

CURRICULUM VITAE

Ute Kregel

Date of birth 2.7.1964

Nationality German

Professional Preparation

1983 Abitur
 1983 - 1988 Georg-August-Universität Göttingen, Reading Chemistry
 1986 “Vordiplom” in Chemistry (equivalent to B.Sc.)
 1988 “Diplom” in Chemistry (equivalent to M.Sc.); the experimental work was carried out in the Department of Chemistry, Max-Planck-Institute for Experimental Medicine, Göttingen (Subject: Molecular biology and yeast genetics; Major: Organic chemistry)
 1988 - 1991 Experimental work for doctoral dissertation, Department of Biophysics, Max-Planck-Institute for Medical Research, Heidelberg (Subject: Protein crystallography)
 1991 PhD in Chemistry
 2002 Docent title (Structural Biology)

Professional Appointments

1991 - 1993 Setting up a new crystallographic laboratory and Postdoctoral research at the Dept. of Biochemistry, University of Toronto, Canada, in the group of Prof. Pai.
 1994 - 1997 Postdoctoral research in the group of Prof. Dijkstra, at the BIOSON Research Institute in Groningen, The Netherlands (incl. ca. 5% teaching).
 1997 - 2004 Crystallographic research (65-90%) and lecturing (10-35%) at the Center for Structural Biology in Göteborg, Sweden.
 1999 - 2005 Position as ”Forskare” in crystallography, funded by GLIBS/SSF (the glycobiology network sponsored by the Swedish Foundation for Strategic Research)
 2001 Appointment as member of the reference group for the SWEGENE Technical Platform on the Structural Biology of Membrane Proteins
 2001 Appointment as a board member of the Swedish NMR Center
 2004 Associate professor at the University of Oslo
 2005 Appointment as a committee member to develop a language policy for UoO
 2007 Appointment as EMBIO board member
 2008 Full Professor at the University of Oslo (back-dated to September 2006)
 2009 Appointment as BioStruct board member (and node-coordinator for UiO)
 2010 Appointment as member of the MX-review board for ESRF beamtime applications
 2011 Appointment as member of Hassel committee
 2013 Appointment to evaluation committee of Swedish biomedical education

Prizes, Awards, Fellowships

1986	Prize for outstanding achievement in the Vordiplom examination
1988	First class honors degree for Diploma in Chemistry ('mit Auszeichnung')
1988 - 1991	Kekulé PhD-fellowship from the "Fonds der chemischen Industrie"
1991	First class honors degree for PhD in Chemistry ('summa cum laude')
1991	Hoechst Prize for graduation work
1991	Studienabschlußstipendium (Prize for very good performance in chemistry studies)
1999	Recipient of a 1-year fellowship as STINT Visiting Scientist
2000	Recipient of a research grant from Hagbergs Stiftelse after nomination by Prof. Tore Vänngård to the Swedish Royal Academy

Main supervision of doctoral thesis

1999 - 2003	Cecilia Svensson, CTH (Licentiate: February 2002)
2000 - 2005	Åsa Holmner, CTH (Thesis defense: September 2005)
2005 - 2009	Ariel Talavera, UiO and CIM (Cotutelle student; Thesis defense: January 2009)
2005 - 2007	Glareh Askarieh, UiO (Thesis defense: April 2011)
2008 - 2013	Gabriele Cordara, UiO (Thesis defense: December 2013)
2010 - 2013	Steffi Munack, UiO (Thesis defense: October 2013)
2010 - 2014	Paula Bousquet, UiO (Thesis defense: August 2014)
2011 to date	Julie E. Heggelund, UiO
2013 to date	Dipankar Manna, UiO
2014 to date	Helen V. Thorbjørnsrud, UiO

Organizer of scientific events

Since 1999	Organizer of weekly crystallography seminars
2000	Organizer of a mini-symposium on Structural Glycobiology
2000	Organizer of a national graduate course in Structural Glycobiology
2002	Co-organizer of the "Lundberg lectures"
2006	Organizer of international minisymposium on "Membrane Proteins: Crystallization and Structure Highlights"
2011	Organizer of minisymposium "Structure and Function of Biological Nanomachines"
2012	Organizer of minisymposium "Protein Crystallography or What is possible with Synchrotron Radiation?"
2013	Organizer of minisymposium "100 Years Crystallography"

Periods of Reduced Working Time

1995 - 1996	Maternity leave (followed by part time employment for approximately 2 years)
2000 - 2002	Reduced working ability and long periods of sick leave due to a too late treated Borrelia tick infection
2000 - 2003	Taking care of my former husband Klaus-Hasso Schröter, who died of cancer in April 2003

Languages

German (mother tongue), English (fluently), Swedish & Norwegian (written and spoken), Dutch (written and spoken), French (written and spoken; currently somewhat out of practice).

Publication List (2010-2015)

- 1) Å. Holmner, A. Mackenzie & **U. Krengel** (2010). Molecular basis of cholera blood-group dependence and implications for a world characterized by climate change. *FEBS. Lett.* **584**, 2548-2555.
- 2) Å. Holmner, A. Mackenzie, M. Ökvist, L. Jansson, M. Lebens, S. Teneberg & **U. Krengel** (2011). Crystal structures exploring the origins of the broader binding specificity of *Escherichia coli* heat-labile enterotoxin compared to cholera toxin. *J. Mol. Biol.* **406**, 387-402.
- 3) D. Ambort, S. van der Post, M.E.V. Johansson, J. Mackenzie, E. Thomsson, **U. Krengel** & G.C. Hansson (2011). Function of the CysD domain of the gel-forming MUC2 mucin. *Biochem. J.* **436**, 61-70.
- 4) G. Cordara, W. Egge-Jacobsen, H.T. Johansen, H.C. Winter, I.J. Goldstein, K. Sandvig & **U. Krengel** (2011). *Marasmius oreades* agglutinin (MOA) is a chimerolectin with proteolytic activity. *Biochem. Biophys. Res. Commun.* **408**, 405-10.
- 5) A. Talavera, J. Mackenzie, R. Friemann, A. López-Requena, G. Garrido, E. Moreno & **U. Krengel** (2011). Structure of the Fab fragment of the anti-murine EGFR antibody 7A7 and exploration of its receptor binding site. *Mol. Immunol.* **48**, 1578-85.
- 6) C. Berger, **U. Krengel**, E. Stang, E. Moreno & I.M. Madshus (2011). Nimotuzumab and Cetuximab block ligand-independent EGF receptor signaling efficiently at different concentrations. *J. Immunother.* **34**, 550-5.
- 7) J.E. Heggelund, E. Haugen, B. LA. Mackenzie, Å. Holmner, F. Vasile, J.J. Reina, A. Bernardi & **U. Krengel** (2012). Both El Tor and classical cholera toxin bind blood group antigens. *Biochem. Biophys. Res. Commun.* **418**, 731-5.
- 8) S. Munack, V. Leroux, K. Roderer, M. Ökvist, A. van Eerde, L.-L. Gundersen, **U. Krengel** & P. Kast (2012). When inhibitors do not inhibit: Critical evaluation of rational drug design targeting chorismate mutase from *Mycobacterium tuberculosis*. *Chem. Biodiversity* **9**, 2507-27.
- 9) G. Rojas, A. Pupo, S. Gómez, **U. Krengel** & E. Moreno (2012). Engineering the binding site of an antibody against N-glycolyl GM3: From functional mapping to novel anti-ganglioside specificities. *ACS Chem Biol.* **15**, 376-86.
- 10) G. Cordara & **U. Krengel** (2013). Lectin structure determination by X-ray crystallography – A hands-on approach. In: SPR Carbohydrate Chemistry *Vol 39* (A. Rauter, Ed.), RSC, 222-246.
- 11) G. Cordara, H.C. Winter, I.J. Goldstein, **U. Krengel** & K. Sandvig (2014). The fungal chimerolectin MOA inhibits protein and DNA synthesis in NIH/3T3 cells and may induce BAX-mediated apoptosis. *Biochem Biophys Res Commun.* **447**, 586-9.
- 12) F. Vasile, J.J. Reina, D. Potenza, J.E. Heggelund, A. Mackenzie, **U. Krengel** & A. Bernardi (2014). Comprehensive analysis of blood group antigen binding to classical and El Tor cholera toxin B-pentamers by NMR. *Glycobiology* **24**, 766-78.
- 13) **U. Krengel** & P.A. Bousquet (2014). Molecular recognition of gangliosides and their potential for cancer immunotherapies. *Front Immunol.* **5**, 325, 1-11.
- 14) D. Burschowsky, A. van Eerde, M. Ökvist, A. Kienhöfer, P. Kast, D. Hilvert & **U. Krengel** (2014). Electrostatic transition state stabilization rather than reactant destabilization provides the chemical basis for efficient chorismate mutase catalysis. *Proc Natl Acad Sci U S A.* **111**, 17516-21.
- 15) **U. Krengel** & S. Törnroth-Horsefield (2015). Coping with oxidative stress. *Science* **347**, 125-6.
- 16) A. van Eerde, E.M. Grahn, H.C. Winter, I.J. Goldstein & **U. Krengel** (2015). Atomic-resolution structure of the α -galactosyl binding *Lyophyllum decastes* lectin reveals a new protein family found in both fungi and plants. *Glycobiology* **25**, 492-501.

Total Scientific Productivity

64 manuscripts (27 since 2010): 44 published in peer-reviewed journals; 11 in press, submitted or in preparation