About

Over the past years, I have been very much focused on modelling neurodegenerative disease using human induced pluripotent stem cells (hiPSCs). I gained my PhD in Neuroscience on animal husbandry at the University of Godollo, Hungary (2017). My current focuses specifically on the themes of metabolism and mitochondrial associated disease in interneurons (GABA receptors), excitatory neurons (Glutamatergic neurons) focusing Epilepsy. I am very knee in epilepsy research areas, from basic science seeking the roots of the disease to therapy development to find effective treatments.

Priser

Early Career Scientist Grant Prize
Chandrasekaran, Abinaya (Modtager), aug. 2022

Hørslev-Fonden –2022
Chandrasekaran, Abinaya (Modtager), 2022

Publikationer

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.

Generation of two patient specific GABRD variants and their isogenic controls for modeling epilepsy
Kamand, M., Taleb, R., Wathikthinnakon, Methi, Mohamed, Fadumo Abdullahi, Ghanzanfari, 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

Charting the Explicit Path: Translational Dynamics of Hepatic Bioengineering from Experimental Benchmarks to Practical Bedside Applications
Radhakrishnan, S., Martin, C. A., Dhayanithy, G., Martin, J. C., Chandrasekaran, Abinaya, Kalkura, S. N. & Rela, M., 2024 , I: MedLiber of Regenerative Medicine. 2, 1, s. 1-18

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

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.

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.

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

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

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.

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.

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.

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.

Altered neurite morphology and cholinergic function of induced pluripotent stem cell-derived neurons from a patient with Kleefstra syndrome and autism
Chandrasekaran, Abinaya, 2017, I: Translational Psychiatry. 7 , 7, e1179.

Comparison of 2D and 3D neural induction methods for the generation of neural progenitor cells from human induced pluripotent stem cells
Chandrasekaran, Abinaya, Avci, H., Ochalek, A., Rosingh, L., Molnar, K., Laszlo, L., Bellak, T., Teglasi, A., Pesti, K., Mike, A., Phanthong, P., Biro, O., Hall, Vanessa Jane, Kitiyanant, N., Krause, K., Kobolak, J. & Dinnyés, A., 2017, I: Stem Cell Research. 25, s. 139-151

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.

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