

Curriculum Vitae

Personal information

Lotte Bjergbæk

Born: 25.04.71

C.F Møllers Allé, building 1131, room 330

Phone: 87 156315

Positions

2006 Associate Professor, Department of Molecular Biology and Genetics, Aarhus University

2005-2006 Assistant Professor, Department of Molecular Biology, Aarhus University

2001-2005 Postdoctoral fellow, Department of Molecular Biology, Geneva University, Switzerland

2000-2001 Postdoctoral fellow, Department of Molecular Biology, Aarhus University

Education & training

2000 Ph.D, Department of Molecular Biology, Aarhus University

1998 Master, Department of Molecular Biology, Aarhus University

1998 Three months research stay in Professor Neil Osheroff's laboratory, Vanderbilt University, USA

Scientific summary

Area of research:

Investigations of the cellular responses upon genomic insults during DNA replication. Emphases are on DNA repair, checkpoints, recombination as well as DNA replication integrity.

1) Unravelling the checkpoint and replication fork integrity roles of the RecQ helicase Sgs1

Jennifer A. Cobb, Lotte Bjergbaek, Kenji Shimada, Christian Frei, and Susan M. Gasser (2003). The stabilization of DNA polymerases at stalled replication forks requires Mec1 and the RecQ helicase Sgs1. *EMBO J.* **22**, 4325-4336

Lotte Bjergbaek, Jennifer A. Cobb, Monica Tsai-Pflugfelder and Susan M. Gasser (2005)

Mechanistically distinct roles for Sgs1p in checkpoint activation and replication fork maintenance. *EMBO J.* **24**, 405-417

Jennifer A. Cobb, Thomas Schleker, Vanesa Rojas, Lotte Bjergbaek, José A. Tercero and Susan M. Gasser (2005).

Replisome instability, fork collapse and gross chromosomal rearrangements arise synergistically from Mec1 kinase and RecQ helicase mutations. *Genes and Development*, **24**, 3055-69

2) Development of new cellular systems, which allow induction of replication roadblocks at well-defined places in the genome. This enables studies of the cellular responses to individual stalled replication forks

Ida Nielsen, Iben Bach Bentsen, Michael Lisby, Sabine Hansen, Kamilla Mundbjerg, Anni H. Andersen and Lotte Bjergbæk (2009). A Flp-nick system to study repair of a single protein-bound nick *in vivo*. *Nature Methods* **6** (10), 753-757.

Iben B. Bentsen, Ida Nielsen, Michael Lisby, Helena B. Nielsen, Souvik Sen Gupta, Kamilla Mundbjerg, Anni H. Andersen and Lotte Bjergbaek (2013). MRX protects fork integrity at protein-DNA barriers and its absence causes checkpoint activation dependent on chromatin context.

Research funding

Approximately 1-1.5 mill kr yearly since 2005.

Teaching and supervision

Formal pedagogical training:

Course in Theory of University Teaching (2005)

Course in Research supervision and Supervision techniques (2006)

Teaching experience:

Graduate teaching in "Molecular Biology of yeast" (lecturer and co-organizer)

Undergraduate teaching in "Advanced Molecular Biology" (lecturer)

Supervision:

Supervision of 7 bachelor students, 4 masterstudents and 1 ph.d student and 1 post doc since 2005. Moreover research leader for 3 research assistants and 1 technician trainee.

Evaluation of others work

Evaluation of master degree thesis at Copenhagen University, BRIC (2012) and Danish Cancer Society (2012)

Reviewer for United States-Israel Binational Science Foundation (grant reviewer).

Referee for EMBO J, Nucleic Acids Research, Genes to Cell, BMC Molecular Biology, FEBS letter and DNA repair

Editor of "DNA repair protocols" (2012)

Leadership, development and collaboration

Member of the seminar committee at Department of Molecular Biology and Genetics (since 2009)

Knowledge exchange:

Participation in "Forskningsdøgn" 2011 with workshop activity

Publication from the Research Council regarding funding

Science, Technology and Innovation projects magazine (2012)