

CURRICULUM VITAE

Seiji Ogawa

Birth Date and Place January 19, 1934 in Tokyo, Japan

Citizenship Japan

Affiliation Kansei Fukushi Research Center,
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Title Professor (special appointment)

Education

1957 B.S., Applied Physics
University of Tokyo, Tokyo, Japan
1967 PhD in Chemistry, Stanford University, Stanford, California

Professional Experiences

1962 - 1964 Research Associate
Radiation Research Laboratories
Mellon Institute, Pittsburgh, PA
1967-1968 Postdoctoral Fellow
Stanford University, Stanford, CA
1968 -1980 Member of the Technical Staff to Principal Investigator
Biophysics Research Bell Laboratories, AT&T, Murray Hill, NJ
1984 -2001 Distinguished Member of the Technical Staff,
Biophysics Research, later the name was changed to
Biological Computation Research
Bell Laboratories, AT&T, / Lucent Technologies, Murray Hill, NJ
2001 – Visiting Professor, Biophysics/Physiology Department
Albert Einstein College of Medicine, Yeshiva University
Bronx, New York
2001 - 2008 Director, Ogawa Laboratories for Brain Function Research
Hamano Life Science Research Foundation
Tokyo, Japan
2008- Professor (special appointment), Kansei Fukushi Research Center,
Tohoku Fukushi University, Sendai, Japan
2008-2011 Visiting Professor, Graduate School for Social Science Research,
Keio University, Tokyo, Japan
2008-2013 Professor, Neuroscience Research Institute, Gachon University of Medicine
and Science, Incheon, Korea

- 2012- Research Adviser at National Institute of Information and Communications
Technology and CiNet
- 2013- Guest professor, Graduate School of Frontier Bioscience, Osaka University

Professional Society Affiliation

International Society for Magnetic Resonance in Medicine
Society for Neuroscience (USA)
International Society for Magnetic Resonance (ISMAR)
Japanese Society for Magnetic Resonance in Medicine
Japanese Society for Nuclear Magnetic Resonance

Research Activities

- Mid 1960's Radiation research: Studies of radiation effects on polymers and of free radical formation.
- Late 1960's: Development of spin label technique (with Prof. H. M. McConnell at Stanford University) for studying protein structure and function.
- 1970's: Structure and function of proteins by high resolution NMR
- 1978 – 1980's: Pioneering in and Development of the field of *in vivo* NMR
- Late 80's -: MRI and MRS of the brain.
- 1990-92 Opened the field of functional MRI of the brain (fMRI).
- 90's - Research in fMRI of the brain.

Relevant papers for the current interests: functional MRI of the brain

1. YW Sung, M. Kamba, S. Ogawa, "An fMRI study of the functional distinction of neuronal circuits at the sites on ventral visual stream co-activated by visual stimuli of different objects. *Exp Brain Res.* 181(4):657-63. (2007)
2. S. Ogawa, T-M. Lee, R. Stepnoski, W. Chen, X.-H. Zhu, and K. Ugurbil, "An approach to probe some neural systems interaction by functional MRI at neural time scale down to milliseconds", *Proc. Natl. Acad. Sci.(USA)*, 2000 97: 11026-11031
3. S. Ogawa, R. S. Menon, S-G. Kim and K. Ugurbil, "On the characteristics of functional magnetic resonance imaging of the brain" *Annual Review of Biophysics and Biomolecular Structure* 27 447-474 1998
4. P. P. Mitra, S. Ogawa, X. Hu and K. Ugurbil, "The Nature of Spatiotemporal Changes in Cerebral Hemodynamics as Manifested in Functional Magnetic Resonance Imaging", *Magnetic Resonance in Medicine*, 37 511-518 (1997)
5. R. S. Menon, S. Ogawa, X. Hu, J. Strupp, P. Anderson, and K. Ugurbil, "BOLD Based Functional MRI at 4 Tesla Includes a Capillary Bed Contribution: Echo-Planar Imaging Correlates with Previous Optical Imaging Using Intrinsic Signals", *Magnet Resonance in Medicine* 33, 453-459 (1995)
6. S. Ogawa, T. M. Lee and B. Barrere, "The Sensitivity of Magnetic Resonance Image Signals of a Rat Brain to Changes in the Cerebral Venous Blood Oxygenation", *Magnetic Resonance in Medicine*, 29 205-210, 1993

7. S. Ogawa, R. S. Menon, D. W. Tank, S.-G. Kim, H. Merkle, J. M. Ellermann and K. Ugurbil, "Functional Brain Mapping by Blood Oxygenation Level-Dependent Contrast Magnetic Resonance Imaging A Comparison of Signal Characteristics with a Biophysical Model", *Biophysical Journal*, 64 (3), March 1993.
8. S. Ogawa, D. W. Tank, R. Menon, J. M. Ellermann, S.-G. Kim, H. Merkle and K. Ugurbil, "Intrinsic Signal Changes Accompanying Sensory Stimulation: Functional Brain Mapping With Magnetic Resonance Imaging" *Proc. Natl. Acad. Sci. (USA)*, 89, 5951-5955 (1992).
9. Ogawa, T. M. Lee, A. R. Kay and D. W. Tank, "Brain Magnetic Resonance Imaging with Contrast Dependent on Blood Oxygenation", *Proc. Natl. Acad. Sci. (USA)*, 87, 9868-9872 (1990)
10. S. Ogawa, T. M. Lee, A. S. Nayak and P. Glynn, "Oxygenation Sensitive Contrast in Magnetic Resonance Image of Rodent Brain at High Magnetic Fields", *Magn. Reson. Med.*, 14, 68-78 (1990).

Honors and Awards

- 1967 Eastman Kodak Award in Chemistry for PhD student
- 1995 GOLD Medal Award from Society for Magnetic Resonance in Medicine
- 1996 Biological Physics Prize from The American Physical Society
- 1997 Fellow, International Society for Magnetic Resonance in Medicine
- 1998 Nakayama Prize from Nakayama Foundation for Human Science, Japan
- 1999 Asahi Prize from Asahi-Shinbun Cultural Foundation, Japan
- 2000 Member, Institute of Medicine (IOM) of National Academy of Sciences, USA
- 2003 Japan International Prize 2003 from Japan Science Technology Foundation
- 2003 Gairdner International Award from Gairdner Foundation, Canada
- 2004 Honorary Member, Japanese Society for Magnetic Resonance in Medicine
- 2004 Honorary Member, Japanese Society for Nuclear Magnetic Resonance
- 2005 Honorary Member, National Magnetic Resonance Society of India
- 2005 Foreign Fellow, The National Academy of Sciences of India
- 2007 ISMAR Prize from International Society of Magnetic Resonance
- 2008 Honorary Doctor of Science, S. Gandhi Post-graduate University for Medical, Lucknow, Science India
- 2008 Olli V. Lounasmaa Memorial Prize, Helsinki University of Technology, Finland.
- 2009 named as a Thomson-Reuter Citation Laureate in Medicine
- 2011 Linus Pauling Medal from Stanford University Medical School
- 2011 Mansfield Lecturer at ISMRM 2011 Society Meeting, Montreal
- 2011- Fellow, National Institute Radiological Sciences (NIRS) of Japan