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## Ansættelse

Klinisk Institut

SDU

30. jan. 2023 → 31. jan. 2025

## Gæsteforsker

KI, OUH, Forskningsenhed for Klinisk fysiologi og nuklearmedicin (Odense)

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30. jan. 2023 → 31. jan. 2025

## Publikationer

### **A novel multitargeted self-assembling peptide-siRNA complex for simultaneous inhibition of SARS-CoV-2-host cell interaction and replication**

Tuttolomondo, M., Pham, S. T. D., Terp, M. G., Cendán Castillo, V., Kalisi, N., Vogel, S., Langkjær, N., Hansen, U. M., Thisgaard, H., Schrøder, H. D., Palarasah, Y. & Ditzel, H. J., 10. sep. 2024, I: *Molecular Therapy Nucleic Acids*. 35, 3, 19 s., 102227.

### **Multicenter Experience with Good Manufacturing Practice Production of [<sup>11</sup>C]PIB for Amyloid Positron Emission Tomography Imaging**

Andersen, A. B. A., Lehel, S., Grove, E. K., Langkjaer, N., Fuglø, D. & Huynh, T. H. V., feb. 2024, I: *Pharmaceuticals*. 17, 2, 15 s., 217.

### **A randomised trial of [18F]PSMA-1007-PET/CT versus NaF-PET/CT for staging primary prostate cancer: A trial protocol**

Buch-Olsen, K. M., Poulsen, M. H., Hansen, S., Vilstrup, M. H., Holm, J., Hess, S., Holdgaard, P. C., Zieger, K. E. A., Madsen, S. S., Gerke, O., Pedersen, K. T., Dam, J. H., Langkjær, N., Østergaard, L. D., Asmussen, J. T., Braad, P. E., Nørgaard, B., Eiber, M. & Hildebrandt, M. G., sep. 2023, I: *BJUI Compass*. 4, 5, s. 513-522

### **Preparation and Evaluation of [18F]AIF-NOTA-NOC for PET Imaging of Neuroendocrine Tumors: Comparison to [68Ga]Ga-DOTA/NOTA-NOC**

Dam, J. H., Langkjær, N., Baun, C., Olsen, B. B., Nielsen, A. Y. & Thisgaard, H., 12. okt. 2022, I: *Molecules (Basel, Switzerland)*. 27, 20, 9 s., 6818.

### **Establishment of patient-derived lung tumorspheres and their response to internal irradiation by Auger electrons**

Madsen, K. L., Langkjær, N., Gerke, O., Høilund-Carsen, P. F. & Olsen, B. B., mar. 2022, I: *International Journal of Oncology*. 60, 3, 34.

### **GMP production of 6-[18F]Fluoro-L-DOPA for PET/CT imaging by different synthetic routes: a three center experience**

Andersen, V. L., Soerensen, M. A., Dam, J. H., Langkjaer, N., Petersen, H., Bender, D. A., Fugloe, D. & Huynh, T. H. V., 12. jun. 2021, I: *EJNMMI Radiopharmacy and Chemistry*. 6, 21.

### **Auger electron therapy of glioblastoma using [<sup>125</sup>I]5-iodo-2'-deoxyuridine and concomitant chemotherapy – Evaluation of a potential treatment strategy**

Madsen, K. L., Therkelsen, A. S. N., Langkjær, N., Olsen, B. B. & Thisgaard, H., 1. maj 2021, I: *Nuclear Medicine and Biology*. 96-97, s. 35-40

### **Multi-curie production of gallium-68 on a biomedical cyclotron and automated radiolabelling of PSMA-11 and DOTATATE**

Thisgaard, H., Kumlin, J., Langkjær, N., Chua, J., Hook, B., Jensen, M., Kassaiian, A., Zeisler, S., Borjian, S., Cross, M., Schaffer, P. & Dam, J. H., 7. jan. 2021, I: *EJNMMI radiopharmacy and chemistry*. 6, 11 s., 1.

**Preparation and evaluation of [F-18] AIF-NOTA-NOC for PET imaging of neuroendocrine tumors**

Dam, J. H., Langkjær, N., Baun, C. & Olsen, B. B., maj 2019, I: Journal of Labelled Compounds and Radiopharmaceuticals. 62, S1, s. S416-S417

**3'-Pyrene-modified unlocked nucleic acids: synthesis, fluorescence properties and a surprising stabilization effect on duplexes and triplexes**

Ejlersen, M., Langkjær, N. & Wengel, J., 2017, I: Organic & Biomolecular Chemistry. 15, 9, s. 2073-2085

**Development of an Efficient G-Quadruplex-Stabilised Thrombin-Binding Aptamer Containing a Three-Carbon Spacer Molecule**

Aaldering, L. J., Poongavanam, V., Langkjær, N., Murugan, N. A., Jørgensen, P. T., Wengel, J. & Veedu, R. N., 2017, I: ChemBioChem. 18, 8, s. 755-763

**Evaluation of somatostatin and nucleolin receptors for therapeutic delivery in non-small cell lung cancer stem cells applying the somatostatin-analog DOTATATE and the nucleolin-targeting aptamer AS1411**

Holmboe, S., Hansen, P. L., Thisgaard, H., Block, I., Müller, C., Langkjær, N., Høilund-Carlsen, P. F., Olsen, B. B. & Mollenhauer, J., 2017, I: PLOS ONE. 12, 5, 12 s., e0178286.

**Evaluation of nucleolin and somatostatin receptor targeting for therapeutic delivery to lung cancer stem cells**

Hansen, P. L., Holmboe, S., Olsen, B. B., Thisgaard, H., Christiansen, H., Schmidt, S., Block, I., Müller, C., Langkjær, N., Jørgensen, P. T., Vogel, S., Wengel, J., Høilund-Carlsen, P. F. & Mollenhauer, J., 27. jun. 2016.

**Highly Effective Auger-Electron Therapy in an Orthotopic Glioblastoma Xenograft Model using Convection-Enhanced Delivery**

Thisgaard, H., Halle, B., Aaberg-Jessen, C., Olsen, B. B., Nautrup Therkelsen, A. S., Dam, J. H., Langkjær, N., Munthe, S., Någren, K., Høilund-Carlsen, P. F. & Kristensen, B. W., 1. jan. 2016, I: Theranostics. 6, 12, s. 2278-2291

**18F-fluorodeoxymannose (FDM) is a potential new tracer for inflammatory bowel disease**

Soltau, S. R., Hess, S., Olsen, B. B., Baun, C., Langkjær, N. & Høilund-Carlsen, P. F., 2016, I: European Journal of Nuclear Medicine and Molecular Imaging. 43, suppl. 1, s. S449 1 s., EP585.

**18F-Fluorodeoxymannose (FDM) is a Potential New Tracer for Inflammatory Bowel Disease**

Christiansen, S. R., Hess, S., Olsen, B. B., Baun, C., Langkjær, N. & Høilund-Carlsen, P. F., 2016.

**Watson-Crick hydrogen bonding of unlocked nucleic acids**

Langkjær, N., Wengel, J. & Pasternak, A., 15. nov. 2015, I: Bioorganic & Medicinal Chemistry Letters. 25, 22, s. 5064-5066 3 s.

**Bis-pyrene-modified unlocked nucleic acids: synthesis, hybridization studies, and fluorescent properties**

Perlíková, P., Ejlersen, M., Langkjær, N. & Wengel, J., sep. 2014, I: ChemMedChem. 9, 9, s. 2120-2127 8 s.

**Convection-enhanced delivery of the Auger-electron-emitter I-125-UdR: A highly efficient therapy in an Orthotopic Glioblastoma Xenograft Model**

Halle, B., Thisgaard, H., Aaberg-Jessen, C., Olsen, B. B., Dam, J. H., Langkjær, N., Munthe, S., Någren, K., Høilund-Carlsen, P. F. & Kristensen, B. W., 2014, I: Neuro-Oncology. 16, Suppl. 5, s. v84 ET-22.

**Bioorganic chemistry as a tool for recognition and binding of bioactive molecules**

Langkjær, N., 2013, Syddansk Universitet. Det Naturvidenskabelige Fakultet.

**Selective Biocatalytic Acylation Studies on 5'-O-(4,4'-Dimethoxytrityl)-2',3'-Secouridine: An Efficient Synthesis of UNA Monomer**

Singh, S. K., Reddy, L. C., Srivastava, S., Olsen, C. E., Sanghvi, Y. S., Langkjær, N., Wengel, J., Parmar, V. S. & Prasad, A. K., 2012, I: Nucleosides, Nucleotides and Nucleic Acids. 31, 12, s. 831-40 10 s.

### **Synthesis of 2'-AMINO-UNA**

Langkjær, N. & Wengel, J., 17. okt. 2011. 1 s.

### **A screen of chemical modifications identifies position-specific modification by UNA to most potently reduce siRNA off-target effects**

Bramsen, J. B., Pakula, M. M., Hansen, T. B., Bus, C., Langkjær, N., Odadzic, D., Smicius, R., Wengel, S. L., Chattopadhyaya, J., Engels, J. W., Herdewijn, P., Wengel, J. & Kjems, J., 2010, I: *Nucleic Acids Research*. 38, 17, s. 5761-5773

### **Synthesis and Biophysical Studies of Coronene Functionalized 2'-Amino-LNA: A Novel Class of Fluorescent Nucleic Acids**

Gupta, P., Langkjær, N. & Wengel, J., 2010, I: *Bioconjugate Chemistry*. 21, 3, s. 513-520 8 s.

### **Utilization of unlocked nucleic acid (UNA) to enhance siRNA performance in vitro and in vivo**

Laursen, M. B., Pakula, M. M., Gao, S., Fluiter, K., Mook, O. R., Baas, F., Langkjær, N., Wengel, S. L., Wengel, J., Kjems, J. & Bramsen, J. B., 2010, I: *Molecular BioSystems*. 6, s. 862-870 9 s.

### **A large-scale chemical modification screen identifies design rules to generate siRNAs with high activity, high stability and low toxicity**

Bramsen, J. B., Laursen, M. B., Nielsen, A. F., Hansen, T. B., Bus, C., Langkjær, N., Babu, B. R., Hojland, T., Abramov, M., Van Aerschot, A., Odadzic, D., Smicius, R., Haas, J., Andree, C., Barman, J., Wenska, M., Srivastava, P., Zhou, C., Honcharenko, D. & Hess, S. & 11 flere, Hess, S., Bobkov, G. V., Mikhailov, S. N., Fava, E., Meyer, T. F., Chattopadhyaya, J., Zerial, M., Engels, J. W., Herdewijn, P., Wengel, J. & Kjems, J., 2009, I: *Nucleic Acids Research*. 37, 9, s. 2867-2881 15 s.

### **Filling the gap in LNA antisense oligo gapmers: The effects of unlocked nucleic acid (UNA) and 4'-C-hydroxymethyl-DNA modifications on RNase H recruitment and efficacy of an LNA gapmer**

Fluiter, K., Mook, O. R. F., Vreijling, J., Langkjær, N., Højland, T., Wengel, J. & Baas, F., 2009, I: *Molecular BioSystems*. 5, 8, s. 838-843 6 s.

### **UNA (unlocked nucleic acid): A flexible RNA mimic that allows engineering of nucleic acid duplex stability**

Langkjær, N., Pasternak, A. & Wengel, J., 2009, I: *Bioorganic & Medicinal Chemistry*. 17, 15, s. 5420-5425 6 s.

### **Nucleosides with 1,4-dioxane as sugar moiety**

Madsen, A. S., Langkjær, N. & Wengel, J., 2008, I: *Nucleic Acids Symposium Series*. 52, 1, s. 269-270

### **Unlocked nucleic acid (UNA) and UNA derivatives: thermal denaturation studies**

Jensen, T. B., Langkjær, N. & Wengel, J., 2008, I: *Nucleic Acids Symposium Series*. 52, 1, s. 133-134

## **Aktiviteter**

### **Experiences with PSMA-1007**

Langkjær, N. (Underviser)  
23. mar. 2018

### **Dansk Radiokemimøde 2018**

Langkjær, N. (Deltager)  
22. mar. 2018 → 23. mar. 2018

### **<sup>18</sup>F-AIF labeled PSMA-11**

Langkjær, N. (Underviser)  
23. mar. 2017

**Dansk Radiokemimøde 2017**

Langkjær, N. (Arrangør), Inglev, S. (Arrangør) & Dam, J. H. (Arrangør)  
2017

**Metalisotoper i nuklearmedicin**

Langkjær, N. (Foredragsholder)  
1. dec. 2016

**GMP - Sidste Nyt**

Langkjær, N. (Deltager)  
11. nov. 2016

**Kemisk Forenings Årsmøde 2016**

Langkjær, N. (Deltager)  
9. jun. 2016

**Nuklearmedicin**

Langkjær, N. (Foredragsholder)  
5. apr. 2016

**Dansk Radiokemimøde 2016**

Langkjær, N. (Deltager)  
10. mar. 2016 → 11. mar. 2016

**Eckert & Ziegler Modular-Lab Winter School**

Langkjær, N. (Deltager)  
10. feb. 2016 → 12. feb. 2016

**QP/QPPV workshop**

Langkjær, N. (Deltager)  
22. sep. 2015

**Postgraduate Course in Radiochemistry/Radiopharmacy**

Langkjær, N. (Deltager)  
31. aug. 2015 → 11. sep. 2015

**<sup>57</sup>Co-labeling of AS1411 nucleolin targeting aptamer.**

Langkjær, N. (Foredragsholder)  
19. mar. 2015

**Dansk Radiokemimøde 2015**

Langkjær, N. (Deltager)  
19. mar. 2015 → 20. mar. 2015

**Postgraduate Course in Radiochemistry/Radiopharmacy**

Langkjær, N. (Deltager)  
25. aug. 2014 → 5. sep. 2014

**Dansk Kemisk Forenings Årsmøde 2014**

Langkjær, N. (Deltager)  
12. jun. 2014

**Postgraduate Course in Radiochemistry/Radiopharmacy**

Langkjær, N. (Deltager)  
27. jan. 2014 → 7. feb. 2014

**Visions in Chemistry The Torkil Holm Symposium**

Langkjær, N. (Deltager)

24. jan. 2014 → 25. jan. 2014

**EU-GMP Regler - Krav & Fortolkninger**

Langkjær, N. (Deltager)

7. okt. 2013 → 10. okt. 2013

**Radioaktive isotoper og ioniserende stråling (isotopkursus)**

Langkjær, N. (Deltager)

2013 → 2014

**Oligonucleotide Therapeutics Society Annual Meeting 2011**

Langkjær, N. (Deltager)

8. sep. 2011

**239th American Chemical Society National meeting**

Langkjær, N. (Deltager)

21. mar. 2010 → 25. mar. 2010