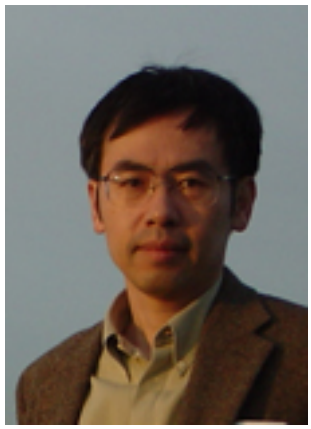
Curriculum Vitae



Name: **Takaomi C. Saido**

Present occupation

Position: Laboratory Head

Institution: Laboratory for Proteolytic Neuroscience
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Education

1978-1982	B.A.	University of Tsukuba
1982-1985 & 1986-1988		
	Ph. D	University of Tokyo Graduate School
1985-1986	Visiting Scholar	Cornell University

Academic appointments

1988-1997	Research Scientist, Tokyo Metropolitan Institute of Medical Science
1992	Visiting Scientist, Scripps Institute
1997-2018	Laboratory Head, RIKEN Brain Science Institute
1997-2012	Visiting Professor, Yokohama City Medical School
1997-2006	Visiting Professor, Tohoku University School of Medicine
1999-2009	Visiting Professor, University of Tsukuba School of Medicine
2004	Visiting Professor, University of Nagoya School of Medicine
2005	Visiting Professor, Institute for Frontier Medical Sciences, University of Kyoto
2006	Visiting Professor, Graduate School of Agricultural and Life Sciences, University of Tokyo
2008-present	Visiting Professor, Waseda University
2009-2010	Visiting Professor, Japan Women's College
2017-present	Visiting Professor, Keio University
2018-present	Laboratory Head, RIKEN Center for Brain Science

Awards and honors

1985	Rotary International Fellowship
1995	Young Investigator Award, Japanese Biochemical Society
2002	Journal of Biochemistry Excellent Paper Prize
2003	BSI Flagship Prize
2003	Neuroscience Research Excellent Paper Prize
2004	Outstanding contributor award, Alzheimer Research Forum
2007	Toshihiko Tokizane Memorial Award
2015	Ando Momofuku Memorial Award

Memberships and committee assignments in professional societies

1982-	Japanese Biochemical Society
1984-1986	Japanese Biophysical Society
1993-	Japanese Pharmaceutical Society
1994-	Society for Neuroscience, USA
1996-	Councilor, Japanese Society for Dementia (councilor)
1996-	Japanese Society for Proteases and Inhibitors
1997-	Japanese Society for Neuroscience
1998-	Japanese Society for Neurochemistry

Major research interests

Metabolism of amyloid β peptide in brain

Pathophysiological roles of calpain in the brain

Animal models of Alzheimer's disease

Presymptomatic markers for brain aging and Alzheimer’s disease

Publications in international journals (in English only)

1. Toyoshima, S. Saido, T.C., Makishima, F., Osawa, T. (1983). Induction of increased calcium uptake in liposomes having membrane proteins of chicken erythrocytes by S-adenosylmethionine. ***Biochem. Biophys. Res. Commun.*** 114, 1126-1131.
2. Seki, H., Saido, T.C., Iseki, K., Whitney, F., Wong, S. (1984). Uptake kinetics of micro-organisms in the sulfuretum of Saanich Inlet, British Columbia, Canada. ***Arch. Hydrobiol.***, 100, 73-82.
3. Saido, T.C., Toyoshima, S., Osawa, T. (1987). Protein-O-carboxylmethyltransferase from cytosol and membranes of chicken erythrocytes. ***J. Biochem.*** 102, 319-326.
4. Magae, J., Osada, H., Fujiki, H., Saido, T.C., Suzuki, K., Nagai, K., Yamasaki, M., Isono, K. (1990). Morphological changes of human myeloid leukemia K562 cells by a protein phosphatase inhibitor, tautomycin. ***Proc. Japan Acad.*** 66, 209-212.
5. Osada, S., Mizuno, K., Saido, T.C., Akita, Y., Suzuki, K., Kuroki, T., Ohno, S. (1990). A phorbol ester receptor/protein kinase, nPKCη, a new member of the

protein kinase C family predominantly expressed in lung and skin. ***J. Biol. Chem.*** 265, 22434-22440.

6. Sorimachi, H., Ohmi, S., Emori, Y., Kawasaki, H., Saido, T.C., Ohno, S., Minami, Y., Suzuki, K. (1990). A novel member of the calcium-dependent cysteine protease family. ***Biol. Chem.*** Hoppe-Seyler 371, 171-176.
7. Kobayashi, Y., Yamamoto, K., Saido, T.C., Kawasaki, H., Oppenheim, J.T., Matsushima, K. (1990). Identification of calcium-activated neutral protease as a processing enzyme of human interleukin 1 α. ***Proc. Natl. Acad. Sci. USA*** 87, 5548-5552.
8. Ohno, S., Akita, Y., Hata, A., Osada, S., Kubo, K., Konno, Y., Akimoto, K., Mizuno, K., Saido, T.C., Kuroki, T., Suzuki, K. (1991). Structural and functional diversities of a family of signal transducing protein kinases, protein kinase C; two distinct classes of PKC, conventional cPKC and novel nPKC. ***Advances in Enzyme Regulation*** 31, 287-303.
9. Mori, A., Aizawa, H., Saido, T.C., Kawasaki, H., Mizuno, K., Murofushi, H., Suzuki, K., Sakai, H. (1991). Site-specific phosphorylation by protein kinase C inhibits assembly-promoting activity of microtubule-associated protein. ***Biochemistry*** 30, 9341-9346.
10. Mizuno, K., Kubo, K., Saido, T.C., Akita, Y., Osada, S., Kuroki, T., Ohno, S., Suzuki, K. (1991). Structure and properties of a ubiquitously expressed protein kinase C, nPKCδ. Eur. ***J. Biochem.*** 202, 931-940.
11. Saido, T.C., Mizuno, K., Suzuki, K. (1991). Proteolysis of protein kinase C by calpain: effect of acidic phospholipids. ***Biomed. Biochim. Acta*** 50, 485-489.
12. Osada, S., Mizuno, K., Saido, T.C., Suzuki, K., Kuroki, T., Ohno, S. (1992). A new member of protein kinase C family, nPKCθ, predominantly expressed in skeletal muscle. ***Mol. Cell. Biol.*** 12, 3930-3938.
13. Suzuki, K., Saido, T.C., Hirai, S. (1992). Modulation of cellular signals by calpain. ***Ann. N. Y. Acad. Sci.*** 674, 218-227.
14. Saido, T.C., Mizuno, K., Konno, Y., Osada, S., Ohno, S., Suzuki, K. (1992). Purification and characterization of protein kinase C ε from rabbit brain. ***Biochemistry*** 31, 482-490.
15. Saido, T.C., Nagao, S., Shiramine, M., Tsukaguchi, M., Sorimachi, H., Murofushi, H., Tsuchiya, T., Ito, H., Suzuki, K. (1992). Autolytic transition of μ-calpain as resolved by antibodies distinguishing between the pre- and post-autolysis forms. ***J. Biochem.*** 111, 81-86.
16. Saido, T.C., Shibata, M., Takenawa, T., Murofushi, H., Suzuki, K. (1992). Positive regulation of μ-calpain action by polyphosphoinositides. ***J. Biol. Chem.*** 267, 24585-24590.
17. Mizuno, K., Saido, T.C., Ohno, S., Tamaoki, T., Suzuki, K. (1993). Staurosporine-related compounds, K252a and UCN-01, inhibit both cPKC and nPKC. ***FEBS Lett.*** 330, 114-116.
18. Sorimachi, H., Toyama-Sorimachi, N., Saido, T.C., Kawasaki, H., Sugita, H., Miyasaka, M., Arahata, K., Suzuki, K. (1993). Muscle-specific calpain, p94, is degraded by autolysis immediately after translation, resulting in disappearance from muscle. ***J. Biol. Chem.*** 268, 10593-10605.
19. Yamaura, I., Tani, E., Saido, T.C., Suzuki, K., Minami, N., Maeda, Y. (1993). Calpain-calpastatin system of canine basilar artery in vasospasm. ***J. Neurosurg.*** 79, 537-543.
20. Saido, T.C., Suzuki, H., Yamazaki, H., Tanoue, K., Suzuki, K. (1993). In situ capture of μ-calpain activation in platelets. ***J. Biol. Chem.*** 268, 7422-7426.

21. Saido, T.C., Yokota, M., Nagao, S., Yamaura, I., Tani, E., Tsuchiya, T., Suzuki, K., Kawashima, S. (1993). Spatial resolution of fodrin proteolysis in postischemic brain. ***J. Biol. Chem.*** 268, 25239-25243.
22. Satake, A., Itoh, K., Shimmoto, M., Saido, T.C., Sakuraba, H., Suzuki, Y. (1994). Distribution of lysosomal protective protein in human tissues. Biochem. ***Biophys. Res. Commun.***, 205, 38-43
23. 23 Akita, Y., Ohno, S., Yajima, Y., Konno, Y., Saido, T.C., Mizuno, K., Chida, K., Osada, S., Kuroki, T., Kawashima, S., Suzuki, K. (1994). Overexpression of Ca2+-independent protein kinase C isozyme, nPKCε increases the secretion of prolactin from thyrotropin-releasing hormone-stimulated rat pituitary GH4C1 cells. ***J. Biol. Chem.*** 269, 4653-4660.
24. Yokota, M., Saido, T.C., Miyaji, K., Tani, E., Kawashima, S., Suzuki, K. (1994). Stimulation of protein-tyrosine phosphorylation in gerbil hippocampus after global forebrain ischemia. ***Neurosci. Lett.*** 168, 69-72.
25. Nagao, S., Saido, T.C.(corresponding author), Akita, Y., Tsuchiya, T., Suzuki, K., Kawashima, S. (1994). Calpain-calpastatin interactions in epidermoid carcinoma KB cells. ***J. Biochem.*** 115, 1178-1184.
26. Sorimachi, H., Saido, T.C., Suzuki, K. (1994). New era of calpain research, discovery of tissue-specific calpains. FEBS Lett., 343, 1-5.
27. Saito, Y., Saido, T.C., Sano, K., Kawashima, S. (1994). The calpain-calpastatin system is regulated differentially during human neuroblastoma cell differentiation to Schwannian and neuronal cells. ***FEBS Lett.***, 353, 327-331.
28. Saido, T.C., Nagao, S., Shiramine, M., Tsukaguchi, M., Yoshizawa, T., Sorimachi, H., Ito, H., Tsuchiya, T., Kawashima, S., Suzuki, K. (1994). Distinct kinetics of subunit autolysis in mammalian m-calpain activation. ***FEBS Lett.*** 346, 263-267.
29. Saido, T.C., Sorimachi, H., Suzuki, K. (1994). Calpain: new perspectives in molecular diversity and physiological-pathological involvement. ***FASEB J.***, 8, 814-822.
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40. Igarashi, K., Kaneda, M., Yamaji, A., Saido, T.C., Kikkawa, U., Ono, Y., Inoue, K., Umeda, M. (1995). A novel phosphatidylserine-binding peptide motif defined by an anti-idiotypic monoclonal antibody: localization of phosphatidylserine-specific binding sites on protein kinase C and phosphatidylserine decarboxylase. ***J. Biol. Chem.***, 270, 29075-29078.
41. Martin, S.J., O'Brien, G.A., Nishioka, W.K., Mahboubi, A., Saido, T.C., Green, D.R. (1995). Proteolysis of fodrin (nonerythroid spectrin) during apoptosis. ***J. Biol. Chem.***, 270, 6425-6428.
42. Saito, Y., Maruyama, K., Saido, T.C., Kawashima, S. (1995). N23K, a gene transiently up-regulated during neuronal differentiation, encodes a precursor protein for a newly identified neuropeptide Nociceptin. Biochem. Biophys. ***Res. Commun.***, 217, 539-545.
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44. Du, X., Saido, T.C. (two first authors), Tsubuki, S., Indig, F.E., Williams, M..J., Ginsberg, M.H. (1995). Calpain cleavage of the cytoplasmic domain of the integrin β3 subunit. ***J. Biol. Chem.***, 270, 24146-26152.
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46. Yamashima, T., Saido, T.C., Takita, M., Miyazawa, A., Yamano, J., Miyakawa, A., Nishijo, H., Ono, T., Yamashita, J., Yoshioka, T. (1996). Transient brain ischemia provokes Ca2+ mobilization, PIP2 overexpression and calpain activation prior to delayed CA-1 neuronal death in monkeys. ***Eur. J. Neurosci.***, 8, 1932-1944.
47. Kume, H., Maruyama, K., Tomita, T., Iwatsubo, T., Saido, T.C., Obata, K. (1996). Molecular cloning of a novel basic helix-loop-helix protein from the rat brain. Biochem. ***Biophys. Res. Commun.***, 219, 526-530.
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51. Yokota, M., Saido, T.C., Tani, E., Yamaura, I., Minami, N. (1996). Cytotoxic fragment of amyloid precursor protein accumulates in hippocampus after global forebrain ischemia. J. Cereb. Blood Flow Metabol., 16, 1219-1223.
52. Saito, Y., Maruyama, K., Kawano, J., Yamagishi, K., Saido, T.C., Kawashima, S. (1996). Molecular cloning and characterization of a novel form of neuropeptide precursor gene as a developmentally regulated molecule. ***J. Biol. Chem.***, 271, 15615-15622.
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54. Iwatsubo, T., Saido, T.C., Mann, D.M.A., Lee, V.M.-Y., Trojanowski, J.Q. (1996). Full-length Aβ(1-42(43)) as well as amino-terminally modified and truncated Aβ42(43) deposit in diffuse plaques. ***Am. J. Pathol.***, 149, 1823-1830.
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56. Maruyama, K., Tomita, T., Shinozaki, K., Kume, H., Asada, H., Saido, T.C., Ishiura, S, Iwatsubo, T., Obata, K. (1996). Familial Alzheimer's disease-linked mutations at Val717 of amyloid precursor protein are specific for the increased secretion of Aβ42(43). ***Biochem. Biophys. Res. Commun.***, 227, 730-735.
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59. Tomita, T., Maruyama, K., Saido, T.C., Kume, H., Shinozaki, K., Tokuhiro, S., Capell, A., Walter, J., Gruenberg, J., Haass, C., Iwatsubo, T., Obata, K. (1997). The presenilin 2 mutation (N141I) linked to familial Alzheimer's disease (Volga German families) increases the secretion of amyloid β protein ending at Aβ42(43). ***Proc. Nat. Acad. Sci. USA***, 94, 2025-2030.
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Editorial

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***There are 92 other scientific publications including two books in Japanese.**