

Biography – Yasunari Seita, Ph.D.

Full version (~200 words)

Yasunari Seita is a Principal Scientist at Dioseve Inc. (Tokyo, Japan). There he leads the development of DIOS-101, a product made of human iPSC-derived fetal granulosa-like cells that support in vitro maturation (IVM) of oocytes. He earned his B.S., M.S. and Ph.D. in Veterinary Science at Azabu University, where he worked on IVF, ICSI and gamete cryopreservation in rodents. As a postdoctoral fellow at Rutgers Robert Wood Johnson Medical School, he studied how human pluripotent stem cells become trophoblast. He then became a Project Assistant Professor at Shiga University of Medical Science, where he produced transgenic cynomolgus monkey models of human disease. From 2019 he worked in Dr. Kotaro Sasaki's laboratory at the University of Pennsylvania. There he rebuilt human and non-human primate germ cell development from iPSCs, producing human prospermatogonia (*Nat Commun* 2020), marmoset primordial germ cell-like cells (*eLife* 2023) and human and rhesus spermatogonia (*Cell Stem Cell* 2026). He also modeled the origin of seminoma (*Cell Rep* 2024). In his latest work, he developed a transcription factor-based method to make fetal granulosa-like cells from human iPSCs. In a mouse model, these cells improved IVM outcomes and passed safety checks across more than one generation (*J Reprod Dev* 2026). He has written more than 30 peer-reviewed papers.

Professional Experience

Principal Scientist

Dioseve Inc., Tokyo, Japan | 2023 – Present

Postdoctoral Research Fellow (PI: Kotaro Sasaki, MD, PhD)

Department of Biomedical Sciences, School of Veterinary Medicine, University of Pennsylvania, USA | 2019 – 2023

Project Assistant Professor / Research Lecturer

Department of Stem Cells and Human Disease Models, Research Center for Animal Life Science, Shiga University of Medical Science, Japan | 2014 – 2019

Postdoctoral Research Fellow

Division of Obstetrics, Gynecology and Reproductive Sciences, Rutgers Robert Wood Johnson Medical School, USA | 2009 – 2014

Education

Ph.D. in Veterinary Science, Azabu University, Japan | 2009

M.S. in Veterinary Science, Azabu University, Japan | 2006

B.S. in Veterinary Science, Azabu University, Japan | 2004

Selected Publications

1. Imura-Kishi K, Yamaga K, Soeda S, ..., Hamazaki N, **Seita Y**[†]. Human iPSC-derived fetal granulosa-like cells enhance oocyte maturation outcomes and enable multi-generational safety evaluation in a mouse IVM model. *J Reprod Dev* (2026).
2. Whelan EC*, Guo M*, Yokomizo R*, **Seita Y***, ..., Sasaki K. Generation of spermatogonia from human and non-human primate pluripotent stem cells. *Cell Stem Cell* 33(8):1289–1303 (2026).
3. Cheng K, **Seita Y**, Whelan EC, ..., Sasaki K. Defining the cellular origin of seminoma by transcriptional and epigenetic mapping to the normal human germline. *Cell Rep* 43(6):114323 (2024).
4. Hwang YS, **Seita Y**, Blanco MA, Sasaki K. CRISPR loss of function screening to identify genes involved in human primordial germ cell-like cell development. *PLoS Genet* 19(12):e1011080 (2023).
5. **Seita Y**, Cheng K, McCarrey JR, ..., Sasaki K. Efficient generation of marmoset primordial germ cell-like cells using induced pluripotent stem cells. *eLife* 12:e82263 (2023).
6. Sakata Y, Cheng K, Mayama M, **Seita Y**, ..., Sasaki K. Reconstitution of human adrenocortical specification and steroidogenesis using induced pluripotent stem cells. *Dev Cell* 57(22):2566–2583 (2022).
7. Cheng K*, **Seita Y***, Moriwaki T*, ..., Sasaki K. The developmental origin and the specification of the adrenal cortex in humans and cynomolgus monkeys. *Sci Adv* 8(16):eabn8485 (2022).
8. Hwang YS*, Suzuki S*, **Seita Y***, ..., Sasaki K. Reconstitution of prospermatogonial specification in vitro from human induced pluripotent stem cells. *Nat Commun* 11:5656 (2020).
9. **Seita Y**, Morimura T, Watanabe N, ..., Ema M, Nishimura M, Tooyama I. Generation of transgenic cynomolgus monkeys overexpressing the gene for amyloid- β precursor protein. *J Alzheimers Dis* 75:45–60 (2020).
10. Tsukiyama T, Kobayashi K, Nakaya M, Iwatani C, **Seita Y**, ..., Ema M. Monkeys mutant for PKD1 recapitulate human autosomal dominant polycystic kidney disease. *Nat Commun* 10:5517 (2019).
11. **Seita Y**, Tsukiyama T, Azami T, ..., Ema M. Comprehensive evaluation of ubiquitous promoters suitable for the generation of transgenic cynomolgus monkeys. *Biol Reprod* 100(6):1440–1452 (2019).
12. **Seita Y**[†], Iwatani C, Tsuchiya H, Nakamura S, Kimura F, Murakami T, Ema M. Poor second ovarian stimulation in cynomolgus monkeys (*Macaca fascicularis*) is associated with the production of antibodies against human follicle-stimulating hormone. *J Reprod Dev* 65(3):267–273 (2019).
13. Nakamura T, Okamoto I, Sasaki K, ..., **Seita Y**, ..., Saitou M. A developmental coordinate of pluripotency among mice, monkeys and humans. *Nature* 537:57–62 (2016).
14. Sasaki K, Nakamura T, Okamoto I, ..., **Seita Y**, ..., Saitou M. The germ cell fate of cynomolgus monkeys is specified in the nascent amnion. *Dev Cell* 39(2):169–185 (2016).

15. **Seita Y**, Tsukiyama T, Iwatani C, ..., Ema M. Generation of transgenic cynomolgus monkeys that express green fluorescent protein throughout the whole body. *Sci Rep* 6:24868 (2016).

**Equal contribution; †Corresponding author*

Short version (~90 words)

Yasunari Seita, Ph.D., is a Principal Scientist at Dioseve Inc. (Tokyo, Japan), where he leads the development of DIOS-101. DIOS-101 is made of human iPSC-derived fetal granulosa-like cells that support oocyte in vitro maturation. He trained in reproductive engineering at Azabu University (Ph.D.) and held research posts at Rutgers University and Shiga University of Medical Science. At the University of Pennsylvania, he rebuilt primate germ cell development from iPSCs (*Nat Commun* 2020; *eLife* 2023; *Cell Stem Cell* 2026). His recent work (*J Reprod Dev* 2026) showed that iPSC-derived granulosa-like cells improve IVM outcomes.