METHODS OF PRODUCING AND USING AVIAN EMBRYONIC STEM CELLS AND AVIAN TELENCEPHALIC ORGANOIDS

Tech ID: 33349 / UC Case 2022-843-0

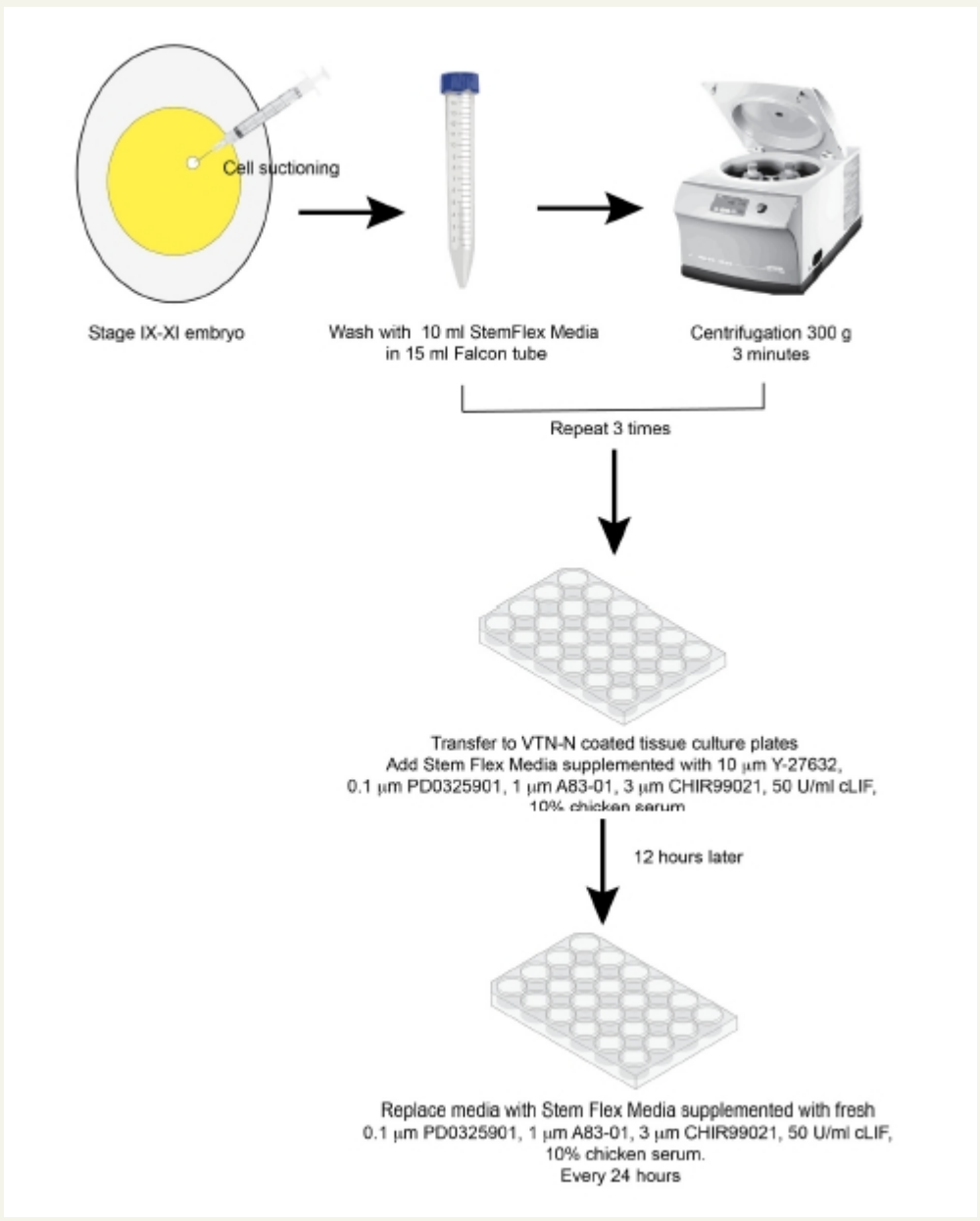
BACKGROUND

Stem cells have the potential to develop into different types of cells. They are key to an organism's development. Producing stem cell lines are important for research. Currently, avian embryonic stems cells are cultured on a layer of feeder cells. Feeder cells ensure that the stem cells survive and do not differentiate into other types of cells. However, using feeder cells can be costly and inconvenient.

TECHNOLOGY DESCRIPTION

Researchers at UC Santa Cruz have developed approaches to produce avian embryonic stem cells without using feeder cells. These stem cells can further be used to produce organoids, which are smaller and simplified versions of organs and are used for a variety of studies.

The approaches involve culturing avian epiblast cells in a cell culture medium present in a feeder-free cell culture container. The cell culture medium can be supplemented with small molecules and stable growth factors. The resulting cell-line's pluripotency has been confirmed using alkaline phosphatase staining and immunohistochemistry.



APPLICATIONS

- screening

CONTACT

Jeff M. Jackson
jjackso6@ucsc.edu
tel: .

INTRODUCING
UC TechAlerts
New technology matches delivered to your email at your preferred schedule
SEARCH SAVE SEARCH
Learn More

INVENTORS

- Mostajo-Radji, Mohammed
- Schweiger, Hunter

OTHER INFORMATION

KEYWORDS

stem cell, epiblast, avian, organoid, chicken, cell culture, feeder-free, pluripotent, spheroid, avian pluripotent stem cell

CATEGORIZED AS

- **Materials & Chemicals**
  - Biological
- **Medical**
  - Research Tools
  - Stem Cell
- **Research Tools**
  - Cell Lines

RELATED CASES

2022-843-0

- tissue renewal, organ development, disease etiology, viral infection, and drug discovery investigations
- comparative neurobiology studies

ADVANTAGES

- eliminates need to culture with feeder cells

INTELLECTUAL PROPERTY INFORMATION

Patent Pending

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Robust Single Cell Classification Methods and System

University of California, Santa Cruz
Industry Alliances & Technology Commercialization
Kerr 413 / IATC,
Santa Cruz,CA 95064

Tel: 831.459.5415
innovation@ucsc.edu
https://officeofresearch.ucsc.edu/
Fax: 831.459.1658

© 2023, The Regents of the University of California
Terms of use
Privacy Notice