1. Course Lecturers CV



Dr Steve Oh Kah Weng is a Senior Scientist & Associate Director at the Bioprocessing Technology Institute (BTI) specialising in embryonic stem cell and fermentation research. Together with Dr. Andre Choo, they started the Stem Cell Group at BTI in

2001 focusing on human stem cell research. His area of interest include the development of serum free and feeder free cultures, understanding the signalling pathways of hESC, development of new tools for monitoring hESC and the identification of teratomas and methods for the expansion of hESC. He is a frequent invited speaker at local and international meetings and a member of several scientific societies.



Dr Andre Choo Boon Hwa obtained his PhD in 2001 focusing on the molecular engineering of antibody fragments and immunotoxins. He was also involved in the identification and characterization of a monoclonal antibody that induced apoptosis

of kappa- myelomas. This work has resulted in the filing of a Patent for its novel application and the setting up of a spin-off company to develop the product as a therapeutic antibody. Moving back to Singapore, he has been actively involved in developing defined culture platforms for the scale-up of human embryonic stem cells (hESC). This included the derivation of immortal feeders that support hESC expansion. More recently, his group has also raised a panel of monoclonal antibodies to hESC surface markers which has applications for characterization and isolation of undifferentiated hESC.

To Register - EMAIL or FAX to:

Professional Activities Centre Faculty of Engineering National University of Singapore 9 Engineering Drive 1 Blk EA #05-34 Singapore 117576

Fax: (65) 6874 5097 Website: <u>http://www.eng.nus.edu.sg/PACentre</u>

- Enquiries: Please contact Anna Robinson for more information at Tel: (65) 6516 5113 or e-mail: <u>engannar@nus.edu.sg</u>
- Fee : Singapore participants: SGD 400.00 + Prevailing GST Overseas participants: SGD 400.00 (GST exempted)
- Payment : Payment is required prior to the course. Crossed cheques should be made payable to "National University of Singapore" and mailed together with the registration form to the mentioned address.

Discount : Maximum of 10% discount is applicable to:

- Employees of the NUS Technology Associates registered with INTRO (Industry and Technology Relations Office);
- NUS Alumni
- Organisations / Companies sending three or more participants.

Refunds and Cancellations :

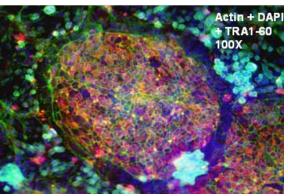
A 50% refund will be made for withdrawals (received in writing) ten working days before the commencement of the course. No refunds will be made thereafter. However, a replacement will be accepted upon prior arrangement at no extra cost. Please inform us of the changes, if any, by fax.

The Professional Activities Centre reserves the right to cancel the course and fully refund the participants, should unforeseen circumstances warrant it. Every effort will be made to inform participants of any changes.





HUMAN EMBRYONIC STEM CELL COURSE



by

Dr. Steve Oh & Dr. Andre Choo BIOPROCESSING TECHNOLOGY INSTITUTE



Organised by: Professional Activities Centre National University of Singapore Faculty of Engineering

2. Course Objective:

To provide participants with an overview of the current state of the science of human embryonic stem cells and their potential applications in regenerative medicine. Stem cell research is at a nascent stage of development with many hurdles to overcome. We will present to the audience some of the issues that have to be addressed before human embryonic stem cells can be brought into clinical applications. Topics that will be covered include:-Ethics of stem cells, pluripotency, culture methods, characterisation, monitoring tools such as imaging, expansion in bioreactors, and differentiation strategies.

3. Course Outline

Ethics - What are the pros and cons of using human embryonic stem cells (hESC) vs. adult stem cells?

Pluripotency - What are the signalling pathways which play a part in maintaining stem cell pluripotency? FGF and BMP pathways

Culture methods - Description of the different culture methods e.g. on feeders and feeder free conditions with and without serum. Serum free alternatives such as noggin, FGF, Wnt3a supplements.

Characterisation - Includes the use of flow cytometry and immunocytochemistry for characterising hESC and identification of differentiated tissues in teratomas.

New monitoring tools - Imaging and identifying stem cell morphology and cell numbers

Expansion - Methods of producing and scale up of hESC in different culture platforms such as plastic, membranes, beads and bioreactors.

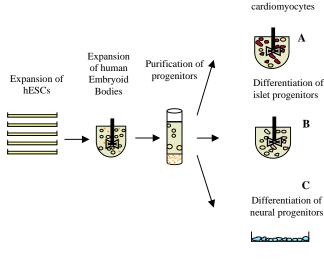
Differentiation - Strategies to form neural, cardiomyocytes and pancreatic islet cells from hESC.

Cell Therapy Issues - covers Good Manufacturing Practice (GMP) in the manufacture of stem cells, Quality Control, Purity and Potency of cells produced for therapies.

4. Target Audience

- Scientists in Pharmaceutical and Biotechnology companies. ٠
- Business Development Executives in Pharmaceutical and • **Biotechnology companies**
- Representatives from Academic Institutions
- Established and start-up companies in stem cells space and vendors seeking to offer products into the space
- Venture Capital community and investors seeking to understand the stem cell market landscape, and associated business opportunities

Future Bioprocesses for Cell Therapy



REGISTRATION FORM

Human Embryonic Stem Cell Course 28 May 2007

Course Fee: SGD400.00 +Prevailing GST) Overseas participants SGD400.00 (GST exempted)

Name of Participant: Dr/Mr/Mrs/Ms: (Attach your name card, if any)

Designation:

Name of Organisation:

Address:

Contact Person:

Email:

Differentiation of

B

С

Tel No (O):

Fax No:

**Dietary Preference: Chinese / Vegetarian

NUS Alumni Membership (if any) # _____ Payment mode:

Cheque / Bank draft No. : _____

VISA / MSTR : _____

Expiry Date : _____ Amount (S\$) : _____

Signature : Payable to "National University of Singapore"

Closing Date : Please send in your registration form together with your payment by 18 May 2007

Authorised Signature / Company Stamp

Mailing Address: Professional Activities Centre Faculty of Engineering, National University of Singapore, 9 Engineering Drive 1, Singapore 117576 +65 6874 5097 Fax: