

Personal information

Name: Charlotte Rohde Knudsen

Born: November 4, 1965

Address: Department of Molecular Biology and Genetics, Gustav Wieds Vej 10C, DK-8000 Aarhus C; phone +45 87155437; email crk@mbg.au.dk

Positions

2001- : Associate professor, Dept. Molecular Biology and Genetics, Aarhus University

1998-2000: Assistant professor, Dept. Molecular and Structural Biology, Aarhus University

1995-1998: Post-doctoral fellow, Dept. Chemistry, Aarhus University

Education and training

1995: Ph.D. degree, Faculty of Science, Aarhus University

1992: M. Sc. degree, Faculty of Science, Aarhus University

1995: Inst. Biochemistry, FU Berlin, Germany

1996-2000: Inst. Physical Biochemistry, University of Witten/Herdecke, Germany (5 months in total)

Research interests

Structure-function studies of the translation apparatus

Identification and analysis of macromolecular interactions

Analysis of protein-RNA interactions

Canonical and non-canonical roles of translation elongation factors

RNA-dependent RNA polymerases

(+)-stranded RNA viruses

Research leadership and funding (since 2001)

2014-

Improvement of antibiotic treatments by eradication of persistent bacteria

Supported by the Riisfort Foundation, the Gangsted Foundation and others

2008-

Structure-Function Studies of Viral RNA Replication

Supported by the Lundbeck Foundation and the Novo Nordisk Foundation

2005-2008

Characterization of the interaction between muscarinic receptor M4 and translation elongation factor eEF1A2

Supported by the Lundbeck Foundation

2001-2010

Transforming properties of isoforms of translation elongation factor eEF1A

Supported by the Danish Cancer Society and the Danish Cancer Research Foundation

2001-

Single-molecule studies of the dynamics of bacterial protein synthesis

Supported by the NIH, FNU, Leo Pharma Research Foundation

Publications

38 peer-reviewed publications, 7 book chapters

>558 citations, H-index 13 (Dec, 2016, Web of Science)

International congresses (invited speaker):

2011: American Society on Microbiology conference on Viral Genome Replication, Banff, Canada

2010: Murnau Conference on Structural Biology, Murnau, Germany

2000: 25th tRNA meeting, Cambridge, UK

1998: FEBS Advanced theoretical course "RNA: Biochemistry and Biotechnology", Poznan, Poland.

International collaborators

- Y. Goldman, Dept. Physiology, Univ. Pennsylvania, USA: Dynamics of EF-Tu on the ribosome
- B. Cooperman, Dept. Chem., Univ. Pennsylvania, USA: Dynamics of EF-Tu on the ribosome
- B. Chetverin, Russian Academy of Sciences, Moscow, Russia: Structural studies of the Qbeta RNA-polymerase complex
- A. Kapanidis, Univ. Oxford, UK: Single-molecule studies of Qbeta infection

Teaching

Bachelor courses: 1992-1993: Class exercises in Basic organic chemistry for biologists. 1993-1994: Instructor in basic laboratory courses on DNA and protein technology. 1995-2006: Class exercises in "General Molecular Biology". 2000-2006: Organization of and instruction in the laboratory exercises related to "General Molecular Biology". 2006-present: Lecturer in "General Molecular Biology".

PhD courses: 2010-present: Lectures and class exercises in "Protein Technology"

Awards

2011: Awarded the prize for "Best lecturer of the year" by students at the Department of Molecular Biology and Genetics

2013: Awarded the prize for "Best lecturer of the year" by students at the Department of Molecular Biology and Genetics

Training

2010: Teaching and Learning Workshop Series offered by Center for Science Education, teacher Quentin Vicens

2011: Course in "Research supervision" offered by Centre for Teaching Development, teacher Gitte Wichmann-Hansen

2011: Management Course for Research Leaders at Department of Molecular Biology and Genetics

Supervision

Postdoctoral training: Fleur Dolman (2010-2013), Jeanette Brejning (2005-2008), Romualdas Stapulionis (2002-2005), Francisco Mansilla (2001-2004)

PhD: Heidi Gytz Olesen (2015), Mateusz Dyla (2015; co-supervisor), Darius Kavaliauskas (2012), Louise Dyhrman Dahl (2010), Camilla Andersen (2009; co-supervisor), Henrik Karring (2002; co-supervisor), Francisco Mansilla Castano (2001; co-supervisor), Anne Birgitte Nautrup-Pedersen (2001; co-supervisor), Agnieszka Danielewicz (2000; co-supervisor)

MSc: Mie Stilling (degree expected in 2017), Manar Mehri (degree expected in 2017), Henrik Pedersen (degree expected in 2017), Durita Mohr (2014), Michael Gulev (2014), Bosene Chelchessa (2013), Hanne Lærke Jørgensen (2012), Liina Ränkel (2009), Sumangala Bhattacharya (2008), Kristian Aabo Blichfeld (2007), Marianne Vad (2006), Lise Refstrup Pedersen (2005; co-supervisor), Mandana Jadidi (2002), Irene Friis (2002), Carlota Domínguez (2002, co-supervisor), Anne Strømgård (2001), Thomas Rattenborg (1997; co-supervisor), Martin Laurberg (1997; co-supervisor), Francisco Mansilla Castano (1996; co-supervisor)

Molecular Biology projects: Marjun a Fridriksmørk (2017), Mie Stilling (2016), Manar Mehri (2016), Elif Erdem (2012), Sara Gutiérrez Ángel (2010), Laura Bel Borja (2010), Lina Vasiliauskaite (2010), Helena Pimentel (2009), Kristian Aabo Blichfeld (2005), Andre da Silva (2004; co-supervisor), Irene Friis (2000), Mandana Jadidi (2000)

Bachelor: Laust Baunhøj (2017), Anders Nørgaard (2017), Shehin Marmoodzada (2016), Marjun a Fridriksmørk (2016), Pernille Skov Rasmussen (2016), Rikke Stick Hansen (2015), Manar Mehri (2014), Michael Gulev (2012), Lykke Andreassen (2012), Bosene Chelchessa (2008), Anne Bie (2008), Bertel Holst Jepsen (2006)

Internships: Fatma Feyza Özgen (2013), Nadiéh de Jonge (2009)

Technician students: Maria-Alexandra Vatasescu (2013), Lene Utuaq (2010), Sanne Nordestgaard Jensen (2004), Benedicte Vestergaard (2002-2003), Anja Aagaard Pedersen (2002-2003), Charlotte Lauridsen (1998-1999)

Evaluation of others work

Thesis evaluation/opponent: University of Copenhagen, University of Southern Denmark

Reviewer of major research grants: Wellcome trust (UK), Latvian Research Council

Reviews for scientific journals: Nature Communications, PLoS ONE, Oncogene, FEBS Journal, Biochimica et Biophysica Acta, Cancer Letters, Journal of Biotechnology, BMC Cancer, Eur. J. Clin. Invest.

Committee work

Member of the Board of careers guidance, Faculty of Science (2004-2010), the Departmental Council (2005-2010), the PhD field Committee for Molecular Biology (2005-present)