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Forskningsprofil

My research revolves around cancer immunotherapy in pre-clinical mouse tumor models, with focus on utilizing dendritic cells for therapy. My research is divided into two arms, one related to STING-targeted therapy and another related to therapeutic cancer vaccines.
STING has proven to be an interesting target for immunotherapy, especially as combination with immune checkpoint inhibitors (ICI). My current aim is to use cholesterol interfering drugs, to prime the STING-pathway, thus making it more susceptible to stimulation during immunotherapy. In addition, I investigate the possible use of caspase-inhibition, as a mean to activate or prime the STING-pathway.
Cancer vaccines holds the potential to aid antigen-presentation and T cell activation during ICI treatment. We have generated a small recombinant protein vaccine, capable of maturing dendritic cells, thereby inducing activation of tumor-specific T cells. The vaccine carries a nucleotide adjuvant capable of activating dendritic cells through the cGAS/STING-pathway or the TLR3-pathway.

Ansættelse

Lektor
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Institut for Medicin og Sundhedsteknologi
Det Sundhedsvidenskabelige Fakultet
Gistrup, Danmark
1 feb. 2015 → 31 dec. 4712

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Det Sundhedsvidenskabelige Fakultet
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1 feb. 2015 → 31 dec. 4712

Medical Microbiology and Immunology
Det Sundhedsvidenskabelige Fakultet
Aalborg, Danmark
1 jan. 2020 → present

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Aalborg, Danmark
1 feb. 2015 → 31 dec. 4712

Bestyrelsesmedlem af
Danish Immunological Society
Danmark

1 jan. 2017 → 1 jan. 2023

Treasurer of the
Danish Immunological Society
Danmark
1 jan. 2017 → present

Member of the
Scandinavian Society of Immunology
Danmark
1 jan. 2016 → present

Publikationer

STING and Nonnecroptotic MLKL-Mediated Mechanisms Improve Dendritic Cell Maturation and Killing of Cancer Cells
Jensen, T. S., Laursen, M. F., Schort, L., Banasik, A. J., Agger, R., Jakobsen, M. R. & Kofod-Olsen, E., sep. 2025, I: European Journal of Immunology. 55, 9, s. e70044 e70044.

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Cholesterol-Inhibition Slow Development of Cancer in CT26 and MC38 Cancer Models
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Flak, R. V., Kofod-Olsen, E., Sølvsten, N. D., Naujokaite, G., Agger, R., Stender, M. T., Christensen, S., Shim, S., Poulsen, L. Ø., Detlefsen, S., Thorlasius-Ussing, O. & Ladekarl, M., 2023, SSRN: Social Science Research Network, 19 s.

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Andersen, L. L., Mørk, N., Reinert, L. S., Kofod-Olsen, E., Narita, R., Jørgensen, S. E., Skipper, K. A., Höning, K., Gad, H. H., Østergaard, L., Ørntoft, T. F., Hornung, V., Paludan, S. R., Mikkelsen, J. G., Fujita, T., Christiansen, M., Hartmann, R. & Mogensen, T. H., 27 jul. 2015, I: The Journal of Experimental Medicine.

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Tørring, C., Petersen, C. C., Bjerg, L., Kofod-Olsen, E., Petersen, T. & Höllsberg, P., 15 sep. 2013, I: Journal of Neuroimmunology. 262, 1-2, s. 92-9 8 s.

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Kaspersen, M. D., Larsen, P. B., Ingerslev, H. J., Fedder, J., Bungum, M., Kofod-Olsen, E., Höllsberg, P. & Bonde, J. H., 2013, I: APMIS - Journal of Pathology, Microbiology and Immunology. 121, s. 26-27 2 s.

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Kofod-Olsen, E. (Opfinder) & Höllsberg, P. (Opfinder), 2011, Patentnr. WO/2011/095174 A1

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Kofod-Olsen, E., 2011, 121 s. Faculty of Health Sciences, University of Aarhus.

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Kofod-Olsen, E. & Höllsberg, P., 2011.

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Flytlie, H. A., Hvid, M., Lindgreen, E., Kofod-Olsen, E., Petersen, E. L., Jørgensen, A., Deleuran, M., Vestergaard, C. & Deleuran, B., jan. 2010, I: Cytokine. 49, 1, s. 24-9 6 s.

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Kofod-Olsen, E., Ross-Hansen, K., Mikkelsen, J. G. & Höllsberg, P., 2008.

Restriction of human herpesvirus 6B replication by p53
Oster, B., Kofod-Olsen, E., Bundgaard, B. & Höllsberg, P., 2008, I: Journal of General Virology. 89, Pt 5, s. 1106-13 8 s.

Human herpesvirus 6B inhibits cell proliferation by a p53-independent pathway
Øster, B., Kaspersen, M. D., Kofod-Olsen, E., Bundgaard, B. & Höllsberg, P., dec. 2006, I: Journal of Clinical Virology. 37 Suppl 1, s. S63-8

Aktiviteter

Aarhus University (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
18 nov. 2022

Aarhus University (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
17 nov. 2022

Aarhus University (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
1 okt. 2022

Technical University of Denmark (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
1 sep. 2022

Aarhus University (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
30 maj 2022

Institut for Medicin og Sundhedsteknologi (Organisation)
Kofod-Olsen, E. (Forperson)
1 jun. 2021

Technical University of Denmark (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
31 jan. 2021

European Macrophage and Dendritic cell Society (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
2021

Technical University of Denmark (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
4 feb. 2020

Danish Society of Immunology (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
2017

Scandinavian Society of Immunology (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
2017

Danish Society for Flow cytometry (Ekstern organisation)
Kofod-Olsen, E. (Medlem)
2016

Presse/medie

Knæk Cancer på tur til fire danske byer
Kofod-Olsen, E.
11/10/2017
4 elementer af Mediedækning

Regulating cholesterol levels might be the key to improving cancer treatment
Kofod-Olsen, E.
30/04/2024 → 05/05/2024
9 elementer af Mediedækning

Regulering af kolesterolniveauer kan være nøglen til bedre kræftbehandling
Kofod-Olsen, E.
30/04/2024
1 element af Mediedækning

Projekter

EPIC-1: A phase II Study of Electroporation Potentiated Immunotherapy in Liver Metastatic Pancreatic Cancer
Flak, R. V. (Projektkoordinator), Ladekarl, M. (PI (principal investigator)), Poulsen, L. Ø. (Projektkoordinator), Thorlacius-Ussing, O. (Andet), Stender, M. T. (Andet), Detlefsen, S. (CoI (co-investigator)), Agger, R. (CoI (co-investigator)), Kofod-Olsen, E. (CoI (co-investigator)) & Wanders, A. (CoI (co-investigator))
01/01/2021 → 09/04/2024

Dendritic cell-targeted vaccination
Kofod-Olsen, E. (PI (principal investigator)) & Agger, R. (PI (principal investigator))
01/09/2016 → …

Inflammatory cell death and dendritic cell activation in the tumor microenvironment
Kofod-Olsen, E. (PI (principal investigator)) & Jensen, T. S. (PI (principal investigator))
01/09/2017 → …

STING-targeted immunotherapy
Kofod-Olsen, E. (PI (principal investigator)) & Jensen, T. S. (PI (principal investigator))
01/05/2018 → …