


Curriculum Vitae

	Name <small>(First Name, Middle Name Last Name)</small>	Toshiro Sato
	Position	Professor
	Affiliation	Department of Organoid Medicine, Keio University School of Medicine
	Country	JAPAN
	Major Field	Gastroenterology

Education Background

4/1991-3/1997 MD Keio University School of Medicine
 4/1997-3/1999 Internship, Keio University Hospital
 4/1999-3/2003 Internal Medicine, Graduate school, School of Medicine, Keio University
 4/2004 PhD

Professional Experience

4/1997-3/1999 Intern, Department of Medicine, Keio University Hospital
 4/2003-9/2005 Resident, Department of Gastroenterology, Keio University Hospital
 9/2004-8/2005 COE Postdoctoral researcher, Keio University School of Medicine
 9/2005-4/2006 Resident, TEPCO hospital
 4/2006-4/2007 Postdoctoral researcher, Stowers Institute, Kansas City (Supervisor: Linheng Li)
 6/2007-3/2011 Postdoctoral researcher, Hubrecht Institute, Utrecht (Supervisor: Hans Clevers)
 4/2011-3/2013 Assistant Professor, Department of Gastroenterology, Keio University School of Medicine
 4/2013-10/2018 Associate professor, Department of Gastroenterology, Keio University School of Medicine
 11/2018-Present Professor, Department of Organoid Medicine, Keio University School of Medicine

Professional Organizations

International Society of Stem Cell Research, American Association for Cancer Research, The Japanese Society of Gastroenterology, The Japanese Society of Internal Medicine, Japanese Cancer Association, The Japanese Society for Regenerative Medicine

Scientific Publication

- 1) Sugimoto S, Kobayashi E, Fujii M, Ohta Y, Arai K, Matano M, Ishikawa K, Miyamoto K, Toshimitsu K, Takahashi S, Nanki K, Hakamata Y, Kanai T, **Sato T***. An organoid-based organ-repurposing approach to treat short bowel syndrome. **Nature**. 2021;592:99-104.
- 2) Togasaki K, Sugimoto S, Ohta Y, Nanki K, Matano M, Takahashi S, Fujii M, Kanai T, **Sato T***. Signaling Shapes the Histologic Variation in Diffuse Gastric Cancer. **Gastroenterology**. 2021 Feb;160(3):823-830.
- 3) Kawasaki K, Toshimitsu K, Matano M, Fujita M, Fujii M, Togasaki K, Ebisudani T, Shimokawa M, Takano A, Takahashi S, Ohta Y, Nanki K, Igarashi R, Ishimaru K, Ishida H, Sukawa Y, Sugimoto S, Saito Y, Maejima K, Sasagawa S, Lee H, Kim HG, Ha K, Hamamoto J, Fukunaga K, Maekawa A, Tanabe M, Ishihara S, Hamamoto Y, Yasuda H, Sekine S, Kudo A, Kitagawa Y, Kanai T, Nakagawa H, **Sato T***. An Organoid Biobank of Neuroendocrine Neoplasms Enables Genotype-Phenotype Mapping. **Cell**. 2020;S0092-8674(20)31387-8.
- 4) Sasaki N, Miyamoto K, Maslowski KM, Ohno H, Kanai T, **Sato T***. Development of a Scalable Coculture System for Gut Anaerobes and Human Colon Epithelium. **Gastroenterology**. 2020;159:388-390

- 5) Kawasaki K, Fujii M, Sugimoto S, Ishikawa K, Matano M, Ohta Y, Toshimitsu K, Takahashi S, Hosoe N, Sekine S, Kanai T, **Sato T***. Chromosome Engineering of Human Colon-Derived Organoids to Develop a Model of Traditional Serrated Adenoma. **Gastroenterology**. 2020;158:638-651
 - 6) Nanki K, Fujii M, Shimokawa M, Matano M, Nishikori S, Date S, Takano A, Toshimitsu K, Ohta Y, Takahashi S, Sugimoto S, Ishimaru K, Kawasaki K, Nagai Y, Ishii R, Yoshida K, Sasaki N, Hibi T, Ishihara S, Kanai T, **Sato T***. Somatic inflammatory gene mutations in human ulcerative colitis epithelium. **Nature**. 2020;577:254-259.
 - 7) Nakamoto N, Sasaki N, Aoki R, Miyamoto K, Suda W, Teratani T, Suzuki T, Koda Y, Chu PS, Taniki N, Yamaguchi A, Kanamori M, Kamada N, Hattori M, Ashida H, Sakamoto M, Atarashi K, Narushima S, Yoshimura A, Honda K, **Sato T***, Kanai T*. Gut pathobionts underlie intestinal barrier dysfunction and liver T helper 17 cell immune response in primary sclerosing cholangitis. **Nature Microbiol**. 2019;3:492-503.
 - 8) Fujii M, Matano M, Toshimitsu K, Takano A, Mikami Y, Nishikori S, Sugimoto S, **Sato T***. Human Intestinal Organoids Maintain Self-Renewal Capacity and Cellular Diversity in Niche-Inspired Culture Condition. **Cell Stem Cell**. 2018 ;23:787-793.
 - 9) Nanki K, Toshimitsu K, Takano A, Fujii M, Shimokawa M, Ohta Y, Matano M, Seino T, Nishikori S, Ishikawa K, Kawasaki K, Togasaki K, Takahashi S, Sukawa Y, Ishida H, Sugimoto S, Kawakubo H, Kim J, Kitagawa Y, Sekine S, Koo BK, Kanai T, **Sato T***. Divergent Routes toward Wnt and R-spondin Niche Independency during Human Gastric Carcinogenesis. **Cell**. 2018;174:856-869.
 - 10) Seino T, Kawasaki S, Shimokawa M, Tamagawa H, Toshimitsu K, Fujii M, Ohta Y, Matano M, Nanki K, Kawasaki K, Takahashi S, Sugimoto S, Iwasaki E, Takagi J, Itoi T, Kitago M, Kitagawa Y, Kanai T, **Sato T***. Human Pancreatic Tumor Organoids Reveal Loss of Stem Cell Niche Factor Dependence during Disease Progression. **Cell Stem Cell**. 2018 ;22:454-467.
 - 11) Sugimoto S, Ohta Y, Fujii M, Matano M, Shimokawa M, Nanki K, Date S, Nishikori S, Nakazato Y, Nakamura N, Kanai T, **Sato T***. Reconstruction of the human colon epithelium in vivo. **Cell Stem Cell** 2018;22:454-467
 - 12) Shimokawa M, Ohta Y, Nishikori S, Matano M, Takano A, Fujii M, Date S, Sugimoto S, Kanai T, **Sato T***. Visualization and targeting of LGR5+ human colon cancer stem cells. **Nature** 2017;545:187-192.
 - 13) Blokzijl F, de Ligt J, Jager M, Sasselli V, Roerink S, Sasaki N, Huch M, Boymans S, Kuijk E, Prins P, Nijman I, Martincorena I, Mokry M, Wiegeler CL, Middendorp S, **Sato T**, Schwank G, Nieuwenhuis EES, Verstegen MMA, van der Laan LJW, de Jonge J, IJzermans JNM, Vries RG, van de Wetering M, Stratton MR, Clevers H, Cuppen E*, van Boxtel R*. Tissue-specific mutation accumulation in human adult stem cells during life. **Nature** 2016.;238:260-264
 - 14) Fujii M, Shimokawa M, Date S, Takano A, Matano M, Ohta Y, Nanki K, Kawasaki K, Nakazato Y, Uraoka T, Watanabe T, Kanai T, **Sato T***. A colorectal tumor organoid library demonstrates progressive loss of niche factor requirements. **Cell Stem Cell** 2016;18:827-38.
 - 15) Matano M, Date S, Shimokawa M, Takano A, Fujii M, Ohta Y, Watanabe T, Kanai T, **Sato T***. Modeling colorectal cancer using CRISPR-Cas9-mediated engineering of human intestinal organoids. **Nature Medicine**. 2015;21:256-62.
 - 16) **Sato T**, van Es JH, Snippert HJ, Stange DE, Vries RG, van den Born M, Barker N, Shroyer NF, van de Wetering M, Clevers H*. Paneth cells constitute the niche for Lgr5 stem cells in intestinal crypts. **Nature**. 2011; 469: 415-8.
- Sato T**, Vries RG, Snippert HJ, van de Wetering M, Barker N, Stange DE, van Es JH, Abo A, Kujala P, Peters PJ, Clevers H*. Single Lgr5 stem cells build crypt-villus structures in vitro without a mesenchymal niche. **Nature**. 2009; 459: 262-5.

Honors & Awards

2012	Keio Medical Research award
2012	Inoue Research award
2012	The Young Scientists' Prize, The Commendation for Science and Technology by the MEXT (Minister of Education, Culture, Sports, Science and Technology).
2012	Kitajima Prize (Keio University School of Medicine Alumni Association)
2016	Medical Research Encouragement Prize of The Japan Medical Association
2017	Inoue Prize for Science
2018	Japan Academy Medal
2018	Japan Society for the Promotion of Science Prize
2020	Mochida Memorial Academic Award
2019~2021	Highly Cited Researchers 2019, 2020, 2021 (Clarivate Analytics)