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Date of birth: December 26, 1970. **Place of birth:** Kyoto, Japan
Sex: Male **Nationality:** Japanese

EDUCATION

Graduate school of Meiji University of Oriental Medicine, Kyoto, Japan **4/1995 - 3/2000**
Ph.D. in Acupuncture and Moxibustion, (Clinical Medicine, Neurosurgery)

Meiji University of Oriental Medicine Hospital, Kyoto, Japan **4/1993 - 3/1995**
Intern in oriental medicine (acupuncture and moxibustion)
Department of Neurosurgery and Medical MR Center

Meiji University of Oriental Medicine, Kyoto, Japan **4/1989 - 3/1993**
B.S., Faculty of Acupuncture and Moxibustion

Licensure Acupuncturist and Moxa practitioner **5/1992**

ACADEMIC APPOINTMENTS

National Institute for Physiological Sciences, Aichi, JAPAN **4/2014 - present**
Division of Cerebral Integration
Associate Professor

Osaka University, Suita, Osaka, JAPAN **4/2010 - 3/2014**
Biofunctional Imaging, WPI Immunology Frontier Research Center,
Assistant Professor

National Institutes of Health, Bethesda, MD, USA **3/2007 - 3/2010**
Advanced MRI (PI: Jeff H. Duyn), Laboratory of Functional Molecular Imaging,
National Institutes of Neurological Disorders and Stroke
Research Fellow

National Institutes of Health, Bethesda, MD, USA **4/2003 - 3/2007**
Advanced MRI (PI: Jeff H. Duyn), Laboratory of Functional Molecular Imaging,
National Institutes of Neurological Disorders and Stroke
Visiting Fellow

Meiji University of Oriental Medicine, Kyoto, Japan **4/2000 - 3/2003**
Department of Medical Informatics
Assistant

PROFESSIONAL AFFILIATIONS

International Society of Magnetic Resonance in Medicine
Society for Neuroscience
The Organization for Human Brain Mapping
The Japanese Society for Magnetic Resonance in Medicine

PUBLICATIONS (selected)

1. Kaiser LG, Kawaguchi H, **Fukunaga M**, B Matson G. Detection of glucose in the human brain with 1 H MRS at 7 Tesla. Magn Reson Med. in press
2. Novel genetic loci underlying human intracranial volume identified through genome-wide association. Adams HH, Hibar DP, Chouraki V, Stein JL, et al. Nat Neurosci. in press
3. Okada N, **Fukunaga M**, Yamashita F, Koshiyama D, Yamamori H, et al. Abnormal asymmetries in subcortical brain volume in schizophrenia. Molecular Psychiatry. in press
4. Yoshida M, Miura K, Hashimoto R, Fujimoto M, Yamamori H, Yasuda Y, Ohi K, **Fukunaga M**, Takeda M, Isa T. Saliency-guided eye movement during free-viewing in schizophrenic patients. J Vis. 2015 15:61
5. Hibar DP, Stein JL, Renteria ME, Arias-Vasquez A, Desrivières S, Jahanshad N, et al. Common genetic variants influence human subcortical brain structures. Nature. 2015 520:224-9
6. Watanabe Y, Tanaka H, Tsukabe A, Kunitomi Y, Nishizawa M, Hashimoto R, Yamamori H, Fujimoto M, **Fukunaga M**, Tomiyama N. Neuromelanin magnetic resonance imaging reveals increased dopaminergic neuron activity in the substantia nigra of patients with schizophrenia. PLoS One. 2014 9:e104619
7. Picchioni D, Pixa ML, **Fukunaga M**, Carr WS, Horovitz SG, Braun AR, Duyn JH. Decreased Connectivity between the Thalamus and the Neocortex during Human Non-Rapid Eye Movement Sleep. Sleep. 2014 37:387-97
8. Murase T, Umeda M, **Fukunaga M**, Higuchi T, Tanaka C. Deconvolution analyses with tent functions reveal delayed and long-sustained increases of BOLD signals with acupuncture stimulation. Magn Reson Med Sci. 2013 12:121-7
9. Yamamoto H, **Fukunaga M**, Takahashi S, Mano H, Tanaka C, Umeda M, Ejima Y. Inconsistency and Uncertainty in the Locations of Human Visual Areas in Talairach Space: Probability and Entropy Maps. Hum Brain Mapp. 2012 33:121-9
10. Lee J, **Fukunaga M**, Duyn JH. Improving contrast to noise ratio of resonance frequency contrast images (phase images) using balanced steady-state free precession. Neuroimage. 2011 54:2779-88
11. Bianciardi M, **Fukunaga M**, van Gelderen P, de Zwart JA, Duyn JH. Negative BOLD-fMRI signals in large cerebral veins. J Cereb Blood Flow Metab. 2011 31:401-12
12. **Fukunaga M**, Li TQ、Lee J、Matsuura E、van Gelderen P、de Zwart JA、Merkle H、Duyn JH. Possible origins of the susceptibility contrast in the brain. Jpn J Magn Reson Med 2011 31:71-3
13. Lee J, Shmueli K, **Fukunaga M**, van Gelderen P, Merkle H, Silva AC, Duyn JH. Sensitivity of MRI resonance frequency to the orientation of brain tissue microstructure. Proc Natl Acad Sci U S A. 2010 107:5130-5
14. **Fukunaga M**, Li TQ, van Gelderen P, de Zwart JA, Shmueli K, Yao B, Lee J, Maric D, Aronova MA, Zhang G, Leapman RD, Schenck JF, Merkle H, Duyn JH. Layer-Specific Variation of Iron Content in Cerebral Cortex as a Source of MRI Contrast. Proc Natl Acad Sci U S A. 2010 107:3834-9
15. Lee J, Hirano Y, **Fukunaga M**, Silva AC, Duyn JH. On the contribution of deoxy-hemoglobin to MRI gray-white matter phase contrast at high field. Neuroimage. 2010 49:193-8
16. Bianciardi M, van Gelderen P, Duyn JH, **Fukunaga M**, de Zwart JA. Making the most of fMRI at 7 T by suppressing spontaneous signal fluctuations. Neuroimage. 2009 44:448-54.
17. **Fukunaga M**, Horovitz SG, de Zwart JA, van Gelderen P, Balkin TJ, Braun AR, Duyn JH. Metabolic origin of BOLD signal fluctuations in the absence of stimuli. J Cereb Blood Flow Metab 2008 28:1377-87
18. Horovitz SG, **Fukunaga M**, de Zwart JA, van Gelderen P, Fulton SC, Balkin TJ, Duyn JH. Low frequency BOLD fluctuations during resting wakefulness and light sleep: A simultaneous EEG-fMRI study. Hum Brain Mapp 2008 29:671-82
19. Duyn JH, van Gelderen P, Li TQ, de Zwart JA, Koretsky AP, **Fukunaga M**. High-field MRI of brain cortical substructure based on signal phase. Proc Natl Acad Sci U S A 2007 104:11796-801
20. **Fukunaga M**, Horovitz SG, van Gelderen P, de Zwart JA, Jansma JM, Ikonomidou VN, Chu R, Deckers RH, Leopold DA, Duyn JH. Large-amplitude, spatially correlated fluctuations in BOLD fMRI signals during extended rest and early sleep stages. Magn Reson Imaging 2006 24:979-992