Iver.Nordentoft@clin.au.dk

+45 29476687

LANGUAGE

Danish: Professional in written and spoken

English: Professional in written and spoken

Danish: Native speaker

Personal Competencies

Committed

Quality-conscious

Goal-oriented

Proactive

Organized

Responsible

Iver Nordentoft

PROFILE

Molecular biologist with over 16 years of experience in translational cancer research, specializing in genomic analysis and circulating tumor DNA. Expertise in next-generation sequencing (NGS) technology and its applications in cancer research. As a project manager and senior researcher, I focus on early diagnosis and cancer monitoring studies. I am an engaged, organized, and innovative professional with excellent communication skills, thriving in interdisciplinary team environments.

RESEARCH LEADERSHIP

- **[2021 - 2024]** Coordinated a multidisciplinary, prospective study with 119 patients aimed at early detection of metastatic recurrence post-chemotherapy and surgery through ctDNA analysis in serial blood and urine samples taken before, during, and after treatment. *Responsible for NGS library preparation, sequencing, and WGS data analysis of over 1,300 plasma samples. International collaboration between Denmark and the USA.*
- **[2020 – present]** National Phase III, ctDNA-guided interventional study involving 193 patients (Tombola trial), focusing on molecular detection of minimal residual disease, early immunotherapy intervention, and treatment response monitoring. *Coordinated NGS laboratory work and sequencing of over 2,000 samples and currently conducting scientific analysis of WGS and ddPCR data. International collaboration between Denmark and the USA.*
- **[2011-2013]** Coordination and establishment of the NGS facility at MOMA.
- **[2004-2007]** Establishment of laboratory for molecular biology at Department of endocrinology and Metabolism, Aarhus University Hospital THG.
- **[2013 – present]** Coordinator and advisor for NGS and ctDNA projects

SELECTED SKILLS

- Laboratory and analytical techniques, including NGS (DNA/RNA/cfDNA), droplet digital PCR, and single-cell and TCR/BCR sequencing; extensive expertise with Illumina sequencing platforms and software
- Bioinformatic analysis (R and Python)
- NGS data analysis, variant analysis, and variant interpretation
- Multidisciplinary collaboration with Research-, clinical departments and industry partners
- REDCap database programming and experienced user of research biobank
- Preparation of technical manuals, budgeting, and grant applications
- In-depth knowledge of translational bladder cancer research
- Quality assurance and documentation in an accredited lab (DS/EN ISO15189:2013)
- Quality assessment/assurance via QREG

PUBLIKATIONER

Co-author on 55 peer-reviewed articles in high-impact journals such as Nature, JAMA Oncol, J Clin Oncol, European Urology, and Cancer Cell. I am the first author on eight papers and shared first author on four.

- **h-index:** 36 (ResearchGate, October 2024)
- **ORCID ID: 0000-0003-4856-4086**

IT -KOMPETENCER

R and RStudio

Phyton (basic)

SAV , IEM (Illumina)

Cell Ranger, Loupe (10X genomics)

REDCap programming

VarSeq (Golden Helix)

IGV (Broad Inst.)

QCI Interpret and IPA (Qiagen)

QX Manager / Quantasoft (BioRad)

COMMUNICATION, SUPERVISION, AND PRESENTATION

- **[2022-2023]** Teaching Danish and international PhD students in ctDNA and NGS methods at Aarhus University
- **[2014-Present]** Supervised 3 Master's students and 9 PhD students
- **[2004-Present]** Presentation of research findings at national and international conferences, to collaborators, clinical teams, and industry partners

RESEARCH FOCUS AND ACHIEVEMENTS

I specialize in studying tumor heterogeneity and evolution in bladder cancer using exome, targeted, and whole-genome NGS. My work has pioneered the characterization of tumor sub-clones and driver mutations, tracing bladder cancer progression and metastasis through longitudinal sampling. This research has identified mutational signatures in aggressive disease and enhanced our understanding of field cancerization in bladder cancer (Nordentoft et al., Cell Rep. 2014; Lamy et al., Cancer Res. 2016; Strandgaard et al., Eur Urol. 2023).

A key area of my research is the use of plasma-based ctDNA for real-time monitoring of recurrence and progression. Leveraging exome sequencing, I develop patient-specific assays (ddPCR and NGS capture panels) to track disease dynamics in urine and plasma samples from patients with advanced disease (Birkenkamp-Demtröder et al., Eur Urol. 2016; Christensen et al., J Clin Oncol. 2019; Christensen et al., Clin Cancer Res. 2023).

I have also contributed to identifying novel subtypes and mutations in early-stage bladder cancer via RNA-Seq analyses (Hedegaard et al., Cancer Cell 2016; Lindskrog et al., Nat Commun. 2021). My current research focuses on whole-genome sequencing of cfDNA from plasma for detecting minimal residual disease, recurrence, and treatment response (Nordentoft et al., Eur Urol. 2024). Additionally, I am exploring T cell receptor diversity and its implications for treatment outcomes in bladder cancer.

CURRENT POSITION

Senior Researcher, Bladder Cancer Research
Department of Molecular Medicine, Aarhus University Hospital

ACADEMIC POSITIONS AND TRAINING

- **[2008– present]** Postdoctoral Fellow, Molecular Diagnostic Laboratory, Aarhus University Hospital
- **[2004–2007]** PhD Student, Department of Endocrinology and Metabolism, Aarhus University
- **[2002-2004]** Freelance Patent Agent, specializing in translation within the fields of molecular biology and medicine, Budde, Schou & Ostenfeld A/S, Copenhagen
- **2003–2003]** Research Fellow, Department of Endocrinology and Metabolism, Aarhus University

EDUCATION AND ACADEMIC DEGREES

- **[2007] PhD in Medicine,** University of Aarhus
- **[2002] Master of Science in Molecular Biology,** University of Aarhus