

COURSE DETAIL

STEM CELLS IN DEVELOPMENT AND REGENERATION

Country

Australia

Host Institution

University of Melbourne

Program(s)

University of Melbourne

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

142

UCEAP Course Suffix**UCEAP Official Title**

STEM CELLS IN DEVELOPMENT AND REGENERATION

UCEAP Transcript Title

STEM CELL: DEV& REG

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course examines modern stem cell biology with respect to current roles of stem cells in development of organisms, regenerative medicine and ethical considerations of biotechnological applications. Different types of stem cells will be discussed with emphasis on embryonic stem cells compared to adult stem cells and roles in embryonic development and adult tissue regeneration. The role of stem cells in diseases such as cancer, anemia etc., will be discussed by leading stem cell researchers in terms of dysregulation of tissue regeneration and current potential treatment strategies. New therapies based on stem cells such as in vitro production of organs, stem cell transplantation and cloning will be presented along with the ethical dilemmas posted by these advances. The course will also cover the latest advances in Induced Pluripotent Stem cell (iPS) technology and what this tells us about the nature of pluripotency.

Language(s) of Instruction

English

Host Institution Course Number

CEDB30004

Host Institution Course Title

STEM CELLS IN DEVELOPMENT AND REGENERATION

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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