U. of Oslo | U. of Copenhagen | Chinese U. of Hong Kong | Norwegian U. of Science and Technology | K.G. Jebsen Centre for Alzheimer's Disease | Kavli Institute for Systems Neuroscience | NO-Age | NO-AD | MIT-AD

The NO-Age and NO-AD Seminar Series 062

'Post-transcriptional regulation of gene expression in *Caenorhabditis elegans*'

by

Prof. KUROYANAGI, Hidehito

University of the Ryukyus Graduate School of Medicine, Okinawa, Japan

at

13:00-14:00 (CET), Tusday, 18th Oct. 2022

Ahus B2: Grupperom B203.006

Register in advance:

https://uio.zoom.us/webinar/register/WN_dEbQwDBNQqWwT2v-2MZMEA

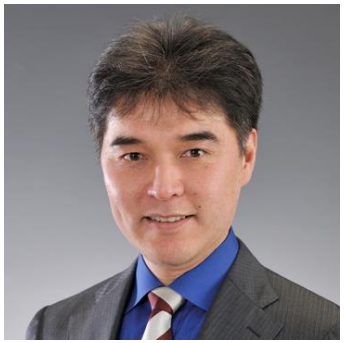
Organizers:

Evandro F. Fang (UiO), Jon Storm-Mathisen (UiO), Lene Juel Rasmussen (KU), W.Y. Chan (CUHK)

Queries: e.f.fang@medisin.uio.no

Previous recorded talks are available here: https://noad100.com/videos-previous-events/

This talk is supported by the Funding for the 'The Nordic Centre Biennial Meeting Global ageing and related healthcare challenges' and is part of this event



Name: KUROYANAGI, Hidehito
Institute: University of the Ryukyus Graduate School of Medicine, Okinawa, Japan
Email: hidehito@med.u-ryukyu.ac.jp
Web: http://biochem.med.uryukyu.ac.jp/en/

Speaker: Prof. KUROYANAGI, Hidehito

Title: Post-transcriptional regulation of gene expression in *Caenorhabditis elegans*

Abstract:
In eukaryotes, messenger RNAs (mRNAs) are processed from primary transcripts, or precursors of mRNAs (pre-mRNAs), in highly organized ways. I have long been utilizing C. elegans, a tiny nematode worm, as a model organism to study pre-mRNA processing regulation in vivo. I developed a method to visualize alternative pre-mRNA splicing events with fluorescence reporter minigenes and conducted forward genetic screening to identify trans-acting regulators. RNA-seq analysis of the splicing regulator mutants revealed many target genes. A nonsense-mediated mRNA decay (NMD)-deficient mutant strain was utilized to comprehensively identify alternative splicing events that regulate gene expression levels. Long-read direct mRNA sequencing revealed full-length sequences of the splice variants. Nascent RNA analysis reveals processing dynamics. In this talk, I am going to introduce our methods and findings on pre-mRNA processing in C. elegans. I will also show some application to mammalian genes.

Biography:

1994 Graduated from the University of Tokyo Faculty of Science
1997-1999 JSPS Research fellow
1999 Received PhD in Science from the University of Tokyo
1999-2000 Yamanouchi Pharmaceutical Co., Ltd.
2000-2003 Assistant Professor, Tokyo Medical and Dental University
2003-2008 Junior Associate Professor, Tokyo Medical and Dental University
2008-2021 Associate Professor, Tokyo Medical and Dental University
2008-2012 JST PRESTO Researcher
2017-2018 Visiting Associate Professor, University of California, Los Angeles (UCLA), USA
2021- Professor, University of the Ryukyus Graduate School of Medicine

U. of Oslo | U. of Copenhagen | Chinese U. of Hong Kong | Norwegian U. of Science and Technology | K.G. Jebsen Centre for Alzheimer's Disease | Kavli Institute for Systems Neuroscience | NO-Age | NO-AD | MIT-AD

The NO-Age and NO-AD Seminar Series 062

'Post-transcriptional regulation of gene expression in *Caenorhabditis elegans*'

by

Prof. KUROYANAGI, Hidehito

University of the Ryukyus Graduate School of Medicine, Okinawa, Japan

at

13:00-14:00 (CET), Tuesday, 18th Oct. 2022

Ahus B2: Grupperom B203.006

Register in advance:

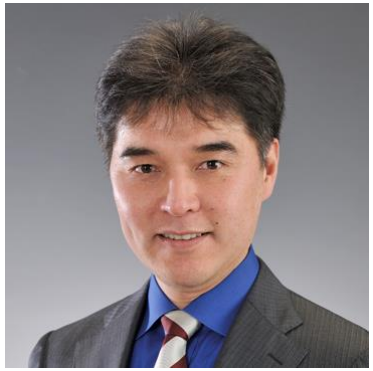
https://uio.zoom.us/webinar/register/WN_dEbQwDBNQqWwT2v-2MZMEA

Organizers:

Evandro F. Fang (UiO), Jon Storm-Mathisen (UiO), Lene Juel Rasmussen (KU), W.Y. Chan (CUHK)

Queries: e.f.fang@medisin.uio.no

Previous recorded talks are available here: https://noad100.com/videos-previous-events/



Name: KUROYANAGI, Hidehito
Institute: University of the Ryukyus Graduate School of Medicine, Okinawa, Japan
Email: hidehito@med.u-ryukyu.ac.jp
Web:
http://biochem.med.uryukyu.ac.jp/en/