iPSC protocol opens the door to explore male infertility treatments.

Amsbio
reports how the **Sasaki Lab** within the **School of Veterinary Medicine** at the **University of Pennsylvania (USA)** devised a protocol in which induced pluripotent stem cells (**iPSCs**) could be utilized to **produce reconstituted human testes.**

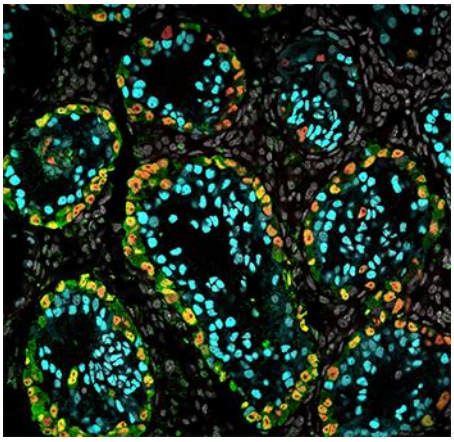

Image caption: Immunofluorescence image of 1-month xenogeneic reconstituted testes (xrTestis) showing GFP (indicating TFAP2C-EGFP reporter expression, green), TFAP2C (red), and SOX9 (cyan), merged with DAPI staining (white). SOX9 marks mouse Sertoli cells. Scale bars: 50 μm. These xrTestes stably maintained structural organization for up to 7 months and exhibited progressive differentiation of iPSC-derived germ cells. Courtesy: Dr Kotaro Sasaki.

Since the original 2020 publication
of their groundbreaking research, Dr Kotaro Sasaki's team has made significant progress in reconstituting human testis-like tissue from iPSCs.

A 2025 blog update
describes a new protocol for generating xenogeneic reconstituted testes (xrTestes) that support human spermatogonial development in vitro. These findings strengthen the potential of the Sasaki Lab system as a valuable model for studying early human spermatogenesis and offer a practical and scalable platform for further research in reproductive biology. The strides made by researchers in the Sasaki Lab are paving a new way for studies to explore treatments for male infertility.

To support reproductive biology research,
Amsbio offers a wide range of reagents for stem cell culture, differentiation, and 3D tissue modelling.

The Sasaki Lab
chose to use StemFit® feeder-free, chemically defined stem cell culture media from Amsbio to maintain their iPSC culture. In addition, the xrTestes cells were cultured on plates coated in recombinant laminin E8 fragments using iMatrix-511 silk from Amsbio. The Sasaki lab also cryopreserved their cells using CELLBANKER 1 from Amsbio, a trusted solution for the storage of any cell type including sensitive cell lines. CELLOTION™ cell wash and recovery solution from Amsbio was also used by the lab to collect FACS-sorted in vitro cells prior to single-cell RNA-seq library preparation.

To learn more
about the Sasaki Labs most advances in developing reconstituted human testes cells from iPSCs read the full 2025 blog update
at https://www.amsbio.com/news/reconstituting-human-testes-from-ipscs

For further information on Stem Cell Synergy Solutions from Amsbio please visit https://www.amsbio.com/research-areas/stem-cells or contact the company on +31-72-8080244 / +44-1235-828200 / +1-617-945-5033 / info@amsbio.com.

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