ISN satellite symposium

on

“Key molecules for neuronal maturation”

-Application for validating the maturation of human iPSC-derived neurons-

23 September, 2014, 13:00~17:20
Yayoi Auditorium, The University of Tokyo.

(URL: http://www.a.u-tokyo.ac.jp/yayoi/map.html)

This symposium is supported by Health and Labour Sciences Research Grants, Research on Regulatory Science of Pharmaceuticals and Medical Devices. And the symposium is also assisted by ISN, NPO Bioforum, and Pharmacological Evaluation Institute of Japan.
Program
ISN satellite symposium
on
“Key molecules for neuronal maturation”
-Application for validating the maturation of human iPSC-derived neurons-

23 September, 2014 in Yayoi Auditorium, The University of Tokyo.
President of the Conference: Dr. Yuko Sekino

Opening Remarks (13:00~13:10) Yuko Sekino (NIHS, Japan)
Requirement for surrogate markers of neuronal maturation.

Session 1: Maturation of protein signaling in neurons and glial cells
Chair: Yuta Ishizuka (Gunma University, Japan)
13:10~13:30 Christian Gonzalez (University of Chile, Chile)
MAP1B regulates pre- and post-synaptic events during neurotransmission.

13:30~13:50 Peter Penzes (Northwestern University, USA)
Nanoscale regulation of synapse structure and function by psychiatric risk molecules

13:50~14:10 Irina Majoul (Ruebeck University, Germany)
Molecules controlling the rearrangement of cell-cell contact interface.

14:10~14:25 Nobuyuki Takei (Niigata University, Japan)
mTOR mediates neuronal maturation and cell size control.

Coffee break (14:25~14:40)

Session 2: Maturation of cytoskeletal molecules in neurons
Chair: Noriko Koganezawa (Gunma University, Japan)
14:40~14:55 Hideto Takahashi (IRCM, Canada)
Drebrin governs spine morphogenesis.
14:55~15:10  Toshiyuki Mizui (AIST, Japan)
LTP-induced translocation of drebrin in mature synapse.

15:10~15:25  Nobuhiko Kojima (Toyo University, Japan)
Drebrin is a key molecule for LTP formation.

15:25~15:40  Hiroyuki Yamazaki (Gunma University, Japan)
A novel drebrin-binding protein spikar mediates spine formation.

Coffee break (15:40~15:55)

Session 3: Maturation of human iPSC-derived neurons
Chair: Yuko Sekino (NIHS, Japan)
15:55~16:15  Reiko T Roppongi (Gunma University, Japan)
Early development of iPSC-derived neurons.

16:15~16:30  Kaoru Sato (NIHS, Japan)
Sequential expression of various receptors along with the differentiation of human iPSC-derived neurons

16:30~16:45  Norimasa Miyamoto (Eisai Co., Japan)
Application of iPSC-derived differentiated cells to safety assessment.

Plenary lecture (16:45~17:15)
Chair: Kazuyuki Imamura (Maebashi Institute of Technology, Japan)
Tomoaki Shirao (Gunma University, Japan)
Drebrin as a surrogate marker of synaptic maturation.

General Discussion (17:15~18:10)

Closing Remarks (18:10~18:15)  Nobuhiko Kojima (Toyo University, Japan)
(Opening Remarks, Session 3: Chair)

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EDUCATIONAL BACKGROUNGS
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1991 Ph.D. for Physiology, Tokyo Women’s Medical University

CAREER HISTORY
1980~1992 Tokyo Women's Medical University, Assistant Professor
1991~1992 National Institute for Physiological Sciences, Research Associate
1991~1993 Tokyo Metropolitan Institute for Neuroscience, Researcher
1993~1998 PRESTO Sakigake21 “Cell and Information”, Researcher
1996~1999 Gunma University, School of Medicine, Assistant Professor
1999~2002 Gunma University, School of Medicine, Lecturer
2002~2005 Gunma University, Graduate School of Medicine, Associate Professor
2005~2009 The University of Tokyo, The Institute of Medical Science, Associate Professor
2010~ Present Post

PUBLICATIONS
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EDUCATIONAL BACKGROUND
Ph.D. in Medicine, Department of Molecular Neurobiology, Brain Research Institute, Niigata University, 2011.
M.S. in Biology, Graduate School of Science and Technology, Niigata University, 2007.
B.S. in Biology, Faculty of Science, Niigata University, 2005

CAREER HISTORY
Department of Neurobiology and Behavior, Gunma University Graduate School of Medicine, Assistant Professor, April 2011 – present.

PUBLICATIONS
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EDUCATIONAL BACKGROUND
March 2008 Ph.D. LifeSciences
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CAREER HISTORY
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Postdoctoral Fellow: July 2008 – June 2012
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GCOE Fellow: April 2008 – June 2008
Systems Neuroscience, Tohoku University Graduate School of Life Sciences, Japan

PUBLICATIONS
   “Architecture of spatial circuits in the hippocampal region.” Phil. Trans. R. Soc. B - Grid-cell Issue, 369:20120515
   All layers of medial entorhinal cortex receive pre- and parasubicular inputs. The Journal of Neuroscience, 32:17620-31
   “Significance of the deep layers of entorhinal cortex for transfer of both perirhinal and amygdala.” inputs to the hippocampus. Neuroscience Research, 61:172-81.
Kazuyuki Imamura, Ph.D.

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EDUCATIONAL BACKGROUND
1984  PhD  Gunma Univ., Graduate School of Medicine, (Physiology, #310)
1980  MA  Gunma Univ., Graduate School of Engineering, (Electronics, #700)
1978  BA  Gunma Univ., School of Engineering, (Electronics)

CAREER HISTORY
Apr 2008 – Current
Maebashi Institute of Technology, Vice-president (Research Affairs, Apr 2013 -), Dean, Graduate School of Engineering (Apr 2012 -), Prof., Dept. Systems Life Engineering (Apr 2008 -)
Gunma Univ, Visiting Professor, Univ.-Industry Center for Innovation (Apr 2014 -)
Osaka City Univ. Visiting Professor, Dept. Physiology, Graduate School of Medicine (Apr 2009 -)

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Oct 1984 - Mar 1988
The Smith-Kettlewell Eye Research Institute, Post-doctoral fellow (Prof. Kasamatsu Lab.)

PUBLICATIONS
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EDUCATIONAL BACKGROUND
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1995 Biochemistry, Universidad de Chile, Santiago, Chile.
2000 Ph.D. in Cell and Molecular Biology, Universidad Autonoma de Madrid, Madrid, Spain

CAREER HISTORY
2000-2001 Postdoctoral Fellow, Universidad Autonoma de Madrid under the Programa Excellence Groups in Neuroscience from the Authonomic Community of Madrid, Spain
2001-2003 Postdoctoral Fellow, Universidad de Chile, under the FONDECYT Postdoctoral Program, CONICYT, Chile.
2003-2007 Assistant Professor, University of Chile
2007-2012 Associate Professor, University of Chile
2012- Professor, University of Chile

PUBLICATIONS
SESSION 1: 13:30~13:50

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EDUCATIONAL BACKGROUND

Advisor: Joseph L. Napoli

CAREER HISTORY

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2009- Associate Professor (Tenure-track), Northwestern University Feinberg
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2010- Associate Professor, Department of Psychiatry and Behavioral Sciences,
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2011- Associate Professor (with Tenure), Northwestern University Feinberg
School of Medicine
2014- Professor, Department of Physiology
2014- Professor, Department of Psychiatry and Behavioral Sciences, Northwestern
University Feinberg School of Medicine

PUBLICATIONS

Dehydrogenase and its Expression in Escherichia Coli: Recognition of Retinal as

encoding retinal dehydrogenase isozyme type I and its expression in E.coli. Gene 191,
167-72.

dehydrogenase type I expressed in Escherichia coli. Biochimica & Biophysica Acta 1342,
175-81
Irina V. Majoul, Ph.D.
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EDUCATIONAL BACKGROUND
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1991 Ph.D. degree in Biochemistry. State Institute of Medicine, Minsk, Belarus
1982 Diploma, Biological Faculty of the State University Minsk, Belarus.

CAREER HISTORY
2009 Privatdozent (Dr. habil.) in Biophysics, University of Lübeck, Germany
2004-08 Honorary Lecturer of Cell Biology & Biophysics, School of Biological Sciences, Royal Holloway University of London, UK
2003 Professorship degree (doctor of biological sciences) 03.00.02 - in Biophysics; VAC - Russian Academy of Sciences, Russia
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PUBLICATIONS
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EDUCATIONAL BACKGROUND
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PhD 1989 Neurochemistry
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CAREER HISTORY
1988-1989 Postdoctoral fellow, Mitsubishi-Kasei Institute of Life sciences, Tokyo Japan
1989-1992 Research Associate, National Institute of Neuroscience, NCNP, Tokyo Japan
1992-1997 Research Associate, Kyoto Institute of Technology, Kyoto, Japan
1997-1998 Research Fellow, Biomedical Center, Uppsala University, Uppsala, Sweden
1998-1999 Assistant Professor, Brain Research Institute, Niigata University, Niigata, Japan
1999- Associate Professor, Brain Research Institute, Niigata University, Niigata, Japan

PUBLICATIONS
Hideto Takahashi, MD, Ph.D.

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EDUCATIONAL BACKGROUND

1991-1997 M.D. Gunma University School of Medicine, Maebashi, Japan
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1999-2003 Ph.D. (Neuroscience), Gunma University Graduate School of Medicine, Maebashi, Japan, Degree obtained: March 24, 2003

CAREER HISTORY

2013-present Assistant Research Professor IRCM,
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2007-2013 Postdoctoral Fellow, Department of Psychiatry,
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2006-2007 Assistant Professor, Education and Research Center and
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2004-2006 Postdoctoral Fellow, Department of Neurobiology and Behavior, Gunma University Graduate School of Medicine

PUBLICATIONS


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EDUCATIONAL BACKGROUND
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2008-2009 Postdoctoral Fellow, Department of Neurobiology and Behavior,
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PUBLICATIONS
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EDUCATIONAL BACKGROUND

04/79 - 03/83 Faculty of Biological Sciences, University of Tsukuba
04/83 - 03/85 Graduate School of Medical Sciences, University of Tsukuba
04/85 - 03/89 Graduate School of Medicine, Gunma University

CAREER HISTORY

04/89 - 08/98 Research Associate of Lab for Neurochemistry, National Institute for Physiological Sciences
12/92 - 09/94 Postdoctoral Fellow at Center for Neurobiology and Behavior, Columbia University, USA
09/98- 03/05 Research Scientist of Neuronal Circuit Mechanisms Research RIKEN Brain Science Institute
04/05- 05/05 Researcher of Initial Research Project Okinawa Institute of Science and Technology
06/05- 03/13 Associate Professor of Department of Neurobiology and Behavior, Gunma University
04/13- Present Professor of Faculty of Life Sciences, Toyo University

PUBLICATIONS


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EDUCATIONAL BACKGROUND

<table>
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<tr>
<th>Date</th>
<th>Degree</th>
<th>Institution and Location</th>
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<tbody>
<tr>
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<td>Apr1995-Mar 1997</td>
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<td>Apr1991-Mar 1995</td>
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CAREER HISTORY

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Sep2001-Mar 2008 Assistant professor
Apr2001-Aug2001 Postdoctoral fellow

PUBLICATIONS


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EDUCATIONAL BACKGROUND
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2007-2009 Graduate School of Medicine, Course of Biomedical Sciences, Gunma University, M.Sc
2009-2013 Graduate School of Medicine, Course of Medical Sciences, Gunma University, Ph.D.

CAREER HISTORY
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received an MSc in pharmacology (1996)
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CAREER HISTORY
1999-2003 Researcher (Research officer)
Division of Pharmacology, National Institute of Health Sciences
2004-2009 Senior Researcher
2004-2005 Invited Researcher
Neuropathology, Columbia University Medical Center P&S
2009-present Head of Neuropharmacological Laboratory
Division of Pharmacology, National Institute of Health Sciences

PUBLICATIONS
enhance neurogenesis and oligodendrogenesis in the early postnatal subventricular
2. Takaki J, Fujimori K, Miura M, Suzuki T, Sekino Y, Sato K. L-glutamate released from
activated microglia downregulates astrocytic L-glutamate transporter expression in
neuroinflammation: the 'collusion' hypothesis for increased extracellular L-glutamate
3. Sato K, Matsuk, N, Nakazawa K, Ohno Y, Estrogens inhibit L-glutamate uptake activity
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EDUCATIONAL BACKGROUND
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CAREER HISTORY
1991. 4 - Eisai Co. Ltd.
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2010.1 – Associate Prof: Faculty of Med, Univ of Tsukuba
2013.7 – Leader: Consortium for Safety Assessment using Human iPS-derived Cells
2014.8 – Technical Board: New Energy and Industrial Technology Development Organization (NEDO)

PUBLICATIONS
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EDUCATIONAL BACKGROUND
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1980-1984 Gunma University, Graduate School of Medical Sciences

CAREER HISTORY
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1986-1988 Postdoctoral Fellow with Professor D.J. Reis The Division of Neurobiology, Cornell University Medical College
1988-1991 Research Associate at the Laboratory of Neurochemistry, National Institute for Physiological Sciences
1991-1993 Associate Professor at the Department of Physiology, Keio University School of Medicine
1993--present Professor, Dept of Neurobio & Behavior, Gunma Univ Grad Sch of Med, Maebashi, Japan
2009-2013 Council of International Society for Neurochemistry
2011-present President of the International Society of Radiation Neurobiology
2013-present Vice President of Japanese Society for Neurochemistry
2006-2009, 2011-present Council Member of Physiological Society of Japan

PUBLICATIONS