

BIOGRAPHICAL SKETCH

NAME		POSITION TITLE	
Taisuke Tomita		Professor	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
The University of Tokyo, Tokyo, Japan	B.S.	1995	Pharmaceutical Science
The University of Tokyo, Tokyo, Japan	M.S.	1997	Pharmaceutical Science
The University of Tokyo, Tokyo, Japan	Ph.D.	2000	Pharmaceutical Science
Washington University in St. Louis	Visiting Scientist	2004-2005	Notch Biology

Date of Birth

January 22nd, 1973

License

The Pharmacist License in Japan (1995)

Positions

1997-2003	Instructor in Laboratory of Neuropathology and Neuroscience, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan
2003-2006	Assistant Professor in Laboratory of Neuropathology and Neuroscience, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan
2006-2014	Associate Professor in Laboratory of Neuropathology and Neuroscience, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan
2017-2022	Adjunct Professor in Laboratory of Brain and Neurological Disorders, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan
2022-2023	Vice chairperson in the Science Board of Pharmaceutical and Medical Devices Agency, Japan (the 6th team)
2014-present	Professor in Laboratory of Neuropathology and Neuroscience, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan
2024-present	Chairperson in the Science Board of Pharmaceutical and Medical Devices Agency, Japan (the 7th team)
2024-present	Vice Dean of Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan

Laboratory homepage<https://neuropsc.f.u-tokyo.ac.jp/~neuropsc/>**Editor and Editorial Advisory Board**

2006-2015	A member of the Editorial Board of Molecular Neurodegeneration
2013-present	A member of the Editorial Board of the Journal of Biological Chemistry
2016-present	A member of the Editorial Board of Scientific Reports
2018-present	Associate Editor of Neuroscience Research

Honors and Awards

2000-2001	Recipient of the research fellowship from the Tokyo Biochemical Research Foundation
2004-2005	Recipient of JSPS postdoctoral fellowships for research abroad
2010	Presentation Award from Japan Society for Dementia Research
2011	48 th Erwin von Balz prize
2013	Basic Research Award from Japan Society for Dementia Research
2015	NAGASE Foundation Award 2015
2018	Shimadzu Young Researcher Award

2021	JB Article Award
2022	Sankei Advanced Technology Award
2023	HIRUMA/Wagner Award

Professional Membership

The Japanese Biochemical Society (Councilor from 2022, Director from 2023)
The Pharmaceutical Society of Japan (Councilor from 2021)
Japan Society for Dementia Research (Council member from 2006, Auditor from 2016, Director from 2017)
The Molecular Biology Society of Japan
The Japan Neuroscience Society (Auditor from 2023)
Japanese Society for Proteases in Pathophysiology (Council from 2021)
Society for Regulatory Science of Medical Products (Director from 2023)
Society for Neuroscience
The American Society for Biochemistry and Molecular Biology
ISTAART
International Proteolysis Society (Asian Council from 2016-2019)

Publications (20 shown of 192)

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<https://scholar.google.co.jp/citations?user=xWP0gQ8AAAAJv>

- **Tomita T**, Maruyama K, Saido TC, Kume H, Shinozaki K, Tokuhiko S, Capell A, Walter J, Gruenberg J, Haass C, Iwatsubo T, Obata K: The presenilin 2 mutation (N141I) linked to familial Alzheimer disease (Volga German families) increases the secretion of amyloid β protein ending at the 42nd (or 43rd) residue. **Proc Natl Acad Sci USA** 1997;**94**:2025-2030
- Baba M, Nakajo S, Tu P-H, **Tomita T**, Nakaya K, Lee VM-Y, Trojanowski JQ, Iwatsubo T: Aggregation of α -synuclein in Lewy bodies of sporadic Parkinson's disease and dementia with Lewy body disease. **Am J Pathol** 1998;**152**: 879-884.
- Naruse S, Thinakaran G, Luo J-J, Kusiak JW, **Tomita T**, Iwatsubo T, Qian X, Ginty, DD, Price, DL, Borchelt DR, Wong PC, Sisodia SS: Effects of PS1 deficiency on membrane protein trafficking in neurons. **Neuron** 1998;**17**:1213-1221
- Kamenetz F, **Tomita T**, Seabrook G, Borchelt D, Iwatsubo T, Sisodia S, Malinow R: APP processing and synaptic function. **Neuron** 2003;**37**:925-937
- Takasugi N, **Tomita T**, Hayashi I, Tsuruoka M, Niimura M, Thinakaran G, Takahashi Y, Iwatsubo T: The role of presenilin cofactors in the γ -secretase complex. **Nature** 2003;**422**:438-441
- Sato C, Takagi S, **Tomita T**, Iwatsubo T: The C-terminal PAL motif and transmembrane domain 9 of Presenilin 1 are involved in the formation of the catalytic pore of the γ -secretase. **J Neurosci** 2008;**28**:6264-6271
- Ohki Y, Higo T, Uemura K, Shimada N, Osawa S, Funamoto S, Ihara Y, Berezovska O, Yokoshima S, Fukuyama T, **Tomita T**, Iwatsubo T: Phenylpiperidine-type γ -secretase modulators target the transmembrane domain 1 of presenilin 1. **EMBO J** 2011;**30**:4815-4824
- Suzuki K, Hayashi Y, Nakahara S, Kumazaki H, Prox J, Horiuchi K, Zeng M, Tanimura S, Nishiyama Y, Osawa S, Sehara-Fujisawa A, Saftig P, Yokoshima S, Fukuyama T, Matsuki N, Koyama R, **Tomita T**, Iwatsubo T: Activity-dependent Cleavage of Neuroligin 1. **Neuron** 2012;**76**:410-422
- Kanatsu K, Morohashi Y, Suzuki M, Kuroda H, Watanabe T, **Tomita T**, Iwatsubo T: Decreased CALM expression reduces A β 42 to total A β through clathrin-mediated endocytosis of γ -secretase. **Nat Commun** 2014;**5**:3386
- Taniguchi A, Sasaki D, Shiohara A, Iwatsubo T, **Tomita T**, Sohma Y, Kanai M: Attenuated aggregation and neurotoxicity of amyloid- β peptide by catalytic photo-oxidation. **Angew Chem Int Ed Engl** 2014;**53**:1382-1385.
- Takeo K, Tanimura S, Shinoda T, Osawa S, Zahariev IK, Takegami N, Ishizuka-Katsura Y, Shinya N, Takagi-Niidome S, Tominaga A, Ohsawa N, Kimura-Someya T, Shirouzu M, Yokoshima S, Yokoyama S, Fukuyama T, **Tomita T**, Iwatsubo T: Allosteric regulation of γ -secretase activity by a phenylimidazole-type γ -secretase modulator. **Proc Natl Acad Sci USA** 2014;**111**:10544-10549
- Nakamura A, Kaneko N, Villemagne VL, Kato T, Doecke J, Dore V, Fowler C, Li QX, Martins R, Rowe C, **Tomita T**, Matsuzaki K, Iwamoto S, Ito K, Tanaka K, Masters CL, Yanagisawa K: High performance plasma A β -amyloid biomarkers for Alzheimer's disease. **Nature** 2018;**554**:249-254.

- Ni J, Taniguchi A, Kuninobu Y, Ozawa S, Hori Y, Kuninobu Y, Saito T, Saido TC, **Tomita T**, Sohma Y, Kanai M: Near-infrared photoactivatable oxygenation catalysts of amyloid protein. **Chem** 2018;4:807-820.
- Kidana K, Tatebe T, Ito K, Saito T, Kikuchi K, Takatori S, Ouchi Y, Saido T, Makino M, Akishita M, Iwatsubo T, Hori Y, **Tomita T**: Loss of astrocyte-derived kallikrein 7 exacerbates amyloid pathology in Alzheimer disease model mouse. **EMBO Mol Med** 2018; e8184
- Schweighauser M, Shi Y, Tarutani A, Kametani F, Murzin AG, Ghetti B, Matsubara T, **Tomita T**, Ando T, Hasegawa K, Murayama S, Yoshida M, Hasegawa M, Scheres SHW, Goedert M. Structures of α -synuclein filaments from multiple system atrophy. **Nature** 2020;585:464-469.
- Nagashima N, Ozawa S, Furuta M, Oi M, Hori Y, **Tomita T**, Sohma Y, Kanai M: Catalytic photooxygenation reduces brain A β in vivo. **Sci Adv** 2021;7: eabc9750
- Tarutani A, Miyata H, Nonaka T, Hasegawa K, Yoshida M, Saito Y, Murayama S, Robinson A, Mann DMA, **Tomita T**, Hasegawa M: Tau strains extracted from human tauopathies determine the substrates recruited for templated amplification. **Brain** 2021;144:2333-2348.
- Ozawa S, Hori Y, Shimizu Y, Taniguchi A, Suzuki T, Wang W, Chiw YW, Koike R, Yokoshima S, Fukuyama T, Takatori S, Sohma Y, Kanai M, **Tomita T**: Photo-oxygenation by a biocompatible catalyst reduces A β levels in the brains of Alzheimer disease model mice. **Brain** 2021;144:1884-1897.
- Matsuzaki M, Yokoyama M, Yoshizawa Y, Kaneko N, Naito H, Kobayashi H, Korenaga A, Sekiya S, Ikemura K, Opoku G, Hirohata S, Iwamoto S, Tanaka K, **Tomita T**: ADAMTS4 is involved in the production of the Alzheimer disease amyloid biomarker APP669-711. **Mol. Psychiatry** 2023;28:1802-1812.
- Kato Y, Takatori S, Akahori A, Etani H, Chu YN, **Tomita T**: Protocol for gene knockdown using siRNA in primary cultured neonatal murine microglia. **STAR Protoc.** 2024;5:102867.