism in Human Induced Pluripotent Stem Cell-Derived Astrocytes in Alzheimer's Disease

Salcedo, C., Wagner, A., Andersen, Jens Velde, Vinten, K. T., Waagepetersen, Helle S., Schousboe, Arne, Freude, Kristine & Aldana, Blanca, 2021, I: Neurochemical Research. 46, s. 2676–2686

Functional Metabolic Mapping Reveals Highly Active Branched-Chain Amino Acid Metabolism in Human Astrocytes, Which Is Impaired in iPSC-Derived Astrocytes in Alzheimer's Disease

Salcedo, C., Andersen, Jens Velde, Vinten, K. T., Pinborg, Lars Hageman, Waagepetersen, Helle S., Freude, Kristine & Aldana, Blanca, 2021, I: Frontiers in Aging Neuroscience. 13, 736580.

Glial Cells in Glaucoma: Friends, Foes, and Potential Therapeutic Targets

Garcia Bermudez, Mariana Yolotzin, Freude, Kristine, Mouhammad, Zaynab Ahmad, van Wijngaarden, P., Martin, K. K. & Kolko, Miriam, 2021, I: Frontiers in Neurology. 12, 17 s., 624983.

Hippocampal disruptions of synaptic and astrocyte metabolism are primary events of early amyloid pathology in the 5xFAD mouse model of Alzheimer's disease

Andersen, Jens Velde, Skotte, Niels Henning, Christensen, S. K., Polli, F. S., Shabani, M., Markussen, K. H., Haukedal, H., Westi, Emil Winther, Diaz-delCastillo, M., Sun, R. C., Kohlmeier, Kristi Anne, Schousboe, Arne, Gentry, M. S., Tanila, H., Freude, Kristine, Aldana, Blanca, Mann, Matthias & Waagepetersen, Helle S., 2021, I: Cell Death & Disease. 12, 11, 13 s., 954 .

Implications of Glycosylation in Alzheimer's Disease

Haukedal, H. & Freude, Kristine, 2021, I: Frontiers in Neuroscience. 14, 18 s., 625348.

Microglia-Secreted Factors Enhance Dopaminergic Differentiation of Tissue- and iPSC-Derived Human Neural Stem Cells
Schmidt, S. I., Bogetofte, H., Ritter, L., Agergaard, Jette Bach, Hammerich, D., Kabiljagic, A. A., Wlodarczyk, A., Lopez, S. G., Sørensen, M. D., Jørgensen, M. L., Okarmus, J., Serrano, A. M., Kristensen, Bjarne Winther, Freude, Kristine, Owens, T. & Meyer, M., 2021, I: *Stem Cell Reports.* 16, s. 1-14

Neural Derivates of Canine Induced Pluripotent Stem Cells-Like Cells From a Mild Cognitive Impairment Dog
Chandrasekaran, Abinaya, Thomsen, B. B., Agerholm, Jørgen Steen, Pessôa, L. V. D. F., Godoy Pieri, N. C., Sabaghidarmiyan, V., Langley, K., Kolko, Miriam, De Andrade, A. F. C., Bressan, F. F., Hyttel, P., Berendt, Mette & Freude, Kristine, 2021, I: *Frontiers in Veterinary Science.* 8, 14 s., 725386.

Neuronal alpha-amylase is important for neuronal activity and glycogenolysis and reduces in presence of amyloid beta pathology

Byman, E., Martinsson, I., Haukedal, H., Gouras, G., Freude, Kristine, Wennstrom, M. & Netherlands Brain Bank, N. B. B., 2021, I: *Aging Cell.* 20, 8, 14 s., 13433.

Nicotinamide Adenine Dinucleotide Phosphate Oxidases Are Everywhere in Brain Disease, but Not in Huntington's Disease?

Duque Villegas, Luisana Carolina, Nørremølle, Anne, Freude, Kristine & Vilhardt, Frederik, 2021, I: *Frontiers in Aging Neuroscience.* 13, 20 s., 736734.

Non-immunogenic Induced Pluripotent Stem Cells, a Promising Way Forward for Allogenic Transplantations for Neurological Disorders

Frederiksen, Henriette Reventlow S, Doechn, U., Tveden-Nyborg, Pernille & Freude, Kristine, 2021, I: *Frontiers in Genome Editing.* 2, 623717.

Oxidative stress in optic neuropathies

Sanz-Morello, B., Ahmadi, H., Vohra, Rupali, Saruhanian, S., Freude, Kristine, Hamann, Steffen & Kolko, Miriam, 2021, I: *Antioxidants.* 10, 10, 27 s., 1538.

iPSC-derived Microglia for Disease Modeling of Frontotemporal Dementia 3

Haukedal, H., Freude, Kristine, Garcia, B. A., Corsi, G., Gadekar, V. & Gorodkin, Jan, 2021, I: *Glia.* 69, S1, s. E480-E481 T14-066D.

Patient iPSC-Derived Neurons for Disease Modeling of Familiar Alzheimer's Disease with Mutations in Presenilin 1

Haukedal, H., Poon, A. F., Jensen, P., Aldana, Blanca, Pires, C., Chandrasekaran, Abinaya, Christensen, S. K., Schiønning, P., Vallin, S., Simonsen, A. H., Nielsen, J., Dinnyes, A., Gorodkin, Jan, Ramakrishna, S., Muddashetty, R., Palakodeti, D., Hyttel, P., Waagepetersen, Helle S., Larsen, M. R. & Freude, Kristine, okt. 2020.

Canine induced pluripotent stem cells: an in vitro approach to validate the dog as a large animal model for Alzheimer's disease

Pessoa, L. V. D. F., Chandrasekaran, Abinaya, Thomsen, B. B., Berendt, Mette, Hyttel, P. & Freude, Kristine, sep. 2020, *iPSCs from Diverse Species.* 1 udg. Elsevier: Academic Press, Bind 2.

Canine induced pluripotent stem cells: An in vitro approach to validate the dog as a large animal model for Alzheimer's disease

De Figueiredo Pessôa, L. V., Chandrasekaran, Abinaya, Thomsen, B. B., Berendt, Mette, Hyttel, P. & Freude, Kristine, 2020, *iPSCs from Diverse Species.* Academic Press, s. 77-91 15 s.

Enrichment of retinal ganglion and Müller glia progenitors from retinal organoids derived from human induced pluripotent stem cells - possibilities and current limitations

Freude, Kristine, Saruhanian, S., McCauley, A., Paterson, C., Odette, M., Oostenink, A., Hyttel, P., Gillies, M., Haukedal, H. & Kolko, Miriam, 2020, I: *World Journal of Stem Cells.* 12, 10, s. 1171-1183

Generation of neural progenitor cells (NPC) from porcine induced pluripotent stem cells (piPSC)

Machado, L. S., Pieri, N. C. G., Botigelli, R. C., de Castro, R. V. G., de Souza, A. F., Bridi, A., Lima, M. A., Fantinato Neto, P., de Figueiredo Pessôa, L. V., Martins, S. M. M. K., de Andrade, A. F. C., Freude, Kristine & Bressan, F. F., 2020, I: *Journal of Tissue Engineering and Regenerative Medicine.* 14, 12, s. 1880-1891

Glutamate-glutamine homeostasis is perturbed in neurons and astrocytes derived from patient iPSC models of frontotemporal dementia

Aldana, Blanca, Zhang, Y., Jensen, P., Chandrasekaran, Abinaya, Christensen, S. K., Nielsen, T. T., Nielsen, Jørgen Erik, Hyttel, P., Larsen, M. R., Waagepetersen, Helle S. & Freude, Kristine, 2020, I: Molecular Brain. 13, 1, 7 s., 125.

Human induced pluripotent cells in personalized treatment of monogenic epilepsies

Mohammad, N. A., Freude, Kristine, Haukedal, H., Tümer, Asuman Zeynep & Møller, R. S., 2020, I: Journal of Translational Genetics and Genomics. 2020, 4, s. 238-250

Mutation in FTD3 CHMP2B causes impaired autophagy and distorted energy metabolism cumulating in reactive astrocyte phenotypes

Chandrasekaran, A., Dittlau, K. S., Corsi, G., Haukedal, H., Doncheva, N. T., Ramakrishna, S., Ambardar, S., Salcedo, C., Schmidt, S. I., Cirera, S., Pihl, M., Schmid, B., Nielsen, T. T., Nielsen, J., Kolko, M., Kobolak, J., Dinnyes, A., Hyttel, P., Palakodeti, D., Gorodkin, J. & 4 flere, Muddashetty, R., Meyer, M., Aldana, Blanca & Freude, Kristine, 2020.

Mutations in FTD3 CHMP2B causes impaired autophagy and distorted energy metabolism cumulating in reactive astrocyte phenotypes

Chandrasekaran, A., Dittlau, K. S., Corsi, G., Doncheva, N. T., Haukedal, H., Ramakrishna, S., Ambardar, S., Salcedo, C., Schmidt, S. I., Cirera, S., Pihl, M., Schmid, B., Nielsen, T. T., Nielsen, J., Kolko, M., Kobolak, J., Dinnyes, A., Hyttel, P., Palakodeti, D., Gorodkin, J. & 4 flere, Muddashetty, R., Meyer, M., Aldana, Blanca & Freude, Kristine, 2020.

Patient iPSC-Derived Neurons for Disease Modeling of Familiar Alzheimer's Disease with Mutations in Presenilin 1

Haukedal, H., Poon, A. F., Jensen, P., Aldana, Blanca, Pires, C., Chandrasekaran, Abinaya, Christensen, S. K., Schiønning, P., Vallin, S., Simonsen, A. H., Nielsen, J., Dinnyes, A., Gorodkin, Jan, Ramakrishna, S., Muddashetty, R., Palakodeti, D., Hyttel, P., Waagepetersen, Helle S., Larsen, M. R. & Freude, Kristine, 26 mar. 2019.

Generation of two isogenic iPSC lines with either a heterozygous or a homozygous E280A mutation in the PSEN1 gene.
Frederiksen, Henriette Reventlow S, Holst, B., Mau-Holzmann, U. A., Freude, Kristine & Schmid, B., mar. 2019, I: Stem Cell Research. 35, 4 s., 101403.

Generation of two iPSC lines with either a heterozygous V717I or a heterozygous KM670/671NL mutation in the APP gene

Frederiksen, Henriette Reventlow S, Holst, B., Ramakrishna, S., Muddashetty, R., Schmid, B. & Freude, Kristine, 1 jan. 2019, I: Stem Cell Research. 34, 5 s., 101368.

Cell type specific expression of toll-like receptors in human brains and implications in Alzheimer's disease

Frederiksen, Henriette Reventlow S, Haukedal, H. & Freude, Kristine, 2019, I: BioMed Research International. 2019, 18 s., 7420189.

Dementia, Brain Disorders and Molecular Mechanisms

Freude, Kristine & Krauss, S., 2019, I: Journal of Molecular Biology. 431, 9, s. 1709-1710

Genetic protection modifications: Moving beyond the binary distinction between therapy and enhancement for human genome editing

Mikkelsen, R. C. B., Frederiksen, Henriette Reventlow S, Gjerris, Mickey, Holst, B., Hyttel, P., Luo, Y., Freude, Kristine & Sandøe, Peter, 2019, I: CRISPR Journal. 2, 6, s. 362-369 8 s.

Implications of Microglia in Amyotrophic Lateral Sclerosis and Frontotemporal Dementia

Haukedal, H. & Freude, Kristine, 2019, I: Journal of Molecular Biology. 431, 9, s. 1818-1829

Induced pluripotent stem cells throughout the animal kingdom: Availability and applications

Pessôa, L. V. D. F., Bressan, F. F. & Freude, Kristine, 2019, I: World Journal of Stem Cells. 11, 8, s. 491-505 15 s.

Metabolic impairments in neurons and astrocytes derived from human induced pluripotent stem cells of Alzheimer's disease patients

Garcia, B. A., Salcedo, C., Hyttel, P., Waagepetersen, Helle S. & Freude, Kristine, 2019, s. 111-111.

Modelling the neuropathology of lysosomal storage disorders through disease-specific human induced pluripotent stem cells

Kobolák, J., Molnár, K., Varga, E., Bock, I., Jezsó, B., Téglási, A., Zhou, S., Lo Giudice, M., Hoogeveen-Westerveld, M., Pijnappel, W. P., Phanthong, P., Varga, N., Kitilyanant, N., Freude, Kristine, Nakanishi, H., László, L., Hyttel, P. & Dinnyés, A., 2019, I: Experimental Cell Research. 380, 2, s. 216-233 18 s.

Oocytes, embryos and pluripotent stem cells from a biomedical perspective

Hyttel, P., Pessôa, L. V. D. F., Secher, Jan Bojsen-Møller, Dittlau, Katarina Stoklund, Freude, Kristine, Hall, Vanessa Jane , Fair, T., Assey, R. J., Laurincik, J., Callesen, H., Greve, T. & Stroebech, L. B., 2019, I: Animal Reproduction. 16, 3, s. 508-523 16 s.

Essential Roles of Lactate in Müller Cell Survival and Function

Vohra, Rupali, Aldana, Blanca, Jensen, Dorte Skytt, Freude, Kristine, Waagepetersen, Helle S., Bergersen, L. H. & Kolko, Miriam, 1 dec. 2018, I: Molecular Neurobiology. 55, 12, s. 9108-9121 14 s.

WebCircRNA: Classifying the Circular RNA Potential of Coding and Noncoding RNA.

Pan, X., Xiong, K., Anthon, Christian, Hyttel, P., Freude, Kristine, Jensen, Lars Juhl & Gorodkin, Jan, 6 nov. 2018, I: Genes. 9, 11, 11 s., 536.

Muller cell survival and function is maintained by the presence of lactate

Vohra, Rupali, Skytt, D. M., Aldana, Blanca, Freude, Kristine, Waagepetersen, Helle S., Bergersen, L. H. & Kolko, Miriam, jul. 2018, s. 1480. 1 s.

Generation of transgene-free porcine intermediate type induced pluripotent stem cells

Li, D., Secher, Jan Bojsen-Møller, Hyttel, P., Ivask, M., Kolko, Miriam, Hall, Vanessa Jane & Freude, Kristine, 2018, I: Cell Cycle. 17, 23, s. 2547-2563 17 s.

Mammalian embryo comparison identifies novel pluripotency genes associated with the naive or primed state

Bernardo, A. S., Jouneau, A., Marks, H., Kensche, P., Kobolak, J., Freude, K., Hall, V., Feher, A., Polgar, Z., Sartori, C., Bock, I., Louet, C., Faial, T., Kerstens, H. H. D., Bouissou, C., Parsonage, G., Mashayekhi, K., Smith, J. C., Lazzari, G., Hyttel, P. & 4 flere, Stunnenberg, H. G., Huynen, M., Pedersen, R. A. & Dinnyés, A., 2018, I: Biology Open. 7, 8, 17 s., bio033282.

Neurons derived from sporadic Alzheimer's disease iPSCs reveal elevated TAU hyperphosphorylation, increased amyloid levels, and GSK3B activation

Ochalek, A., Mihalik, B., Avci, H. X., Chandrasekaran, Abinaya, Téglási, A., Bock, I., Giudice, M. L., Táncos, Z., Molnár, K. , László, L., Nielsen, Jørgen Erik, Holst, B., Freude, Kristine, Hyttel, P., Kobolák, J. & Dinnyés, A., dec. 2017, I: Alzheimer's Research and Therapy. 9, 1, 19 s., 90.

RNA-Guided Activation of Pluripotency Genes in Human Fibroblasts

Xiong, K., Zhou, Y., Blichfeld, K. A., Hyttel, P., Bolund, L., Freude, Kristine & Luo, Y., jun. 2017, I: Cellular Reprogramming. 19, 3, s. 189-198 10 s.

Toward Development of Pluripotent Porcine Stem Cells by Road Mapping Early Embryonic Development

Petkov, S., Freude, Kristine, Mashayekhi-Nezamabadi, K., Hyttel, P. & Hall, Vanessa Jane, mar. 2017, *Animal Models and Human Reproduction: Cell and Molecular Approaches with Reference to Human Reproduction*. Schatten, H. & Constantinescu, G. M. (red.). Wiley-Blackwell, s. 485-508 24 s.

Characterization of energy and neurotransmitter metabolism in cortical glutamatergic neurons derived from human induced pluripotent stem cells: A novel approach to study metabolism in human neurons

Aldana, Blanca, Zhang, Y., Lihme, M. F., Bak, Lasse Kristoffer, Nielsen, Jørgen Erik, Holst, B., Hyttel, P., Freude, Kristine & Waagepetersen, Helle S., 2017, I: Neurochemistry International. 106, s. 48-61

Evaluation of porcine stem cell competence for somatic cell nuclear transfer and production of cloned animals
Secher, Jan Bojsen-Møller, Liu, Y., Petkov, S. G., Li, D., Hall, Vanessa Jane, Schmidt, M., Callesen, H., Freude, Kristine & Hyttel, P., 2017, I: Animal Reproduction Science. 178, s. 40-49

Identification of SSEA-1 expressing enhanced reprogramming (SEER) cells in porcine embryonic fibroblasts
Li, D., Secher, Jan Bojsen-Møller, Juhl, M., Mashayekhi-Nezamabadi, K., Nielsen, T. T., Holst, B., Hyttel, P., Freude, Kristine & Hall, Vanessa Jane, 2017, I: Cell Cycle. 16, 11, s. 1070-1084

Identification of potential biomarkers in donor cows for in vitro embryo production by granulosa cell transcriptomics
Mazzoni, G., Salleh, S. M., Freude, Kristine, Pedersen, H. S., Stroebech, L., Callesen, H., Hyttel, P. & Kadarmideen, H. N., 2017, I: PLOS ONE. 12, 4, 27 s., e0175464.

In vitro production of bovine embryos: Cumulus/granulosa cell gene expression patterns point to early atresia as beneficial for oocyte competence
Mazzoni, G., Razza, E., Pedersen, H. S., Secher, Jan Bojsen-Møller, Kadarmideen, H. N., Callesen, H., Stroebech, L., Freude, Kristine & Hyttel, P., 2017, I: Animal Reproduction. 14, 3, s. 482-489 8 s.

Mitochondrial Spare Respiratory Capacity Is Negatively Correlated with Nuclear Reprogramming Efficiency
Yan, Z., Al-Saaidi, R. A., Fernandez Guerra, P., Freude, Kristine, Olsen, R. K. J., Jensen, U. B., Gregersen, N., Hyttel, P., Bolund, L., Aagaard, L., Bross, P. & Luo, Y., 2017, I: Stem Cells and Development. 26, 3, s. 166-176

Modeling neurodegenerative diseases with patient-derived induced pluripotent cells: Possibilities and challenges
Poon, A., Zhang, Y., Chandrasekaran, Abinaya, Phanthong, P., Schmid, B., Nielsen, T. T. & Freude, Kristine, 2017, I: New Biotechnology. 39, Part B, s. 190-198

Patient iPSC-derived neurons for disease modeling of frontotemporal dementia with mutation in CHMP2B
Zhang, Y., Schmid, B., Qas Younan, N. K., Rasmussen, M. A., Garcia, B. I. A., Agger, M., Callø, K., Stummann, T. C., Larsen, H. M., Nielsen, T. T., Huang, J., Xu, F., Liu, X., Bolund, L., Meyer, M., Bak, L. K., Waagepetersen, H. S., Luo, Y., Nielsen, J. E., Consortium, T. FRA. & 4 flere, Holst, B., Clausen, C., Hyttel, P. & Freude, Kristine, 2017, I: Stem Cell Reports. 8, 3, s. 648-658

Systematic in vitro and in vivo characterization of Leukemia-inhibiting factor- and Fibroblast growth factor-derived porcine induced pluripotent stem cells
Secher, J. O. B., Ceylan, A., Mazzoni, G., Mashayekhi-Nezamabadi, K., Li, T., Muenthaisong, S., Nielsen, T., Li, D., Li, S., Petkov, S. G., Cirera Salicio, S., Luo, Y., Thombs, L., Kadarmideen, H., Dinnyés, A., Bolund, L., Roelen, B. A., Schmidt, M., Callesen, H., Hyttel, P. & 1 flere, Freude, Kristine, 2017, I: Molecular Reproduction and Development. 84, 3, s. 229-245

Derivation of induced pluripotent stem cells from a familial Alzheimer's disease patient carrying the L282F mutation in presenilin 1
Poon, A. F., Li, T., Pires, C., Nielsen, T. T., Nielsen, Jørgen Erik, Holst, B., Dinnyes, A., Hyttel, P. & Freude, Kristine, nov. 2016, I: Stem Cell Research. 17, 3, s. 470-473 4 s.

Generation of a gene-corrected isogenic control hiPSC line derived from a familial Alzheimer's disease patient carrying a L150P mutation in presenilin 1
Poon, A. F., Schmid, B., Pires, C., Nielsen, T. T., Hjermind, L. E., Nielsen, Jørgen Erik, Holst, B., Hyttel, P. & Freude, Kristine, nov. 2016, I: Stem Cell Research. 17, 3, s. 466-469 4 s.

Generation of induced pluripotent stem cells (iPSCs) stably expressing CRISPR-based synergistic activation mediator (SAM)
Xiong, K., Zhou, Y., Hyttel, P., Bolund, L., Freude, Kristine & Luo, Y., nov. 2016, I: Stem Cell Research. 17, 3, s. 665-669 5 s.

Systems Biology and Stem Cell Pluripotency: Revisiting the Discovery of Induced Pluripotent Stem Cell

Mashayekhi, K., Hall, Vanessa Jane, Freude, Kristine, Høffding, M. K., Labusca, L. & Hyttel, P., 29 okt. 2016, *Systems Biology in Animal Production and Health*. Kadarmideen, H. N. (red.). 1 udg. Springer, Bind 2. s. 127-154 28 s.

The positional identity of iPSC-derived neural progenitor cells along the anterior-posterior axis is controlled in a dosage-dependent manner by bFGF and EGF

Zhou, S., Ochalek, A., Szczesna, K., Avci, H. X., Kobolak, J., Varga, E., Rasmussen, M., Holst, B., Cirera, Susanna, Hyttel, P., Freude, Kristine & Dinnyes, A., okt. 2016, I: *Differentiation*. 92, 4, s. 183-194 12 s.

Generation of a gene-corrected isogenic control cell line from an Alzheimer's disease patient iPSC line carrying a A79V mutation in *PSEN1*

Pires, C., Schmid, B., Petræus, C., Poon, A. F., Nimsanor, N., Nielsen, T. T., Waldemar, Gunhild, Hjermind, L. E., Nielsen, Jørgen Erik, Hyttel, P. & Freude, Kristine, sep. 2016, I: *Stem Cell Research*. 17, 2, s. 285-288 4 s.

Generation of a human induced pluripotent stem cell line via CRISPR-Cas9 mediated integration of a site-specific heterozygous mutation in *CHMP2B*

Zhang, Y., Schmid, B., Nielsen, T. T., Nielsen, Jørgen Erik, Clausen, C., Hyttel, P., Holst, B. & Freude, Kristine, jul. 2016, I: *Stem Cell Research*. 17, 1, s. 148-150 3 s.

Human Induced Pluripotent stem cells and their derivatives for disease modeling and therapeutic applications in Alzheimer's disease

Pires, C., Hall, Vanessa Jane & Freude, Kristine, 20 maj 2016, *Alzheimer's disease*. SMGroup, s. 1-25 25 s.

Generation of induced pluripotent stem cells (iPSCs) from an Alzheimer's disease patient carrying a M146I mutation in *PSEN1*

Li, T., Pires, C., Nielsen, T. T., Waldemar, Gunhild, Hjermind, L. E., Nielsen, Jørgen Erik, Dinnyes, A., Holst, B., Hyttel, P. & Freude, Kristine, mar. 2016, I: *Stem Cell Research*. 16, 2, s. 334-337 4 s.

Generation of induced pluripotent stem cells (iPSCs) from an Alzheimer's disease patient carrying an A79V mutation in *PSEN1*

Li, T., Pires, C., Nielsen, T. T., Waldemar, Gunhild, Hjermind, L. E., Nielsen, Jørgen Erik, Dinnyes, A., Hyttel, P. & Freude, Kristine, mar. 2016, I: *Stem Cell Research*. 16, 2, s. 229-332 4 s.

Initial embryology and pluripotent stem cells in the pig: the quest for establishing the pig as a model for cell therapy

Secher, Jan Bojsen-Møller, Callesen, H., Freude, Kristine & Hyttel, P., 1 jan. 2016, I: *Theriogenology*. 85, 1, s. 162-171 10 s.

Generation of induced pluripotent stem cells (iPSCs) from an Alzheimer's disease patient carrying a L150P mutation in *PSEN-1*

Tubsuwan, A., Pires, C., Rasmussen, M. A., Schmid, B., Nielsen, Jørgen Erik, Hjermind, L. E., Hall, Vanessa Jane, Nielsen, T. T., Waldemar, Gunhild, Hyttel, P., Clausen, C., Kitiyantant, N., Freude, Kristine & Holst, B., jan. 2016, I: *Stem Cell Research*. 16, 1, s. 110-112 3 s.

Generation of a human induced pluripotent stem cell line via CRISPR-Cas9 mediated integration of a site-specific homozygous mutation in *CHMP2B*

Zhang, Y., Schmid, B., Nielsen, T. T., Nielsen, Jørgen Erik, Clausen, C., Hyttel, P., Holst, B. & Freude, Kristine, 2016, I: *Stem Cell Research*. 17, 1, s. 151-153 3 s.

Neurosphere based differentiation of human iPSC improves astrocyte differentiation

Zhou, S., Szczesna, K., Ochalek, A., Kobolák, J., Varga, E., Nemes, C., Chandrasekaran, A., Rasmussen, M., Cirera, Susanna, Hyttel, P., Dinnyés, A., Freude, Kristine & Avci, H. X., 2016, I: *Stem Cells International*. 2016, 15 s., 4937689.

In vitro production of bovine embryos: revisiting oocyte development and application of systems biology

Stroebech, L., Mazzoni, G., Pedersen, H. S., Freude, Kristine, Kadarmideen, H., Callesen, H. & Hyttel, P., 1 aug. 2015, I: *Animal Reproduction*. 12, 3, s. 465-472 8 s.

Co-expression network analysis to identify pluripotency biomarkers in bovine and porcine embryos

Mazzoni, G., Freude, Kristine, Hall, Vanessa Jane, Mashayekhi-Nezamabadi, K., Hyttel, P., Dinnyés, A. & Kadarmideen, H., 2015. 1 s.

Optimization of three-dimensional imaging on in vitro produced porcine blastocysts and chimeras for stem cell testing: a technology report.

Secher, Jan Bojsen-Møller, Freude, Kristine, Li, R. & Callesen, H., 2015, I: Stem Cells and Development. 24, 9, s. 1141-1145 5 s.

Assessment of porcine-induced pluripotent stem cells by in vivo assays

Secher, Jan Bojsen-Møller, Freude, Kristine, Petkov, S. G., Ceylan, A., Schmidt, M. & Hyttel, P., 1 dec. 2014. 1 s.

Deciphering the naïve state of porcine iPSC

Freude, Kristine, Secher, Jan Bojsen-Møller, Mashayekhi-Nezamabadi, K., Petkov, S. G., Nielsen, T. T., Ceylan, A., Poligari, S., Dinnyes, A. & Hyttel, P., 18 jun. 2014. 1 s.

Induced pluripotent stem cells derived from Alzheimer's disease patients: the promise, the hope and the path ahead

Freude, Kristine, Pires, C., Hyttel, P. & Hall, Vanessa Jane, 2014, I: Journal of Clinical Medicine. 3, 4, s. 1402-1436 35 s.

A Sox9/Fgf feed-forward loop maintains pancreatic organ identity

Seymour, Philip Allan, Shih, H. P., Patel, N. A., Freude, Kristine, Xie, R., Lim, C. J. & Sander, M., sep. 2012, I: Development. 139, 18, s. 3363-72 10 s.

Swedish Alzheimer mutation induces mitochondrial dysfunction mediated by HSP60 mislocalization of amyloid precursor protein (APP) and beta-amyloid

Walls, K. C., Coskun, P., Gallegos-Perez, J. L., Zadourian, N., Freude, Kristine, Rasool, S., Blurton-Jones, M., Green, K. N. & LaFerla, F. M., 2012, I: Journal of Biological Chemistry. 287, 36, s. 30317-30327 11 s.

Soluble amyloid precursor protein induces rapid neural differentiation of human embryonic stem cells

Freude, Kristine, Penjwini, M., Davis, J. L., LaFerla, F. M. & Blurton-Jones, M., 2011, I: The Journal of Biological Chemistry. 286, 27, s. 24264-24274 11 s.

Nkx6 transcription factors and Ptf1a function as antagonistic lineage determinants in multipotent pancreatic progenitors

Schaffer, A. E., Freude, Kristine, Nelson, S. B. & Sander, M., 2010, I: Developmental Cell. 18, 6, s. 1022-1029 8 s.

Nkx6-1 controls the identity and fate of red nucleus and oculomotor neurons in the mouse midbrain

Prakash, N., Puelles, E., Freude, Kristine, Trümbach, D., Omodei, D., Di Salvio, M., Sussel, L., Ericson, J., Sander, M., Simeone, A. & Wurst, W., 2009, I: Development (Cambridge, England). 136, 15, s. 2545-2555 11 s.

A dosage-dependent requirement for Sox9 in pancreatic endocrine cell formation

Seymour, Philip Allan, Freude, Kristine, Dubois, C. L., Shih, H., Patel, N. A. & Sander, M., 1 nov. 2008, I: Advances in Developmental Biology. 323, 1, s. 19-30 12 s.

SOX9 is required for maintenance of the pancreatic progenitor cell pool

Seymour, Philip Allan, Freude, Kristine, Tran, M. N., Mayes, E. E., Jensen, J., Kist, R., Scherer, G. & Sander, M., 6 feb. 2007, I: Proceedings of the National Academy of Sciences of the United States of America. 104, 6, s. 1865-70 6 s.

X-linked mental retardation: a comprehensive molecular screen of 47 candidate genes from a 7.4 Mb interval in Xp11

Jensen, L. R., Lenzner, S., Moser, B., Freude, Kristine, Tzschach, A., Wei, C., Fryns, J., Chelly, J., Turner, G., Moraine, C., Hamel, B., Ropers, H. & Kuss, A. W., 2007, I: European Journal of Human Genetics. 15, 1, s. 68-75 8 s.

Mutations in the FTSJ1 gene coding for a novel S-adenosylmethionine-binding protein cause nonsyndromic X-linked mental retardation

Freude, K., Hoffmann, K., Jensen, L., Delatycki, M. B., des Portes, V., Moser, B., Hamel, B., van Bokhoven, H., Moraine, C., Fryns, J., Chelly, J., Gécz, J., Lenzner, S., Kalscheuer, V. M., Ropers, H. & Freude, Kristine, aug. 2004, I: American Journal of Human Genetics. 75, 2, s. 305-9 5 s.

Mutations in the polyglutamine binding protein 1 gene cause X-linked mental retardation

Kalscheuer, V. M., Freude, K., Musante, L., Jensen, L. R., Yntema, H. G., Gécz, J., Sefiani, A., Hoffmann, K., Moser, B., Haas, S., Gurok, U., Haesler, S., Aranda, B., Nshedjan, A., Tzschach, A., Hartmann, N., Roloff, T-C., Shoichet, S., Hagens, O., Tao, J. & 14 flere, Van Bokhoven, H., Turner, G., Chelly, J., Moraine, C., Fryns, J., Nuber, U., Hoeltzenbein, M., Scharff, C., Scherthan, H., Lenzner, S., Hamel, B. C. J., Schweiger, S., Ropers, H. & Freude, Kristine, dec. 2003, I: Nature Genetics. 35, 4, s. 313-5 3 s.

Aktiviteter

Deciphering the sex specific neuroinflammatory component in Alzheimer's disease

Freude, Kristine (Andet)

4 apr. 2024

Trønderbrain Research Seminar 2024

Freude, Kristine (Deltager)

4 apr. 2024 → 5 apr. 2024

DEVELOPNOID Annual meeting 19th to 20th of March 2024

Freude, Kristine (Deltager) & Mohamed, Fadumo Abdullahi (Deltager)

19 mar. 2024 → 20 mar. 2024

Gene editing

Freude, Kristine (Andet)

19 mar. 2024

(AD/PD 2024) INTERNATIONAL CONFERENCE ON ALZHEIMER'S AND PARKINSON'S DISEASES AND RELATED NEUROLOGICAL DISORDERS

Freude, Kristine (Deltager) & Tao, Ruixin (Deltager)

5 mar. 2024 → 9 mar. 2024

Neuroimmunology Research Society Denmark (NIRS-DK) Conference 2024

Freude, Kristine (Deltager)

4 mar. 2024

iPSC Models to Decipher Glia Mediated Inflammatory Responses in Neurodegenerative Diseases

Freude, Kristine (Andet)

4 mar. 2024

Biology of Aging and lifestyle

Jensen, Lars Jørn (Deltager) & Freude, Kristine (Deltager)

31 mar. 2022

Induced pluripotent stem cell models for neurodegenerative diseases

Freude, Kristine (Andet)

31 mar. 2022

Priser

Alzheimer Forskningsfonden Forskerpris

Freude, Kristine (Modtager), 2020

Presse/medie

Kort Sagt: "The hope and the hype of stem cells" - by Kristine Freude

Kristine Freude

10/03/2016

1 Mediebidrag

Medicin mod dæmens: Ingen ved, om kvinder får gavn af det

Kristine Freude

01/06/2023

1 Mediebidrag

Minihjerner af stamceller skal løse Alzheimergåden

Kristine Freude & Henriette Haukedal

23/10/2020

1 Mediebidrag

Musene med to fædre

Kristine Freude

09/03/2023

1 Mediebidrag