**Curriculum Vitae Takanori Takebe M.D., Ph.D. December 9, 2021**

Endowed Chair of Organoid Medicine

Division of Gastroenterology, Hepatology and Nutrition

Division of Developmental Biology

Center for Stem Cell and Organoid Medicine (CuSTOM)

Cincinnati Children's Hospital Medical Center

3333 Burnet Avenue, R3.565 Cincinnati, Ohio 45229-3026

**Positions and Scientific Appointments**

2021-current Endowed Chair of Organoid Medicine, Division of Gastroenterology, Hepatology and Nutrition, Cincinnati Children's Hospital Medical Center

2021current Associate Professor, Division of Gastroenterology, Hepatology and Nutrition and Division of Developmental Biology, Cincinnati Children's Hospital Medical Center

2016-2020 Assistant Professor, Division of Gastroenterology, Hepatology and Nutrition and Division of Developmental Biology, Cincinnati Children's Hospital Medical Center

2017-current Director of Commercial Innovation, Center for Stem Cell and Organoid Medicine (CuSTOM), Cincinnati Children’s Hospital Medical Center, USA

2019 -current Adjunct professor & Director, Communication Design Center, Yokohama City University, Japan

2018 Professor & Founding Director, Communication Design Center, Advanced Medical Research Center, Yokohama City University, Japan

2018 -current Professor, Institute of Research, Tokyo Medical and Dental University, Japan

2013-2018 Associate Professor, Department of Regenerative Medicine, Yokohama City University, Japan

2011-2013 Research Associate, Department of Regenerative Medicine, Yokohama City University, Japan

**Licensing and certification**

Completed CITI Curriculum for Responsible Conduct of Research, Research Misconduct, Data Handling, 　Rules for Collaborative Research, Conflicts of Interest, Authorship, Plagiarism, Peer Review, Mentoring, 　Managing Public Research Funds, Animal Care and Use Using Laboratory Animals in a Research 　　　　Setting: Core Principles, Regulations, Oversight and Guidance (Report ID: 5471716 & 18219028)

**Honors and Awards**

2021 Falk Transformational Award, IL, USA

2021 Elected member of American Society of Clinical Investigation (ASCI), Washington, USA

2021 Faculty Award (Basic Science Research Achievement Award), Cincinnati, USA

2020 NIH Director’s New Innovator Award, Bethesda, USA

2019 Nagase Prize (1st prize), Frontier Science Foundation, Tokyo

2019 Falk Medical Research Trust Catalyst Award, The Medical Foundation at Health Resources, MA

2019 Research Award in the Natural Sciences, The Mitsubishi Foundation, Tokyo

2019 Young Scientist Prize (1st prize), Japanese Association of Medical Sciences, Nagoya

2019 Japan Academy Medal, Japan Academy, Tokyo

2019 Research Award, Takeda Science Foundation, Tokyo

2018 JSPS Prize of the Japan Society for the Promotion of Science, Tokyo

2017 Young Scientist Prize, The Japan Agency for Medical Research and Development (AMED), Tokyo

2017 NISTEP Award, National Institute of Science and Technology Policy, Tokyo

2016 Robertson Investigator Award, New-York Stem Cell Foundation, NY

2016 WIRED Audi INNOVATION AWARD 2016, Tokyo

2016 Young Scientists’ Prize, Minister of Education, Culture, Sports, Science and Technology of Japan

2015 Baelz Prize, Boehringer Ingelheim, Tokyo

2015 BD Stem Cell Grant, BD, US

2015 Umehara Prize, Yokohama Medical Research Promotion Foundation, Yokohama

2014 Science AAAS, 10 breakthrough of the year, 2013

2014 Discover magazine, Top 5 science stories of 2013

2014 Research innovation award, The Japan Society of Organ Preservation and Medical Biology

2014 Yokohama Igakukai award, Yokohama Igakukai

2014 Research award, Kanae Foundation for the Promotion of Medical Science, Tokyo

2013 Travel Award, International Society for Stem Cell Research 11th annual meeting. Boston, MA

2012 Young Investigator Award, Japanese Society for Regenerative Medicine

2011 Best Oral Presentation Award, 12th Congress of the Asian Society of Transplantation, Korea

2011 Mirai Design Award 2030, Dentsu Inc. & Hakuhodo Inc., Tokyo, Japan

2011 Gold medal, Medical Dean’s Award of Yokohama City University, Japan

2010 Summa cum laude, Yokohama City University, Japan

2008 Presidential Award, Yokohama City University

**Education and Training**

2011 Medical Doctor, Yokohama City University School of Medicine

2018 **Doctor of Philosophy, Regenerative Medicine** Yokohama City University School of Medicine

**Community Leadership Appointments**

2021-current Elected Member, The American Society for Clinical Investigation (ASCI)

2021-current Board of Directors, Japanese Society for Regenerative Medicine (JSRM)

2021-current Editorial Board, Seminars in Liver Disease, IOP publishing

2020-current Advisory Board, Cell Stem Cell (Cell press)

2019-current Editorial Board, Stem Cell Reports (Cell press)

2019-current Editorial Board, Hepatology (AASLD)

2018-2020 Deputy to the Chairman, Japanese Society for Regenerative Medicine (JSRM)

2018-current Board of Directors, International Society for Stem Cell Research (ISSCR)

2018 Professor, Advanced Medical Research Center, Yokohama City University, Japan

2018-current Associate Editor, Stem Journal (IOS Press)

2017 Chief Editor, Special Issue “Organoids”, Experimental Medicine (Yodosha)

2016-current Abstract reviewer (annually) for ISSCR Meeting

2016-current Member, American Association for The Study of Liver Diseases (AASLD)

2014-current Councilor, Japan Society of Organ Preservation and Medical Biology

2014 Visiting Associate Professor, Department of Genetics, Stanford University, USA

2011-current Next-Gen Leader committee, International Society for Stem Cell Research (ISSCR)

2009-current Member, Japanese Society for Regenerative Medicine (JSRM)

Reviewer (most frequent journals listed): NEJM, Nature, Science, Cell Stem Cell, Science Translational Medicine, Stem Cell Reports, Hepatology, Gastroenterology

**Other Positions and Industry Appointments**

2021-current Scientific Founder, EVA Therapeutics, Inc., Osaka, Japan

2021-current Scientific Advisor, Organoid Farm, Inc., Yokohama, Japan

2021-current Advisory Board, Sysmex Corporation, Kobe, Japan

2020-current Co-Scientific Founder and Advisory Board, The Liver Company, Inc, CA, USA

2019-current External AI Ethics Advisory Board, FUJITSU, Inc, Tokyo, Japan

2018-current Co-scientific Founder, Organoid Neogenesis Laboratory, Inc., Yokohama, Japan

2018-current Scientific Founder, Shokuno-Okusuri Inc, Inc., Tokyo, Japan

2015-current Advisory Board, Healios, K.K., Tokyo, Japan

Consultation Merck & Co., Takeda Pharmaceuticals, Gilead Sciences, INSITRO and others.

**Interviews and Distinguished Features:**

2021 Interviewed in **Nature** highlighted in featured article, entitled *‘*[*The rise of the assembloid’*](https://www.nature.com/articles/d41586-021-02628-x).

2021 Featured in **37 news media** including **The Economist**, **New York Times**, **Science** *associated with Okabe et al. MED, 2021.*

2021 Interviewed in **Drug Target Review,** *entitled ‘*[*Drug development in stem cell-derived liver organoid models*](https://www.drugtargetreview.com/article/93155/drug-development-in-stem-cell-derived-liver-organoid-models/)*’.*

2021 Featured in **Stephen Colbert show,** *associated with Okabe et al. MED, 2021.*

2021 Appeared in NHK science program “**Humanience**”: Nature, 2019 paper was highlighted as a main program

2021 Interviewed in *Boston University News Service,* entitled ‘[*Stem cells might be key to more sustainable animal agriculture, researchers say’*](https://bunewsservice.com/stem-cells-might-be-key-to-more-sustainable-animal-agriculture-researchers-say/)

2021 Interviewed in **Nature** highlighted in featured article, entitled ‘[*The mini lungs and other organoids helping to beat COVID*](https://www.nature.com/articles/d41586-021-01395-z)’.

2021 Interviewed in **Nature Biotechnology** highlighted in featured article, entitled ‘[*Voices of biotech research*](https://www.nature.com/articles/s41587-021-00847-1)’.

2020 Appeared in **NHK World Special Episode**: [*The Sky's the Limit! - Takanori Takebe and iPS Cell Research*](https://www3.nhk.or.jp/nhkworld/en/tv/scienceview/20210310/2015254/)

2019 Interviewed in **Nature Reviews Gastroenterology and Hepatology** highlighted in article by Hugh Thomas: [*Organoid modelling of NAFLD*](https://www.nature.com/articles/s41575-019-0181-3), doi.org/10.1038/s41575-019-0181-3

2019 Interviewed in **Nature Medicine** article, entitled ‘[*Creativity for a cure’*](https://www.nature.com/articles/s41591-019-0471-x).

2017 Interviewed in **Science** article, entitled ‘[*Mini-livers reveal fine details of organ development*](https://www.science.org/doi/full/10.1126/science.356.6343.1109)’

2017 Interviewed in **Cell Stem Cell** article, entitled ‘[*Advances in Organoid Technology: Hans Clevers, Madeline Lancaster, and Takanori Takebe*](https://www.sciencedirect.com/science/article/pii/S1934590917301790)’

2016 Interviewed in **Nature** article by Cassandra Willyard ‘[*The boom in mini stomachs, brains, breasts, kidneys and more- RISE OF THE ORGANOIDS*](https://www.nature.com/articles/523520a)*’*

2015 Commented in **Nature Methods** written by Nicole Rusk ‘[*Cell biology: Reproducibly generating organ buds in vitro*](https://www.nature.com/articles/nmeth.3470#:~:text=Coculture%20of%20three%20cell%20types,generation%20of%20functional%20organ%20buds.&text=They%20saw%20that%20MSCs%20contributed,that%20substrate%20stiffness%20influenced%20condensation.)’

2014 Interviewed to highlight the goals of **Solving Organ Shortage** and published in Methuselah Foundation

2013 Interviewed in **Nature** article by Monya Baker: [*Miniature human liver grown in mice*](https://www.nature.com/articles/nature.2013.13324), Nature doi:10.1038/nature.2013.13324, 3 July, 2013.

2013 Highlighted as **Science Breakthrough of the Year 2013**: [*Dishing Up Mini-Organs*](https://www.science.org/lookup/doi/10.1126/science.342.6165.1436-b), doi: 10.1126/science.342.6165.1436-b

2013 Interviewed in **The Economist**: Charlotte Howard: Stem-cell therapies Prometheus unbound

2013 Interviewed in **Nature Reviews Gastroenterology and Hepatology** highlighted in article by Katrina Ray: [*Functional miniature human liver generated from stem cells*](https://www.nature.com/articles/nrgastro.2013.128), doi:10.1038/nrgastro.2013.128

2012 Interviewed in **Nature** article by David Cyranoski: [*Rudimentary liver grown in vitro*](https://www.nature.com/articles/nature.2012.10848#:~:text=Japanese%20scientists%20coax%20pluripotent%20cells,like%20tissue%20in%20a%20dish.), doi:10.1038/nature.2012.10848, 20 Jun, 2012

2012 Research Highlight in **Newton** “*Future of iPS cells*”

**Research & Scholarly activities**:

Brief description of Research & Scholarly activities:

The long-term vision of Takebe Lab is to move medicine into a new dimension, so-called “My Medicine”, that provides highly personalized solution to direct people towards a better life. By integrating innovation in multiple research directions, with stem cell and organoids play pivotal roles, we are dedicated to continued evolving, alleviating and treating humankind, today and in the future.

The mission of our laboratories is to utilize our basic research and discovery platforms to frame next-gen medicine with three major areas of interests:

(1) model and manipulate humanity in model systems
(2) understand variations and deviations of humanity
(3) prevent, alleviate and treat diseases of humanity

Some of our fundamental capabilities includes:

* human stem cell and organoid culture
* animal model system
* chemical and forward-genetic screening
* gene editing and single cell genomics
* intravital 4D imaging
* robotics and automation
* design and art

**Grants and Contracts:**

Publications

**Peer reviewed original articles (\*Corresponding author):**

1. Lansing F, Mukhametzyanova L, Rojo-Romanos T, Iwasawa K, Kimura M, Paszkowski-Rogacz M, Karpinski J, Grass T, Sonntag J, Schneider P, Güneş C, Hoersten J, Schmitt L, Rodriguez-Muela N, Knöfler R,**Takebe T**, Buchholz F: Correction of a Factor VIII genomic inversion with designer-recombinases. ***Nature Communications***,in press.
2. Dunn A, Cai Y, Iwasawa K, Kimura M, **Takebe T**\*: Synthesis and Application of POLYseq for Sample Pooling in Single-Cell RNAseq. ***STAR Protocols*,** *in press*.
3. Naraoka Y, Mabuchi Y, Yoneyama Y, Suto E.G, Hisamatsu D, Ikeda M, Ito R, Nakamura T, **Takebe T**, Akazawa C. Isolation and Characterization of Tissue Resident CD29-Positive Progenitor Cells in Livestock to Generate a Three-Dimensional Meat Bud. ***Cells****, in press*.
4. Okabe R, Chen-Yoshikawa T-Y, Yoneyama Y, Yokoyama Y, Tanaka S, Yoshizawa A, Thompson W-L, Kannan G, Kobayashi E, Date H, **Takebe T**\*. Mammalian Enteral Ventilation Ameliorates Respiratory Failure, ***MED***, 2(6):773-783, 2021.
	* Highlighted in [*NYTimes*](https://www.nytimes.com/2021/05/14/science/rectum-breathing-oxygen.html)*,* [*Economist*](https://www.economist.com/science-and-technology/2021/05/20/anal-oxygen-administration-may-save-lives)*,* [*Science*](https://www.sciencemag.org/news/2021/05/mammals-can-breathe-through-their-intestines)*,* [*Smithsonian Magazine*](https://www.smithsonianmag.com/smart-news/bottoms-anally-delivered-oxygen-keeps-pigs-and-mice-alive-180977767/)*,* [*NYPost*](https://nypost.com/2021/05/15/japanese-scientists-say-breathing-through-rectums-saved-mice/)*,* [*National Geographic*](https://www.nationalgeographic.com.es/ciencia/algunos-mamiferos-son-capaces-respirar-por-ano_16927)*,* [*TrontoStar*](https://www.parrysound.com/news-story/10487345-researchers-have-developed-a-treatment-that-could-potentially-save-lives-in-the-next-pandemic-breathing-through-your-butt/), and the others. Selected as **Cover Article**.
5. Dunn A, Cai Y, Iwasawa K, Kimura M, **Takebe T**\*: POLYseq: A poly (ß-amino ester)-based vector for multifunctional cellular barcoding. ***Stem Cell Reports*,** 16(9), 2149-2158, 2021.
6. Koike H, Iwasawa K, Ouchi R, Maezawa M, Kimura M, Kodaka A, Thompson W-L, **Takebe T**\*, Engineering human hepato-biliary-pancreatic organoids from pluripotent stem cells, ***Nature Protocols***, **16**, 919–936, 2021.
7. Dobrindt K, Hoagland DA, Seah C, Kassim B, O'Shea CP, Iskhakova M, Fernando MB, Deans PJM, Powell SK, Javidfar B, Murphy A, Peter C, Møeller R, Garcia MF, Kimura M, Iwasawa K, Crary J, Kotton DN, **Takebe T**, Huckins LM, tenOever BR, Akbarian S, Brennand KJ. Common genetic variation in humans impacts in vitro susceptibility to SARS-CoV-2 infection. ***Stem Cell Reports*** 6(3):505-518, 2021. PMCID: PMC7523109 doi: https://doi.org/10.1101/2020.09.20.300574
8. Hayashi H, Osaka S, Sakabe K, Fukami A, Kishimoto E, Aihara E, Sabu Y, Mizutani A, Kusuhara H, Naritaka N, Zhang W, Huppert S-S, Sakabe M, Nakamura T, Hu Y-C, Mayhew C, Setchell K, **Takebe T**, Asai A, Modeling Human Bile Acid Transport and Synthesis in Stem Cell-Derived Hepatocytes with a Patient-Specific Mutation. ***Stem Cell Reports*,** 16(2), 309-323, 2021.
9. Fang H, Geng S, Hao M, Chen Q, Liu M, Liu C, Tian Z, Wang C, **Takebe T**, Guan J, Chen Y, Guo Z, He W, Diao J. Simultaneous Zn 2+ tracking in multiple organelles using super-resolution morphology-correlated organelle identification in living cells. ***Nature Communications***, 12 (1) 1-14, 2021
10. Shinozawa T, Kimura M, Yuqi C, Saiki N, Yoneyama Y, Ouchi R, Koike H, Koido M, Zhang R-R, Dunn A, Ferguson A, Togo S, Lewis K, Thompson W,Asai A, **Takebe T\***: High-Fidelity Drug Induced Liver Injury Screen Using Human iPSC Liver Organoids. ***Gastroenterology***,160, 3, 831-846.e10, 2021.
11. Sekine K, Ogawa S, Tsuzuki S, Kobayashi T, Ikeda K, Nakanishi N, Takeuchi K, Kanai E, Otake Y, Okamoto S, Kobayashi T, **Takebe T**, Taniguchi H. Generation of human induced pluripotent stem cell-derived liver buds with chemically defined and animal origin-free media. ***Scientific reports***. 10(1), 1-13, 2020
12. Koido M, Kawakami E, Fukumura J, Noguchi Y, Ohori M, Nio Y, Nicoletti P, Aithal G, Daly, A, Watkins P, Anayama H, Dragan Y, Shinozawa T and **Takebe T\***. Polygenic architecture informs potential vulnerability to drug-induced liver injury. ***Nature Medicine***, 26, 1541–1548, 2020. PMID: 32895570
	* Featured at [*BioWorld*](https://www.bioworld.com/articles/497559-organoids-enable-due-diligence-on-liver-toxicity?v=preview)and[*Genetic Engineering & Biotechnology News (GEN)*](https://www.genengnews.com/news/polygenic-risk-score-predicts-drug-induced-liver-injury/).
13. Wendy T and **Takebe T\***: Generation of multi-cellular human liver organoids from pluripotent stem cells. ***Methods in Cell Biology***.159:47-68, 2020. PMID: 32586449
14. Han L, Koike H, Chaturvedi P, Kishimoto K, Iwasawa K, Giesbrecht K, Witcher P, Eicher A, Nasr T, Haines L, Shannon J, Morimoto M, Wells J, **Takebe T,** Zorn A: Single cell transcriptomics reveals a signaling roadmap coordinating endoderm and mesoderm lineage diversification during foregut organogenesis, ***Nature Communications***, **1,**4158 (2020). https://doi.org/10.1038/s41467-020-17968-x PMID: 32855417
15. Kobayashi N, Togo S, Matsuzaki T, Hashiseko K, Kawamura R, Suganuma M, Nakabayashi S, Yoneyama Y, Ouchi R, **Takebe T**, Yoshikawa H-Y. Stiffness distribution analysis in indentation depth direction reveals clear mechanical features of cells and organoids by using AFM. ***Applied Physics Express***, 2020.
16. Okabe R, Yoshikawa T, Yoshizawa A , Hirashima T, Saito M, Date H , **Takebe T\*** : Orthotopic Foetal Lung Tissue Direct Injection Into Lung Showed a Preventive Effect Against Paraquat-Induced Acute Lung Injury in Mice, ***European Journal of Cardio-Thoracic Surgery***, 58(3):638-645, 2020. PMID: 32259837
17. Liu T, Zhou L, Yang K, Iwasawa K, Kadekaro AL, **Takebe T**, Andl T, Zhang Y. The beta-catenin/YAP signaling axis is a key regulator of melanoma-associated fibroblasts. ***Signal Transduct Target Therapy***, 4:63, 2019. PMCID: PMC6928146
18. Fang H, Yao S, Chen Q, Liu C, Cai Y, Geng S, Bai Y, Tian Z, Zacharias AL, **Takebe T**, Chen Y, Guo Z, He W, Diao J. De Novo-Designed Near-Infrared Nanoaggregates for Super-Resolution Monitoring of Lysosomes in Cells, in Whole Organoids, and in Vivo. ***ACS Nano*** 2019. PMCID: PMC - In Process
19. Koike H, Iwasawa K, Ouchi R, Maezawa M, Giesbrecht K, Saiki N, R-R, Ferguson A, Kimura M , Wendy T, Wells J, Zorn A, and **Takebe T\***: Modeling human hepato-biliary-pancreatic organogenesis from the foregut-midgut boundary. ***Nature***, 574(7776):112-116, 2019. (\***Corresponding author**)
	* [*Highlighted as 5 Most Significant Discoveries of FY2020 from Cincinnati Children's*](https://www.prnewswire.com/news-releases/5-most-significant-discoveries-of-fy2020-from-cincinnati-childrens-301250937.html)*, Highlighted in* [*News Medical*](https://www.news-medical.net/news/20190927/Functional-three-organoid-stem-cell-system-could-lead-to-unprecedented-advances-for-precision-medicine.aspx) *and* [*WVXU*](https://www.wvxu.org/local-news/2018-06-11/miniature-human-organs-are-being-made-in-a-lab-at-cincinnati-childrens) *radio.*
20. Ouchi R, Togo S, Kimura M, Shinozawa T, Koido M, Koike H, Thompson W, Karns R, Mayhew C, McGrath PS, McCauley HA, Zhang RR, Lewis K, Hakozaki S, Ferguson A, Saiki N, Yoneyama Y, Takeuchi I, Mabuchi Y, Akazawa C, Yoshikawa HY, Wells JM, **Takebe T\***: Modeling Steatohepatitis in Humans with Pluripotent Stem Cell-Derived Organoids. ***Cell Metabolism***, 30(2):374-384, 2019 (\*Correspondence) PMID: 31155493
	* [*Highlighted on NIH Director’s Blog*](https://directorsblog.nih.gov/?s=Takeb)*, Highlighted at* [*BioTechniques*](https://www.biotechniques.com/cell-and-tissue-biology/miniaturizing-models-of-liver-disease/)*.*
21. Matsuzaki T, Matsumoto S, Kasai T, Yoshizawa E, Okamoto S, Yoshikawa H-Y., Taniguchi H and **Takebe T\***. Defining lineage-specific membrane fluidity signatures that regulate adhesion kinetics. ***Stem Cell Reports***, 11 (4), 852-860, 2018. (**\*Corresponding author & Lead contact**) PMID: 30197117
22. Nie YZ, Zheng YW, Miyakawa K, Murata S, Zhang RR, Sekine K, Ueno Y, **Takebe T**, Wakita T, Ryo A, Taniguchi H. Recapitulation of hepatitis B virus-host interactions in liver organoids from human induced pluripotent stem cells. ***EBioMedicine***. pii: S2352-3964(18)30300-1, 2018. PMID: 30120080
23. Ayabe H, Anada T, Kaomoya T, Sato T, Kimura M, Yoshizawa E, Kikuchi S, Ueno Y, Sekine K, Camp J-G, Treutlein T, Ferguson A, Suzuki O, **Takebe T\*** and Taniguchi. Oxygen-Dependent Intercellular TGFB Signaling Regulates Human iPSC-Derived Liver Bud Differentiation. ***Stem Cell Reports***, 11(2), 306-316, 2018. (**\*Corresponding author & Lead contact**) PMID: 30033085
24. Kimura M, Azuma M, Zhang R-R, Thompson W, Mayhew C, **Takebe T\***: Digitalized human organoid for wireless phenotyping. ***iScience***, 4, 294–301, 2018(**\*Corresponding author & Lead contact**). PMID: 30240748
	* Featured at [*PhysicsWorld*](https://physicsworld.com/a/human-organoids-go-digital/) and [*WVXU*](https://www.wvxu.org/local-news/2018-06-11/miniature-human-organs-are-being-made-in-a-lab-at-cincinnati-childrens) radio
25. Takahashi Y, **Takebe T**, Taniguchi H. Methods for Generating Vascularized Islet-Like Organoids Via Self-Condensation. ***Curr Protoc Stem Cell Biol***. 45(1): e49. 2018.PMID: 30040240
26. Rao MS, Pei Y, Garcia TY, Chew S, Kasai T, Hisai T, Taniguchi H, **Takebe T**, Lamba DA, Zeng X. Illustrating the potency of current Good Manufacturing Practice-compliant induced pluripotent stem cell lines as a source of multiple cell lineages using standardized protocols. ***Cytotherapy***. 20(6):861-872, 2018. PMID: 29793831.
27. Takahashi Y, Sekine K, Kin T, **Takebe T\***, Taniguchi H: Self-Condensation Culture Enables Vascularization of Tissue Fragments for Efficient Therapeutic Transplantation. ***Cell Reports***, 23(6):1620-1629, 2018. Selected for Cover (**\*Corresponding author & Lead contact**). PMID: 29742420
	* Selected as Cover Work of *Cell Reports and highlighted at* [*TechnologyNetworks*](https://www.technologynetworks.com/cell-science/news/tissue-engineered-human-pancreas-cells-successfully-treat-diabetic-mice-301635) *and* [*Genetic Engineering and Biotechnology News (GEN)*](file:////Users/takanoritakebe/Takebe%20Lab%20Dropbox/Takebe%20Takanori/Drop%20Desktop/Bibliography/CV%20and%20Biosketch/Latest/CCHMC%20CV/Genetic%20Engineering%20and%20Biotechnology%20News%20.%20Transplanted%20Human%20Islets%20Grow%20Blood%20Vessels%20and%20Secrete%20...%20.%20...%20of%20which%20there%20are%2079%2C000%20new%20diagnoses%20per%20year%2C)*.*
28. Zhang R-R, Koido M, Tadokoro T, Ouchi R, Matsuno T, Ueno Y, Sekine K, **Takebe T\***, Taniguchi H: Human iPSC-Derived Posterior Gut Progenitors Are Expandable and Capable of Forming Gut and Liver Organoids. ***Stem Cell Reports***, 10 (3), 780-793, 2018. (**\*Corresponding author & Lead contact**) PMID: 29429958
	* Selected as Best of *Stem Cell Reports* 2018
29. **Takebe T\***, Sekine K, Kimura M, Yoshizawa E, Funayama S, Nakanishi N, Hisai T, Kobayashi T, Mori A, Ayano S, Ejiri Y, Amimoto N, Yamazaki Y, Ogawa S, Ishikawa M, Kiyota Y, Ueno Y, Taniguchi H: Massive and Reproducible Production of Liver Buds Entirely from Human Pluripotent Stem Cells. ***Cell Reports***, 21(10):2661-2670, 2017. (**\*Corresponding author& Lead contact**) PMID: 29212014
30. Camp JG, Sekine K, Gerber T, Loeffler-Wirth H, Binder H, Gac M, Kanton S, Kageyama J, Damm G, Seehofer D, Belicova L, Bickle M, Barsacchi R, Okuda R, Yoshizawa E, Kimura M, Ayabe H, Taniguchi H, **Takebe T\***, Treutlein B\*: Multilineage communication regulates human liver bud self-organization from pluripotency. ***Nature***, 546, 533–534, 2017. (**\*Joint corresponding authors**) PMID: 28614297
	* Preview articles published at[*Science*](https://www.science.org/doi/abs/10.1126/science.356.6343.1109) *and* [*Cell Systems*](https://www.cell.com/cell-systems/fulltext/S2405-4712%2817%2930293-4)*.*
31. Koike H, Zhang R-R, Sekine K, Ueno Y, Zheng Y-W, **Takebe T\***, Taniguchi H\*: Nutritional modulation of mouse and human liver bud growth through a branched-amino acid metabolism. ***Developmen***t, 15;144(6):1018-102, 2017. PMID: 28219950
32. Sekine K, **Takebe T**, Taniguchi H: Liver Regeneration Using Cultured Liver Bud. ***Methods Mol Biol***. 1597:207-216, 2017. PMID: 28361320
33. Asai A, Aihara E, Mizuochi T, Phelan K, Mayhew C, Shivakumar P, **Takebe T**, Wells J, Bezerra J: Paracrine signals regulate human liver organoid maturation from induced pluripotent stem cells. ***Development***, 15;144(6):1056-1064, 2017. PMID: 28275009
34. Ito K, Sakuma S, Kimura M, **Takebe T**, Kaneko M, Arai F. Temporal Transition of Mechanical Characteristics of HUVEC/MSC Spheroids Using a Microfluidic Chip with Force Sensor Probes. ***Micro machines***, 7(12), 221, 2016. PMID N/A (robotics journal)
35. Kagimoto S, **Takebe T\***, Kobayashi S, Yabuki Y, Hori A, Hirotomi K, Mikami T, Uemura T, Maegawa J, Taniguchi H: Auto transplantation of monkey ear perichondrium-derived progenitor cells for cartilage reconstruction. ***Cell transplantation***. 2016;25(5):951-962. (**\*Joint corresponding authors**) PMID: 26884211
36. **Takebe T\***, Enomura M, Yoshizawa E, Kimura M, Koike H, Ueno Y, Matsuzaki T, Yamazaki T, Toyohara T, Osafune K, Nakauchi H, Yoshikawa H-Y, Taniguchi H: Vascularized and Complex Organ Buds from Diverse Tissues Via Mesenchymal Cell-Driven Condensation. ***Cell Stem Cell***, 16(5): 556-565, 2015. (\***Corresponding author**) PMID: 25891906
	* Best of Cell Stem Cell 2015, Selected as Cover work for *Cell Stem Cell,* Preview article published at[*Cell Stem Cell*](https://www.cell.com/cell-stem-cell/fulltext/S1934-5909%2815%2900176-9?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS1934590915001769%3Fshowall%3Dtrue)*,* [*Nature Methods*](https://www.nature.com/articles/nmeth.3470#:~:text=Coculture%20of%20three%20cell%20types,generation%20of%20functional%20organ%20buds.&text=They%20saw%20that%20MSCs%20contributed,that%20substrate%20stiffness%20influenced%20condensation.)*.*
37. Lee S, Takahashi Y, Lee KM, Mizuno M, Nemono JG, **Takebe T**, Lee JI: Viability and functional assessment of murine pancreatic islets after transportation between Korea and Japan. ***Transplant Proc,*** 47(3):738-41, 2015. PMID: 25891722
38. **Takebe T\***, Kobayashi S, Suzuki H, Mizuno M, Chang YM, Yoshizawa E, Kimura M, Hori A, Asano J, Maegawa J, Taniguchi H: Transient vascularization of transplanted human adult–derived progenitors promotes self-organizing cartilage. ***Journal of Clinical Investigation***, 124(10):4325-34, 2014. (**\*Corresponding author**) PMID: 25202983
39. Zhang RR, **Takebe T\***, Miyazaki L, Takayama M, Koike H, Kimura M, Enomura M, Zheng YW, Sekine K, Taniguchi H: Efficient hepatic differentiation of human induced pluripotent stem cells in a three-dimensional microscale culture. ***Methods Mol Biol***, 1210:131-41, 2014. doi: 10.1007/978-1-4939-1435-710. (**\*Corresponding author**) PMID: 25173165
40. **Takebe T\***, Zhang RR, Koike H, Kimura M, Yoshizawa E, Enomura M, Sekine K, Taniguchi H\*: Generation of a vascularized and functional human liver from an iPSC-derived organ bud transplant. ***Nature Protocols*** 9, 396–409, 2014. (**\* Corresponding author**) PMID: 24457331
41. Nam BM, Kim BY, Jo YH, Lee S, Nemeno JG, Yang W, Lee KM, Kim H, Jang IJ, **Takebe T,** Lee JI : Effect of cryopreservation and cell passage number on cell preparations destined for autologous chondrocyte transplantation. ***Transplant Proc,*** 46(4):1145-9, 2014. PMID: 24815147
42. Koike H, Ouchi R, Ueno Y, Nakata S, Obana Y, Sekine K, Zheng YW, **Takebe T**, Isono K, Koseki H, Taniguchi H: Polycomb Group Protein Ezh2 Regulates Hepatic Progenitor Cell Proliferation and Differentiation in Murine Embryonic Liver. ***PloS one*** 9 (8), e104776, 2014 PMID: 25153170
43. Kim BY, Nam BM, Lee KM, Jo YH, Nemeno JG, Yang W, Lee S, Kim H, Jang IJ, **Takebe T**, Lee JI: Effect of Preservation Conditions on Cartilage Tissue for Cell Transplantation. ***Transplant Proc,*** 46 (4), 1145-1149, 2014. PMID: 24815148
44. Jo YH, Jang IJ, Nemeno JG, Lee S, Kim BY, Nam BM, Yang W, Lee KM, Kim H, **Takebe T**, Kim YS, Lee JI: Artificial Islets from Hybrid Spheroids of Three Pancreatic Cell Lines. ***Transplant Proc,*** 46 (4), 1156-1160, 2014. PMID: 24815150
45. Yang W, Lee S, Jo YH, Lee KM, Nemeno JG, Nam BM, Kim BY, Jang IJ, Kim HN, **Takebe T**, Lee JI: Effects of Natural Cartilaginous Extracellular Matrix on Chondrogenic Potential for Cartilage Cell Transplantation. ***Transplant Proc,*** 46 (4), 1247-1250, 2014. PMID: 24815172.
46. Zheng YW, Nie YZ, Tsuchida T, Zhang, Aoki K, Sekine K, Ogawa M, **Takebe T**, Ueno Y, Sakakibara H, Hirahara F, Taniguchi H: Evidence of a Sophisticatedly Heterogeneous Population of Human Umbilical Vein Endothelial Cells. ***Transplant Proc,*** 46 (4), 1251-1253, 2014. PMID: 24815173
47. Sekine K, **Takebe T**, Taniguchi H: Fluorescent Labeling and Visualization of Human Induced Pluripotent Stem Cells with the Use of Transcription Activator–like Effector Nucleases. ***Transplant Proc,*** 46 (4), 1205-1207, 2014. PMID: 24815161
48. Zheng YW, Tsuchida T, Shimao T, Li B, **Takebe T**, Zhang RR, Sakurai Y, Ueno Y, Sekine K, Ishibashi N, Imajima M, Tanaka T, Taniguchi H: The CD133+CD44+ Precancerous Subpopulation of Oval Cells Is a Therapeutic Target for Hepatocellular Carcinoma. ***Stem Cells and Development***, 23(18):2237-49, 2014. doi:10.1089/scd.2013.0577. PMID: 24804872
49. Koike H, Ueno Y, Naito T, Shiina T, Ouchi R, Obana Y, Mori M, Sekine K, **Takebe T**, Zheng YW, Isono K, Koseki H, Taniguchi H: Ring1B Promotes Hepatic Stem/Progenitor Cell Expansion via Simultaneous Suppression of Cdkn1a and Cdkn2a. ***Hepatology***, 60(1):323-33, 2014. PMID: 24497168
50. Tsuchida T, Zheng YW, Zhang RR, **Takebe T**, Ueno Y, Sekine K, Taniguchi H: The development of humanized liver with Rag1 knockout rats. ***Transplant Proc,*** 46(4):1191-1193, 2014. PMID: 24815157
51. Okuda R, Sekine K, Hisamatsu D, Ueno Y, **Takebe T**, Zheng YW, Taniguchi H: Tropism of cancer stem cells to a specific distant organ. ***In Vivo***. 28 (3), 361-365, 2014. PMID: 24815839
52. Mizuno M, **Takebe T\***, Kobayashi S, Kimura S, Masutani M, Lee S, Jo YH, Lee JI, Taniguchi H\*: Elastic cartilage reconstruction by transplantation of cultured hyaline cartilage-derived chondrocytes. ***Transplant Proc***, 46 (4), 1217-1221, 2014. (**\*Corresponding author**) PMID: 24815164
53. Zhang RR **Takebe T\***, Sekine K, Koike H, Zheng YW Taniguchi H\*: Identification of Proliferating Human Hepatic Cells from Human Induced Pluripotent Stem Cells. ***Transplant Proc***, 46 (4), 1201-1204, 2014. (\*Corresponding author) PMID: 24815160
54. **Takebe T\***, Koike N\*, Sekine K, Fujiwara R, Amiya T, Zheng YW, Taniguchi H\*: Engineering of human hepatic tissue with functional vascular networks. ***Organogenesis***, 10 (2), 0-1. (**\*Corresponding author**) PMID: 24451152
55. Takahashi Y, **Takebe T\***, Enomura M, Koike N, Lee S, Nemeno JG, Sekine K, Lee JI, Taniguchi H\*: High-resolution intravital imaging for monitoring the transplanted islet in mice. ***Transplant Proc***, 46 (4), 1166-1168, 2014. (**\* Corresponding author**) PMID: 24815152
56. Enomoto Y, Enomura M, **Takebe T\***, Mitsuhashi Y, Kimura M, Yoshizawa E, Taniguchi H\*: Self-Formation of Vascularized Hepatic Tissue from Human Adult Hepatocyte. ***Transplant Proc*** 46(4):1243-6. 2014. (**\*Corresponding author**) PMID: 24815171
57. **Takebe T\***, Sekine K, Enomura M, Koike H, Zhang RR, Ueno Y, Zheng YW, Koike N, Aoyama S, Adachi Y, Taniguchi H\*: Vascularized and functional human liver from an iPSC-derived organ bud transplant. ***Nature***, 499, 481–484, 2013. (**\*Corresponding author**) PMID: 23823721
	* Elected as Top discovery of 2013 at *Discovery magazine* & *Science AAAS* Breath through of the year 2013, Featured in *The Economist, New York Times, BBC and the others,* Preview article published at *Nature, Cell Stem Cell, Hepatology, Gastroenterology*
58. Zhang RR**1**\*, **Takebe T**1**\***, Miyazaki L, Takayama M, Koike H, Kimura M, Enomura M, Zheng YW, Sekine K, Taniguchi H: Efficient Hepatic Differentiation of Human Induced Pluripotent Stem Cells In A Three-Dimensional Microscale Culture. ***Stem Cells and Tissue Repair***, 1210:131-41, 2014. (**1 Equal contribution, \*Corresponding author**) PMID: 25173165
59. Mizuno M, Kobayashi S, **Takebe T**, Kan H, Yabuki Y, Matsuzaki T, Yoshikawa HY, Nakabayashi S, JeongIk L, Maegawa J, Taniguchi H: Reconstruction of joint hyaline cartilage by autologous progenitor cells derived from ear elastic cartilage. ***Stem Cells***, 32(3): 816-21, 2014. PMID: 24038678
60. Tanaka H\*, Tanaka S\*, Sekine K\*, Kita S, Okamura A, **Takebe T,** Zheng YW, UenoY, Tanaka J, Taniguchi H (\*; Equal contribution): Efficient generation of pancreatic β-cell spheroids in a simulated microgravity culture system. ***Biomaterials***, S0142-9612, 2013. PMID: 23642538
61. **Takebe T**, Kobayashi S, Kan H, Suzuki H, Mizuno M, Yabuki Y, Adegawa T, Yoshioka T, Tanaka J, Maegawa J, Taniguchi H: Human elastic cartilage engineering from cartilage progenitor cells using rotating wall vessel bioreactor. ***Transplant Proc***, 44 (4), 1158-1161, 2012. PMID: 22564652
62. **Takebe T**, Sekine K, Suzuki Y, Enomura M, Tanaka S, Ueno Y, ZhengYW, Taniguchi H: Self-organization of human hepatic organoid by recapitulating organogenesis in vitro. ***Transplant Proc***, 44 (4), 1018-1020, 2012. PMID: 22564614
63. **Takebe T**, Koike N, Sekine K, Enomura M, Ueno Y, Zheng YW, Taniguchi H: Generation of human vascular network in vitro. ***Transplant Proc***, 44 (4), 1130-1133, 2012. PMID: 22564644
64. Sekine K, **Takebe T**, Suzuki Y, Kamiya A, Nakauchi H, Taniguchi H: Highly efficient generation of definitive endoderm lineage from human induced pluripotent stem cells. ***Transplant Proc***, 44 (4), 1127-1129, 2012. PMID: 22564643
65. Koike H\*, Kubota K\*, Sekine K\*, **Takebe T**, Ouchi R, Zheng YW, Ueno Y, Tanigawa N, Taniguchi H. (\*; Equal contribution): Establishment of automated culture system for murine induced pluripotent stem cells. ***BMC biotechnology***, 12 (1), 81, 2012. PMID: 23127273
66. Kobayashi S\*, **Takebe T\***, Inui M, Iwai S, Kan H, Zheng YW, Maegawa J, Taniguchi H. (**\*Equal contribution**): Reconstruction of human elastic cartilage by a CD44+ CD90+ stem cell in the perichondrium, 108(35):14479-84, 2011. PMID: 21836053

**Review articles:**

1. Al-Reza H, Okabe R, **Takebe T\***. Organoid Transplant Approaches for the Liver. ***Transplant International***, in press, 2021.
2. Yoneyama Y, Okabe R, **Takebe T\***. Enteral ventilation technology to combat severe respiratory failure. ***Translational and Regulatory Sciences***, in press, 2021.
3. Iwasawa K, **Takebe T\***. Organogenesis in vitro. ***Current Opinion in Cell Biology*** 73, 84-91, 2021.
4. Marsee A, J M Roos F, M A Verstegen M, HPB Organoid Consortium; Gehart H, Koning E, Lemaigre F, Forbes S, Chuan Peng W, Huch M, **Takebe T**, Vallier L, Clevers H, Van der Laan L, Spee B. Building consensus on definition and nomenclature of hepatic, pancreatic, and biliary organoids. ***Cell Stem Cell.*** 28(5):816-832, 2021. doi: 10.1016/j.stem.2021.04.005.
5. Annabi N, Baker M, Boettiger A, Chakraborty D, Chen Y, Corbett KS, Correia B, Dahlman J, de Oliveira T, Ertuerk A,Yanik MF, Henaff E, Huch M, Iliev ID, Jacobs T, Junca H, Keung A, Kolodkin-Gal I, Krishnaswamy S, Lancaster M,Macosko E, Mart.nez-N..ez MA, Miura K, Molloy J, Cruz AO, Platt RJ, Posey AD Jr, Shao H, Simunovic M, SlavovN, **Takebe T,** Vandenberghe LH, Varshney RK, Wang J. Voices of biotech research. ***Nat Biotechnol***. 39(3):281-286, 2021. doi: 10.1038/s41587-021-00847-1. PMID: 33692517
6. K Lewis, M Yoshimoto, **Takebe T\*:** Fetal liver hematopoiesis: from development to delivery. ***Stem Cell Research & Therapy*** 12 (1), 1-8, 2021.
7. WL Thompson,**Takebe T\***, Human liver model systems in a dish, ***Dev Growth Differ.*** 63(1),47-58, 2021, PMID: 33423319
8. Kawakami E, **Takebe T\***. My Medicine for Drug Induced Liver Injury. ***Journal of Clinical and Experimental Medicine*** 276(6): 640-646, 2021.
9. **Takebe T\***. Street Medical- New Paradigm of Medicine, ***Health Evaluation and Promotion***, 48(1):  57-57, 2021.
10. M Funata, Y Nio, DM Erion, WL Thompson, **Takebe T\***: The promise of human organoids in the digestive system. ***Cell Death & Differentiation***, 1-11, 2020.
11. K Sakabe, **Takebe T**, A Asai. Organoid Medicine in Hepatology. ***Clinical Liver Disease*** 15 (1), 3-8, 2020. PMID 32104569
12. Takayama M, Yoneyama Y, **Takebe T\***. Translational efforts for human organoid research. ***Journal of Clinical and Experimental Medicine*** 274(8): 677-683, 2020.
13. **Takebe T\***: Creativity for a cure. ***Nature Medicine***, (6):868., 2019. (**\* Correspondence**) PMID: 31171868
14. **Takebe T\***, Wells JM \*: Organoids-By-Design. ***Science***, 364 (6444), 956-95, 2019. (**\* Correspondence**) PMID: 31171692
15. Saiki N, Nio Y, Shinozawa T, **Takebe T\***: Novel organoid-based therapy for coagulation deficiency. ***Organ Biology.***  26(3):  55-55, 2019.
16. **Takebe T\***, James M-W, Michael H, Zorn A: Organoid center strategies for accelerating clinical translation. ***Cell Stem Cell***, 22, 6, 806–809, 2018. (**\*Corresponding author**) PMID: 29859171
17. Lewis K, **Takebe T\***: Tumoroid a la carte; path to personalization. ***Hepatology***, 68(3):1189-1191, 2018. (**\*Corresponding author**) PMID: 29457835
18. **Takebe T\***, Zhang B, Milica R\*: Synergistic engineering: Organoids meet organs-on-a-chip. ***Cell Stem Cell***, 21 (3), 297-300, 2017. (**\*Corresponding author**) PMID: 28886364
19. Shinozawa T, Yoshikawa H-Y, **Takebe T\***: Reverse Engineering Organ Buds through Self-Driven Condensation and Organization. ***Developmental Biology*** 2016 Jun 27. pii: S0012-1606(16)30156-7. (**\*Correspondence**). PMID: 27364470
20. Koike H, **Takebe T\***. Generating Mini-Organs in Culture. ***Curr Pathobiol Rep***. 4, 2, 59-68, 2016.
21. Takahashi Y, **Takebe T**, Taniguchi H: Engineering pancreatic tissues from stem cells towards therapy. ***Regenerative Therapy*** 2016(3): 15-23, 1 Mar 2016, doi: 10.1016/j.reth.2016.01.002
22. Rashid T, **Takebe T**, Nakauchi H: Novel strategies for liver therapy using stem cells. ***Gut***, 2015 Jan; 64(1):1-4. Doi:10.1136/gutjnl-2014-307480. Epub 2014Sep 2.
23. Osaki T, Fukuda J, Koike H, **Takebe T\***: Molding process of complex organs and its application to medical transplantation using human iPS cells, ***Experimental Medicine,*** 33(8), 2015.
24. Taniguchi H, **Takebe T**:The creation of functional human liver by the iPS-derived organ primordia transplants. ***SAISHINIGAKU,*** 70(2), 298-315, 2015.
25. Taniguchi H, **Takebe T**: Creation of a functional human liver using iPS cells. ***KANTANSUI*** 70(3), 353-360, 2015.
26. Taniguchi H, **Takebe T**: The creation of human organs by utilizing iPS cells, ***GEKKAN TONYOBYO DIABETES,*** 7(3), 36-41, 2015.
27. Taniguchi H, **Takebe T**: Development strategies for the creation of human organs by utilizing iPS cells, ***Regenerative medicine of Islet***, 11-15, 2015.
28. **Takebe T**, Taniguchi H: Creation of functional human organ using iPS cells. ***Annual Review of*** ***Diabetes, Metabolism, and Endocrine,*** 25-31, 2015.
29. **Takebe T**, Taniguchi H: The creation of human liver based on the artificial structure of iPS cell-derived organ primordia, ***YOKOHAMAIGAKU,*** 65(4), 503-507, 2014.
30. Taniguchi H, **Takebe T**: Artificial reconstruction of human three-dimensional tissues based on the interaction of stem cells and microenvironment, ***Cancer molecular target therapy,*** 12 (3), 66-71, 2014.
31. Takahashi S, **Takebe T**, Taniguchi H: The latest developments of the pancreatic β cell differentiation induction studies using pluripotent stem cells, ***Organ Biology,*** 21(2), 110-118, 2014
32. **Takebe T\***, Taniguchi H: Human iPSC-Derived Miniature Organs: A Tool for Drug Studies. ***Clinical Pharmacology & Therapeutics***. 96(3):310-313 | doi:10.1038/clpt.2014.110. (**\*: Correspondence**)
33. Taniguchi H, **Takebe T**: Realization of human iPSC-organ bud transplantation therapy, ***Gastroenterological Surgery,*** 37 (8), 2014.
34. Taniguchi H, **Takebe T\***: Strategies toward human live regeneration, ***Saishinigaku,*** *69 (3), 100-109, 2014.*
35. **Takebe T**, Taniguchi H: Methods for generating vascularized and functional organ from pluripotent stem cells, ***Experimental Medicine,*** 32 (1), 2014.
36. **Takebe T**, Taniguchi H: Vascularized and functional liver from human iPS cells by recapitulating organogenesis, ***Experimental Medicine***, 32(1), 2014.
37. **Takebe T**, Taniguchi H: “Creation of vascularized and functional organ from human iPS cell”, Vol.20 No.2, 2013, ***Organ Biology***
38. Judee Grace Nemeno-Guanzon, Johan Robert Berg, Mitsuru Mizuno, Soojung Lee, Yong Hwa Jo, Jee Eun Yeo, Bo Mi Nam, Bo Young Kim, Dae-Hyun Kim, Yong-Gon Koh, **Takebe T\*** and Jeong-Ik Lee\*: Towards the advancement of blood vessel tissue engineering. ***International Journal of Tissue Regeneration***, 4(1), 7-11, 2013.
39. **Takebe T**, Taniguchi H: A challenge towards organ generation, ***KAGAKU TO SEIBUTSU***, 51(11), 2013.
40. Sekine K, Takebe T, Enomura M, Matsui C, Tanaka H, Taniguchi H: Regenerative medicine approach as an alternative treatment to islet transplantation. ***Transplant Proc***, 44 (4), 1104-1106, 2012. PMID: 22564636
41. **Takebe T**, Taniguchi H: From cells to organs: Future paradigm of regenerative medicine, ***Organ Biology,*** 19(1), 2012.

**Book / Book Chapter:**

1. **Takebe T**: MyMedicine. ***Journal of Clinical and Experimental Medicine***, 2021.
2. **Takebe T**: Street Medical. ***Nikkei Publishing***, 2020.
3. **Takebe T**, Eiraku M, Sato T: Protocols for Organoid Experiments, ***Experimental Medicine***, 2019.
4. **Takebe T**: The era of Organoid4.0, ***Experimental Medicine***, 2017.
5. Koike H, **Takebe T**: Growing Mini-Organs from Stem Cells. ***Encyclopedia of Molecular Cell Biology and Molecular Medicine***, Wiley-VCH, 2016.
6. Zhang R-R, Koike H, **Takebe T**. Chapter 17. The visualization of human organogenesis from stem cells by recapitulating multicellular interactions. ***Hyper Bio Assembler for 3D Cellular Systems***, Springer, 2015.
7. **Takebe T**,Taniguchi H: Methods for ES･iPS cell experiments, ***Experimental Medicine***, 2014.

Patents and pending applications:

1. **Takebe T**, Al-Reza H. 2021-0603 – Maturing liver organoid and use for hyperbilirubinemia modeling, disclosed on June 10, 2021
2. **Takebe T**, Yoneyama Y. Prediction of liver fibrosis. Patent Application No. 2021-129760. Aug6, 2021
3. **Takebe T**, Okabe R, Yoneyama Y, Yoshikawa T, Date H. Methods for respiratory support. Patent Application No. 2020-084395 May-13, 2020, PCT/JP2021/018213. May13, 2021
4. Kanayama M, **Takebe T**, Nishii S, Kuwahara T, Uehira T, Usuha R, Kiriyama T. Game and Program. Patent Application No. 2020-183107, Oct 13, 2020.
5. **Takebe T**, Saiki N. Parathyroid Organoids. Patent Application No. 2020-162912, Sep-29, 2020
6. **Takebe T,** Saiki N. Endothelial cell differentiation. Patent application No.2021-075780, Apr28, 2021.
7. **Takebe T,** Saiki N. Cell cluster differentiation Patent application No. 2021-37339, Apr28, 2021.
8. **Takebe T,** Saiki N. Perfusion culture. Patent application No. 2021-37339 Aug6, 2020, PCT/JP2021/ 21478, July 6, 2021
9. **Takebe T,** Saiki N. Compound assay system. PCT/JP2021/021539
10. **Takebe T**, Cai Y, Lansing F. 2020-0602 – Platelet Transfer, disclosed on June 5, 2020
11. **Takebe T**, Kimura M 2020-0605 – Hepatic Insulin Resistance in Organoids, disclosed on June 12, 2020 (U.S. Provisional Patent Application No. 63/042,997, filed on June 23, 2020, pending)
12. Akazawa C, Suto E, Mabuchi Y, **Takebe T**  ‘Stem cell isolation method’, Patent application No.2020-079272(4/28/2020)
13. **Takebe T**, Saiki N, Kawakami E, ‘Production of Factor VIII’, PCT/JP2020/007886, Feb-27, 2020 Patent application No.2019- 36542(2/28/2019) PCT: PCT/JP2020/007886(Application date 2/27/2020)
14. Taniguchi H, **Takebe T**, Ishikawa M, Yamashita M, Kiyota Y, ‘Imaging apparatus’ Patent application No.2019-198409(10/31/2019), Patent application No.2019-98804(Trademark)
15. **Takebe T**, Nishii S, Nakazawa D, Kodaka A, ‘STREET MEDICAL’ Patent application No.2019-98804(Trademark)(7/19/2019)
16. **Takebe T**, Saiki N. ‘Multi-matrix organoid’, Patent application No.2019-066048(3/29/2019), PCT: PCT/JP2020/013882(3/27/2020)
17. **Takebe T**, Nio Y, Kawakami E, ‘MAC-based drug screening/toxicity assay.’ JP2019-066625(3/29/2019), PCT: PCT/JP2020/015255(3/27/2020)
18. **Takebe T**, Nio Y. ‘Prevention of tumor formation’, Patent application No.2018-194380(10/15/2018), PCT: PCT/JP2019/40145(10/11/2019)
19. **Takebe T**, Saiki N, ‘Toxicity screen system’ JP2019-189838, (10/17/2019)
20. **Takebe T**, ‘Organoid Compositions and Novel Methods of Making and Using the Same ‘2019-0703 (7/16/2019) Associated Patent Application: US 62/874,559 filed 7/16/2019
21. **Takebe T,** Dunn A, ‘New Polymer for Cell Labeling, Barcoding and Assembly Techniques’ 2019-0419 (4/29/2019) Associated Patent Application: US 62/855,448, filed 5/31/2019
22. **Takebe T,** Iwasawa K, ‘Organ Bud‘2019-0418(4/29/2019) Associated Patent Application: Provisional Patent Application in process
23. **Takebe T**, ‘Cell Reprogramming ‘2019-0417 (4/29/2019)
24. **Takebe T,** Lewis K, ‘Human Umbilical Cord Hematopoietic Stem Cells’ 2019-0407(4/19/2019) Associated Patent Application: US 62/855/524, filed 5/31/2019
25. **Takebe T**, Lewis K, ‘Notch Stimulation related to Organoids’ 2019-0404
26. **Takebe T**, Asai A, Bezerra J, ‘Bio-artificial liver device with organoids’, 9/27/2018.
27. James MW, **Takebe T**, Lewis K, Munerra J, **‘**Method of generating human organoid having increased immune cell production’, 9/12/2018.
28. **Takebe T**, Koike H, ‘Methods for generating multi-organ structure’, 7/1/2018.
29. **Takebe T**, Kimura M, ‘Generation of digitalized human organoid for wireless phenotyping’, 11/13/2017
30. **Takebe T**, Kimura M, R-R Zhang, ‘Methods for synchronizing stem cell pool’ 4/12/2017
31. **Takebe T**, Ouchi R, ‘Compositions and Methods of Treating Liver Disease’, PCT4843-5759-9825.1(11/3/2017)
32. **Takebe T**, Ouchi R, Koike H, Kimura M, ‘Liver Organoid Disease Models and Methods of Making and Using Same’, PCT 4825-3542-1265.1 (11/3/2017)
33. **Takebe T**, Shinozawa T, Kimura M, ‘Liver Organoid Compositions and Methods of Making and Using Same’, PCT 4852-4633-3521.1 (11/3/2017)
34. Taniguchi H, **Takebe T**, Sekine K, ‘FORMATION OF THREE-DIMENSIONAL ORGAN FROM PLURIPOTENT STEM CELLS’, Patent application No.2017-230647(11/30/2017), PCT:PCT/JP2018/044144(11/30/2018)
35. **Takebe T**, Taniguchi H, Matsuzaki T, ‘CELL SORTING METHOD’, Patent application No.2017-043744(3/8/2017) PCT: PCT/2019-504611(3/6/2018)
36. **Takebe T**, ‘A Method for new liver organoid generation’, Application No.：62/517,414(11/27/2016)
37. **Takebe T**, ‘A Method for liver organoid based toxicity (LoT) screen model’, Application No.：62/417,371(11/27/2016)
38. Taniguchi H, Ueno Y, **Takebe T,** Sekine K, Okuda R, ‘METHOD FOR RECONSTITUTING TUMOR WITH MICROENVIRONMENT’, Patent application No.2016-53074, 2017-1445(3/16/2016, 2017/1/6) PCT: PCT/2017-50769(3/16/2017 ), Designated contracting states: USA:15/461,217（3/16/2017)
39. Taniguchi H, **Takebe T**, Okubo T, Kanai M, Abe H, Kino-oka M, Kobayashi G, ‘CELL CULTURE VESSEL’, Patent application No.PCT/JP2016/58409(3/16/2016) PCT:PCT/2018-505152(3/16/2016 ), Designated contracting states: China:201680083583.6(3/16/2016 ), USA:16/084,283 (3/16/2016 ), EU: 16894395.9(3/16/2016 )
40. Taniguchi H, **Takebe T**, Tsumura T, Ono T, ‘METHOD FOR SEEDING CELLS ON SCAFFOLD MATERIAL AND APPARATUS THEREFOR’, Patent application No.2016-027622(2/17/2016) PCT: PCT/2016-027622(2/17/2016) Registration No.：6115842(Japan)
41. Taniguchi H, Nie Y, Zheng Y, Sekine K, **Takebe T,** ‘METHOD FOR MANUFACTURING TISSUE/ORGAN BY USING BLOOD CELLS’, Patent application No.2015-251140(12/24/2015)PCT: PCT/2017-558110(Application date 12/19/2016)Designated contracting states: UAE:P6000856/2018(12/19/2016),Australia :2016374909 (12/19/2016 ),Brazil : BR112018012070-7(12/19/2016), Canada:3,008,213(2/19/2016 ),China:201680070326.9(12/19/2016 ),EU : 16878613.5(12/19/2016), Hong Kong: 18116553.5(12/19/2016), India: 201847026214(12/19/2016 ),Korea:10-2018-7017472(12/19/2016), Singapore:11201804755V (12/19/2016), Thailand: 1801003615(12/19/2016), USA:16/060,814(12/19/2016),South Africa:2018/04294(12/19/2016)
42. Taniguchi H, Murata S, Nie Y, Miyakawa K, Ryo A, **Takebe T**, ‘VIRUS INFECTION MODEL, PREPARATION METHOD THEREFOR, AND UTILIZATION THEREOF’, Patent application No.2015-249520(12/22/2015)PCT: PCT/2017-558218(12/21/2016), Designated contracting states: UAE:P6000849/2018(12/21/2016), Australia: 2016375418(12/21/2016),Brazil : BR112018010867-7(12/21/2016 ), Canada: 3,008,218(12/21/2016),China:201680068253.X(12/21/2016), EU: 16878818.0(12/21/2016), Hong Kong: 18116738.3(12/21/2016), India: 201847026211(12/21/2016),Korea:10-2018-7017399(12/21/2016), Singapore: 11201804754S(12/21/2016),Thailand : 1801003614(12/21/2016),USA : 15/779,723(12/21/2016),South Africa:2018/04295(12/21/2016)
43. **Takebe T,** R-R Z, Taniguchi H ‘PRIMITIVE GUT ENDODERM CELLS AND PRODUCTION METHOD THEREOF’ Patent application No.2014-248694(12/9/2014), Patent Filed No 5777127 (2015.7.17) Designated contracting states: Canada:2,969,194(12/8/2015), China:201580066955.X ( 12/8/2015,EU:15868455.5 (12/8/2015),Hong Kong :18102963.9(3/1/2018),　India:201747023255(12/8/2015), Korea:2017-7018234(12/8/2015), Singapore: 11201704424P(12/8/2015), Thailand :1701003161 ( 12/8/2015), USA:15/534,205(12/8/2015) Registration No.：5777127(Japan), 11201704424P(Singapore), US 10,370,638 (USA)
44. Taniguchi H, **Takebe T,** Sekine K, Nakao A, Hiromatsu T, Sunayama H, Nishimura T, ‘CELL CULTURE SYSTEM’ Patent application No.2014-197443(9/26/2014), Designated contracting states: EU:15843860.6(9/18/2015)USA :15/513,442 (9/18/2015), Registration No.：6440432(Japan)
45. Ejiri Y, Taniguchi H, **Takebe T** ‘CULTURE METHOD AND CELL MASS’ Patent Application No 2014-112959(2014.5.30), PCT: PCT/2016-523166/(5/29/2015), Designated contracting states: Canada :2,950,559(5/29/2015),China : 201580029061.3(5/29/2015), EU:15799890.7 (5/29/2015), India:201617044355 (5/29/2015),Korea:2016-7036604(5/29/2015),Singapore : 11201609916R(5/29/2015), Thailand: 1601007130(5/29/2015), USA: 15/314,653(5/29/2015)　Registration No.：6560199 (Japan), ZL201580029061.3(China)
46. **Takebe T**, Shimizu M, ‘Advertising Medicine AdMed’, Patent application No.2014-023762 (Trademark) (3/28/2014), Registration No.5695344
47. **Takebe T,** Yoshikawa H, Taniguchi H, ‘METHOD FOR FABRICATING CELL AGGREGATE FOR SELF-ORGANIZATION’ Patent Application No 2014-37341 (2014.2.27) PCT: PCT/2016-505305( 2/26/2015)Designated contracting states: UAE:P6000148/2016(2/26/2015), Australia:2015223798(2/26/2015),Brazil:BR112016019677-5(2/26/2015), Canada:2,937,882(2/26/2015), China:201580003897.6(2/26/2015), EU:15754683.9(2/26/2015), Hong Kong:17102524.2(2/26/2015), India:201647031958(2/26/2015), Korea:2016-7025902(2/26/2015) , Singapore:11201606750U(2/26/2015), Thailand:1601004721(2/26/2015), USA:15/121,934（2/26/2015), South Africa:2016/06532(2/26/2015) Registration No.：Japan(6489484)
48. **Takebe T,** Taniguchi H, Takahashi Y, ‘METHOD FOR PROVIDING VASCULAR SYSTEM IN BIOLOGICAL TISSUE’ Patent Application No 2013-153056(2013.7.23)PCT: PCT/2015-528240(7/15/2014), Designated contracting states: UAE :60/2016（7/15/2014）, Australia: 2014294233( 7/15/2014), Brazil:BR112016000706-9 (7/15/2014), Canada: 2,917,333( 7/15/2014),China:201480037287.3(7/15/2014), EU:14829625.4 (7/15/2014), Hong Kong:16103989.9 (7/15/2014), India: 201647005321(7/15/2014),Korea:2016-7004061（7/15/2014）, Singapore: 11201600505S(7/15/2014), Thailand: 1601000361(7/15/2014), USA : 14/906,699(7/15/2014), South Africa:2016/01128（7/15/2014）
49. Ejiri Y, Ayano K, Fukuhara N, Taniguchi H, Takebe T, ‘TISSUE STRUCTURE AND MANUFACTURING METHOD THEREFOR’ Patent Application No 2013-122190(2013.6.10)PCT: PCT/2015-522539(6/9/2014), Designated contracting states: UAE:1511/2015(6/9/2014), Australia:2014279568( 6/9/2014),Brazil:BR112015027420-0(6/9/2014), Canada:2,913,559(6/9/2014), China:201480033286.1(6/9/2014), EU:14811401(6/9/2014), India:10553/DELNP/2015(6/9/2014), Korea:2015-7028227(6/9/2014),Singapore :11201508747X(6/9/2014) , Thailand:1501007357(6/9/2014), USA:14/897,161（6/9/2014), South Africa:2015/08662(6/9/2014) Registration No. Japan(6400575), China(ZL201480033286.1), Singapore(11201508747X)
50. Ejiri Y, Ayano K, Fukuhara N, Taniguchi H, **Takebe T,** ‘Culture Vessels and Method’ Patent Application No 2013-120915(2013.6.7) PCT: PCT/2015-521306( 6/5/2014) Designated contracting states:UAE :1593/2015(6/5/2014),Australia :2014276229(6/5/2014), Brazil:BR112015030041-3(6/5/2014), Canada:2,914,463(6/5/2014 ),China:201480032635.8(6/5/2014), EU:14808113.6(6/5/2014),India :11787/DELNP/2015(6/5/2014), Korea:2016-7000067( 6/5/2014 ),Singapore:11201509870Q(6/5/2014),Thailand :151007310(6/5/2014),USA :14/896,251(6/5/2014), USA:16/668,701(10/30/2019),Japan:2019-168253(9/17/2019) Registration No.：ZL201480032635.8(China), 11201509870Q(Singapore), US 10,494,593(USA)
51. Taniguchi H, **Takebe T**, Ueno Y, Koike H ‘METHOD FOR AMPLIFYING CELL USING AMINO ACID PREPARATION’ Patent Application No 2013-106289 (2013.5.20) PCT: PCT/2015-518230(Application date 5/19/2014) Registration No.：6265385(Japan)
52. **Takebe T,** Taniguchi H, Kobayashi S, ‘METHOD FOR PREPARING CHONDROCYTES’ Patent Application No 2013-58534 (2013.3.21), PCT/JP2014/57673(2014.3.20), Designated contracting states: EU :14769212.3（3/20/2014）,Germany:14769212.3(3/20/2014), France:14769212.3(3/20/2014), U.K.:14769212.3(3/20/2014), USA:14/778,700（3/20/2014）Registration No.：2977448(EU, Germany, France, U.K.), US 10,100,274(USA), 2015-506846(Japan)
53. Taniguchi H, **Takebe T,** ‘Method For Producing Tissue And Organ’, Patent Application No.2013-536370(9/28/2012), PCT/JP2012/074840 (2012.9.28)
54. Taniguchi H, **Takebe T**, ‘Organ bud’, Patent application No.2011-210157(9/27/2011), PCT: PCT2018-236162/(12/18/2018)
55. Taniguchi H, **Takebe T, ’**METHOD FOR PRODUCING TISSUE AND ORGAN’, Patent application No.2011-210157(9/27/2011), PCT: PCT/2013-536370(9/27/2012) Designated contracting states: China:201280047078.8（9/27/2012), EU: 12835199.6(9/27/2012), USA: 14/347,482( 9/27/2012), Japan:2017-067228 (9/27/2012),USA:15/296,912（10/18/2016)Registration No.：6124348(Japan), ZL201280047078.8(China), 6456425(Japan)