

Curriculum Vitae

Personal information

Tinna Ventrup Stevnsner
Born August 4, 1963

Contact information

Dep. Molecular Biology and Genetics
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Positions

2020 - Professor, Dep. of Molecular Biology and Genetics, Aarhus University, DK
1998 - 2020 Associate professor, Dep. of Molecular Biology and Genetics, Aarhus University, DK
1996 - 1998 Assistant professor, Dep. of Molecular and Structural Biology, Aarhus University, DK
1993 - 1996 Assistant professor, Dep. Environ. & Occupational Health, Aarhus University, DK
1992 Guest researcher, National Institute on Aging, NIH, Baltimore, MD, USA
1989 - 1992 Guest researcher, National Cancer Institute, NIH, Bethesda, MD, USA
1988 - 1989 Research assistant, Dep. of Molecular Biology, Aarhus University, DK

Education & training

2014 Six months of sabbatical at University of California - Irvine
1992 Ph.D. degree in molecular biology, Aarhus University
(all research work was carried out at National Institute of Cancer, NIH, USA)
1988 MSc degree in biology

Scientific summary

Area of research

The research of my group is focused on the processes involved in genomic maintenance and how the aging processes are associated with genomic instability in humans and other mammals. Emphasis is mainly on endogenous DNA damage resulting from normal cellular metabolism, such as mitochondrial respiration. For several years we have been measuring and comparing DNA repair activities in various tissues of the body, but recently we have started to focus on the brain and the role of genomic instability in age-associated neurodegeneration.

Publications

More than 70 original research articles published in international peer-reviewed journals, more than 2700 citations.

Selected recent publications:

The Caenorhabditis elegans Werner syndrome protein participates in DNA damage checkpoint and DNA repair in response to CPT-induced double-strand breaks. Hyun M, Choi S, Stevnsner T, Ahn B. Cell Signal. (2016) 28, 3, 214-23
Cockayne Syndrome group B protein stimulates NEIL2 DNA glycosylase activity. Aamann MD, Hvitby C, Popuri V, Muftuoglu M, Lemminger L, Skeby CK, Keijzers G, Ahn B, Bjørås M, Bohr VA, Stevnsner T. Mech Ageing Dev. (2014) 135, 1-14
Age and gender effects on DNA strand break repair in peripheral blood mononuclear cells. Garm, C. , Moreno-Villanueva, M. , Bürkle, A. , Petersen, I. , Bohr, V. A. , Christensen, K. & Stevnsner, T. Aging Cell.(2013) 12, 1, 56-66.
Regulatory interplay of Cockayne syndrome B ATPase and stress-response gene ATF3 following genotoxic stress. Kristensen U, Epanchintsev A, Rauschendorf MA, Laugel V, Stevnsner T, Bohr VA, Coin F, Egly JM. Proc Natl Acad Sci U S A. (2013) 110(25):E2261-70.
Mitochondrial base excision repair in mouse synaptosomes during normal aging and in a model of Alzheimer's disease. Diaz, R. G. , Weissman, L. , Yang, J. L. , Bohr, V. & Stevnsner, T. Neurobiology of Aging (2012) 33, 4, 694-707.
DNA repair deficiency in neurodegeneration. Jeppesen, D. K. , Bohr, V. & Stevnsner, T. Progress in Neurobiology (2011) 30, 94, 166-200.

Organizer of international conferences, symposia and summer schools

DSMOME seminar 5 on "Brain Aging", Copenhagen University, Denmark, May 2015
Ph.D.-Summerschool on "Mitochondria in Health and Disease", Aarhus University, Denmark, June 2013
Ph.D.-Summerschool on "Mitochondria in Health and Disease", Aarhus University, Denmark, June 2010
Minisymposium on "Mitochondrial genome dynamics and aging", Aarhus, Denmark, Jan. 2010
MiMage conference on "Mitochondria in Ageing and age-related disease", Les Diablerets, Switzerland, Sept. 2009
Ph.D.-Summerschool on "Mitochondria in Health and disease", Roskilde, Denmark, June 2009
3rd US-EU BER conference, Galveston, Texas, USA, Feb. 2009
Minisymposium on "DNA strand break repair in aging", Aarhus, Denmark, Jan. 2009
Minisymposium on "Genome maintenance and aging", Aarhus, Denmark, Jan. 2008

Workshop on "Aging – from molecules to Population", Helsingør, Denmark, May 2008
MiMage/LinkAge joint summerschool on Mitochondria, LesDiablerets, Switzerland, Sept. 2007
Alfred Benzon workshop on "Nuclear and Mitochondrial DNA repair in cancer and ageing", Jægersborg, Denmark, 2005
Workshop on "DNA damage and repair", Copenhagen, Denmark, 1999
Alfred Benzon Symposium 44 on "Molecular Biology of Aging", Copenhagen, Denmark, 1998

Recent scientific presentations as invited speaker

Biotechnology for a longer life. Aarhus, Denmark. Title: Molecular Biology of Aging. (Dec. 2016)
62nd Benzon Symposium on Genome Stability and Neurodegeneration. Copenhagen, Denmark. Title: Regulation of base excision repair in the aging human brain. (aug. 2016)
45th meeting of the European Environmental Mutagenesis & Genomic Society, Copenhagen, Denmark. Title: Regulation of base excision repair in the aging human brain. (Aug. 2016)
11th International Conference of Environmental Mutagens – 11th ICEM. Foz de Alguazu, Brazil. Title: Different roles of CSB protein in BER in nucleus and mitochondria" (November 2013)
V Fundamental Aspects of DNA Repair and Mutagenesis. Sao Paulo, Brazil. Title: Protein interactions for Cockayne Syndrome B (CSB) protein in base excision repair (BER) (October 2013)
Genome Dynamics in Neuroscience –Genome Instability in Aging and brain disease. Oslo, Norway. Title: Protein interactions for Cockayne Syndrome Group B (CSB) protein in base excision repair. (Sept. 2012)
Fourth EU-USA conference on DNA base damage and repair. Oslo, Norway. Title: Mitochondrial base excision repair and brain aging. (May 2011)
Ageing and cancer – major medical challenges. Copenhagen, Denmark. Title: The Danish Aging Research Center and Danish Center for Molecular Gerontology – a presentation. (May 2011)
2nd Düsseldorf Ageing Research Conference – Prevention of Aging, Düsseldorf, Germany. Title: Mitochondrial DNA repair and aging. (Nov. 2010)
MiMage-conference – Mitochondria in Ageing and Age-related Disease. Les Diablerets, Switzerland. Title: Mitochondrial DNA repair pathways and defects in age-associated neurodegeneration. (Sep. 2009)
3rd US-EU BER conference – Repair of Endogenous Genome Damage. Galveston, Texas, USA. Title: Differential age-related changes in mitochondrial DNA repair activities in mouse brain regions. (Feb. 2009)
Minisymposium on Telomere and telomerase as targets for Cancer therapy, Vejle Sygehus, in Vejle, Denmark. Title: "Potential roles for mitochondrial DNA repair in aging associated diseases such as cancer and neurodegeneration" (June 2008)
3rd Danish conference on Biotechnology and Molecular Biology – Functional foods and nutrigenomics – nutrition in health and disease. Vejle, Denmark. Title: DNA repair, mitochondria and neurodegeneration. (May 2008)
CMBN and GNN minisymposium on Biology of Aging and neurodegeneration – focus on Genome dynamics in Oslo, Norway. Title: "Aging aspects of mitochondrial repair" (Feb. 2008)
Gordon Research Conference on Biology of Aging in Les Diablerets, Switzerland. Title: "DNA repair in mammalian mitochondria and relations to aging" (Sept. 2007)
Takeda Genome Urology 2006 – DNA Damage, Kyoto, Japan. Title: "DNA damage and mitochondria: Clinical relevance to the aging process" (Nov. 2006)

Recent research funding

Partner in Danish Aging Research Center funded by the Velux Foundation – total 22.5 mil DKK (2013-2018)
Partner in PlantMan funded by Danish Research Council – total 2.6 mil DKK (2015-2017)
Carlsberg Foundation grant – 0.25 mil DKK (2016-2017)
Danish Research Council grant – 2.3 mil DKK (2014-2016)
NovoNordic Foundation grant – 1 mil DKK (2014-2016)
AU-IDEAS grant 0.5 mil DKK (2014-2015)

Teaching and supervision

Course on university pedagogics for assistant professors (1994)
Course on PhD supervision (Oct. 2006)
Supervisor for more than 30 master thesis students, 10 PhD students and 10 post docs since 2000
Former and present teacher at numerous undergraduate and graduate courses at Dep. Mol. Biology and Genetics

Evaluation of others work

Opponent of more than 20 PhD defenses in Norway, Poland and Denmark
Reviewer of research grants from e.g. the Norwegian Research Council, the Netherlands Organization for Scientific Research, the Czech Health Research Council, Biotechnology and Biological Sciences Research Council (UK) and the National Science Foundation (US).
Editorial board member of "Mechanisms of Aging and Development", and reviewer for numerous international journals

Leadership

Leader of Danish Center for Molecular Gerontology (2005 -)
Member of steering committee of EU program "Mimage" (2005-2010)

Committee work

Member of Teaching Committee at Department of Molecular Biology and Genetics, Aarhus University (2009 -)
Former chair of Teaching Committee at Department of Molecular Biology and Genetics, Aarhus University (2009 – 2014)
Former chair of Teaching Committee at Faculty of Science and Technology, Aarhus University (2009-2015)
Former member of Study Environment group at Aarhus University (2011-2014)

Collaborations

Collaborations are established with the laboratories of prof. C. Cotmann, University of California, Irvine, USA; lab.chief, prof. V.A.Bohr, National Institute on Aging, NIH, Baltimore, USA; prof. J.M. Egly Strassbourg, France; assoc. prof. R. Gredilla, Complutense University, Madrid, Spain; assoc. prof. Sandra Zarate, University of Buenos Aires, Argentina, prof. K. Christensen, University of Southern Denmark, Denmark; prof. L.J.Rasmussen, Copenhagen University, Denmark, assoc. prof. Christian Vægter Bjerregaard, Dep. Medical Bioscience, Aarhus University, assoc. prof. Birgitta R. Knudsen, Anni H. Andersen and Lotte Bjergbæk, Dep. Molecular Biology and Genetics, Aarhus University, Denmark.

Public outreach

Numerous interviews in Danish National radio and TV broadcasts including “Viden Om”, “Apropos”, “Go’ Morgen Danmark” and “Videnskabens Verden”.

Numerous oral presentations to the public about aging research including lectures at “Folkeuniversitetet i Aarhus”, “Folkeuniversitetet i Horsens”, “Ungdommens Naturvidenskabelige Forening”, “Landbrugets Seniorklubber”, “Solbjerg Seniorklub”, the “City Council of Aarhus” and “Ældresagen i Aarhus”.

Articles and book chapters written in layman Danish published in the magazine “Aktuel Naturvidenskab”, and e.g. the books “25 Søforklaringer”, “Ny Aldringsforskning” and “Evolutionsbiologiske Milepæle”.