

CURRICULUM VITAE

- Name:** Noboru Mizushima
- Date of Birth:** 30 June, 1966, Tokyo, Japan
- Present position:** Professor
Department of Biochemistry and Molecular Biology
Graduate School and Faculty of Medicine
The University of Tokyo
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nmizu@m.u-tokyo.ac.jp
- Education:**
1985-1991 Faculty of Medicine, Tokyo Medical and Dental University
1991-1996 Graduate School of Medicine, Tokyo Medical and Dental University (M.D., Ph.D.)
- Research Positions:**
1996-1998 Post Doctoral Fellow of the Japan Society of the Promotion of Science
1998-1999 Post Doctoral Fellow of National Institute for Basic Biology
1999-2002 Researcher, PRESTO, Japan Science and Technology Corporation (JST)
2002-2004 Assistant Professor, Department of Cell Biology,
National Institute for Basic Biology, Okazaki, Japan
2004-2006 Laboratory Head, Department of Bioregulation and Metabolism
The Tokyo Metropolitan Institute of Medical Science
2006-2012 Professor, Department of Physiology and Cell Biology
Tokyo Medical and Dental University
2012-present Professor, Department of Biochemistry and Molecular Biology,
Graduate School and Faculty of Medicine, The University of Tokyo
- Awards:**
1999 Medical alumni award of Tokyo medical & dental university
2001 Young investigator award of the Japanese Biochemical Society
2005 Mitsubishi Chemical Award of the Molecular Biology Society of Japan
2006 The Commendation for Science and Technology by the Minister of Education,
Culture, Sports, Science and Technology, The Young Scientists' Prize
2007 FEBS Letters Young Scientist Award
2008 JSPS (Japan Society for the Promotion of Science) Prize
2008 Brain Science Foundation, Tsukahara Award
2009 Inoue Prize for Science, Inoue Foundation for Science
2010 Japanese Biochemical Society, Kakiuchi Samuro Memorial Award
2011 The Takeda Prize for Medical Science
2013 Thomson Reuters Citation Laureates
2014 The Yomiuri Techno Forum, Gold Medal Prize
2015 The Japanese Society of Anti-Aging Medicine Award
2016 The Uehara Prize
- Other Professional Activities**
2006 - 2007 Editorial Board - Autophagy
2007 - present Associate Editor - Autophagy

2007 - present Associate Editor – Cell Structure and Function
2007 - present Editor – FEBS Letters
2010- present Associate Editor – Genes to Cells
2012- present Bord Reviewing Editor – eLife
2014- 2015 Editor - Journal of Biochemistry
2014- present Honorary Editor - Molecular and Cellular Oncology
2014- present Editorial Board - Molecular Cell
2015- present President - the Japanese Biochemistry Society

2006 - present Membership in the American Society for Clinical Investigation
2007 Organizer, Keystone Symposium on Autophagy in Health and Disease
2008 Vice-Chair, 3rd Gordon Research Conference on “Autophagy”
2010 Chair, the 4th Gordon Research Conference on “Autophagy”
2011 Organizer, Zing conference on Autophagy
2016 Organizer, Keystone Symposium on Autophagy: Molecular and Physiological Mechanisms

Publications (selected)

Original articles

1. Kaizuka, T., *Mizushima, N. Atg13 is essential for autophagy and cardiac development in mice. *Mol. Cell. Biol.* 36: 585-595 (2015).
2. Suzuki, H., Kaizuka, T., *Mizushima, N., *Noda, N. N. Structure of the Atg101–Atg13 complex reveals essential roles of Atg101 in mammalian autophagy initiation. *Nat. Struct. Mol. Biol.* 22: 572–580 (2015).
3. Saitsu, H., Nishimura, T., Muramatsu, K., Kodera, H., Kumada, S., Sugai, K., Kasai-Yoshida, E., Sawaura, N., Nishida, H., Hoshino, A., Ryujin, F., Yoshioka, S., Nishiyama, K., Kondo, Y., Tsurusaki, Y., Nakashima, M., Miyake, N., Arakawa, H., Kato, M., *Mizushima, N., *Matsumoto, N. De novo mutations in the autophagy gene encoding WDR45 (WIP14) cause static encephalopathy of childhood with neurodegeneration in adulthood. *Nat. Genet.* 45: 445-449 (2013).
4. Itakura, E., Kishi-Itakura, C., Mizushima, N. The hairpin-type tail-anchored SNARE syntaxin 17 targets to autophagosomes for fusion with endosomes/lysosomes. *Cell* 151: 1256-1269 (2012).
5. Takamura, A., Komatsu, M., Hara, T., Sakamoto, A., Kishi, C., Waguri, S., Eishi, Y., Hino, O., Tanaka, K., Mizushima, N. Autophagy-deficient mice develop multiple liver tumors. *Genes Dev.* 25: 795-800 (2011)
6. Itakura, E., Mizushima, N. p62 targeting to the autophagosome formation site requires self-oligomerization but not LC3-binding. *J. Cell Biol.* 192: 17-27 (2011).
7. Tsukamoto, S., Kuma, A., Murakami, M., Kishi, C., Yamamoto, A., Mizushima, N. Autophagy is essential for preimplantation development of mouse embryos. *Science* 321: 117-120 (2008)
8. Hara, T., Takamura, A., Kishi, C., Iemura, S., Natsume, T., Guan, J.L., Mizushima, N. FIP200, a ULK-interacting protein, is required for autophagosome formation in mammalian cells. *J. Cell Biol.* 181: 497-510 (2008)
9. Hara, T., Nakamura, K., Matsui, M., Yamamoto, A., Nakahara, Y., Suzuki-Migishima, R., Yokoyama, M., Mishima, K., Saito, I., Okano, H., Mizushima, N. Suppression of basal autophagy in neural cells causes neurodegenerative disease in mice. *Nature* 441, 885-889 (2006).
10. Kuma, A., Hatano, M., Matsui, M., Yamamoto, A., Nakaya, H., Yoshimori, T., Ohsumi, Y., Tokuhisa, T., Mizushima, N. The role of autophagy during the early neonatal starvation period. *Nature.* 432, 1032-1036 (2004).

11. Mizushima, N., Yamamoto, A., Matsui, M., Yoshimori, T. and Ohsumi, Y. In vivo analysis of autophagy in response to nutrient starvation using transgenic mice expressing a fluorescent autophagosome marker. *Mol. Biol. Cell* 15, 1101-1111 (2004).
12. Mizushima, N., Yamamoto, A., Hatano, M., Kobayashi, Y., Kabeya, Y., Suzuki, K., Tokuhiya, T., Ohsumi, Y. and Yoshimori, T. Dissection of Autophagosome Formation using Apg5-Deficient Mouse Embryonic Stem Cells *J. Cell Biol.* 152, 657-667. (2001)
13. Mizushima, N., Noda, T., Yoshimori, T., Tanaka, Y., Ishii, T., George, M. D., Klionsky, D. J., Ohsumi, M. and Ohsumi, Y. A protein conjugation system essential for autophagy *Nature* 395, 395-398. (1998)

Reviews

14. Shen, H.M., Mizushima, N. At the end of the autophagic road: an emerging understanding of lysosomal functions in autophagy. *Trends Biochem. Sci.* 39:61-71 (2014).
15. Mizushima, N., Komatsu, M. Autophagy: renovation of cells and tissues. *Cell.* 147:728-41 (2011).
16. Mizushima, N., Levine B. Autophagy in mammalian development and differentiation. *Nat. Cell Biol.* 12:823-830 (2010).
17. Mizushima, N., Yoshimori, T. and Levine, B. Methods in mammalian autophagy research. *Cell* 140; 313-326 (2010)
18. Mizushima, N., Levine, B., Cuervo, A.M., Klionsky, D.J. Autophagy fights disease through cellular self-digestion *Nature* 451:1069-1075 (2008)
19. Mizushima, N. Autophagy: process and function *Genes Dev.* 21: 2861-2873 (2007)