

Online Certificate Course on “Basic Cell Culture Techniques”

Organized by:

COMSTech Secretariat, Islamabad in Collaboration with the International Center for Chemical and Biological Sciences (ICCBS) Karachi, Pakistan

December 14-15, 2020

Cell culture is one of the major approaches used in cellular and molecular biology, providing an excellent model system for studying the physiology and biochemistry of living cells.

Cell culture entails to the removal of cells from an animal or plant and their successive growth in a favorable artificial environment. The cells may be removed from the tissue directly, or they may be derived from a cell line and disaggregated by enzymatic or mechanical means before further *in vitro* cultivation.

The workshop will provide a solid basis for the understanding of the growth of animal/human cells, with formal lectures and laboratory exercises. Through integrated learning methods, utilizing hands-on training to reinforce lecture material, participants will learn the biological basis and relevance of the process of cell culture techniques. The training program will facilitate the trainees to translate these techniques according to their specific research needs.

WHO SHOULD ATTEND?

The workshop is designed to address the interest of scientists and research scholars from different fields of biological sciences including molecular biology, biochemistry, genetics, and biotechnology.

WORKSHOP CONTENT

The program includes a series of online lectures and hands-on sessions on the following topics:

- Preparation and types of media
- Maintenance of cells in culture
- Cell passaging and seeding in plate
- Cryopreservation

RESOURCE PERSONS

Dr. Sumbra Farooq Sheikh: Dr. Sheikh is currently working at the Institute for Virology und Epidemiology of Viral diseases, University Hospital, Tübingen University, Germany. Her research primarily focuses on the design and development of contrast agents for the

early detection of cancer with special focus on; glioblastoma and prostate carcinoma. She has a wide experience in the field of cellular and molecular studies involving cell culture-based assays.



Dr. Alexander Sturzu: Dr Sturzu is working at the Department of Neuroradiology, University Hospital, Tübingen University, Germany. His main research interests are design of novel imaging compounds for tissue specific imaging and novel anticancer agents. He is well versed in foundational molecular biology and his expertise is widely based on cell culture and cell culture based assays.



VENUE

Topic: "Basic Cell Culture Techniques"

Time: Dec 14, 2020 12:00 PM Islamabad, Karachi, Tashkent

Join Zoom Meeting

<https://us02web.zoom.us/j/82416827002?pwd=bU1rZGMreTkwbzJOZmpwWTZSZUJhQT09>

Meeting ID: 824 1682 7002

Passcode: 639480

Topic: "Basic Cell Culture Techniques"

Time: Dec 15, 2020 12:00 PM Islamabad, Karachi, Tashkent

Join Zoom Meeting

<https://us02web.zoom.us/j/84960181216?pwd=WEhnU3JPNkw4S1RETEpJYThUN2NvUT09>

Meeting ID: 849 6018 1216

Passcode: 212055

WORKSHOP PROGRAM (Pakistan Standard Time)

Monday, December 14, 2020

12:00-12:05 Inauguration Ceremony

12:05-12:10 Recitation of the Holy Quran

12:10-12:20 Welcome Address by Prof. Dr. M. Iqbal Choudhary

12:20-13:30 Lecture 1 entitled, "Introduction to mammalian cell culture and cell passaging" by **Dr. Sumbla Farooq Sheikh**, University of Tübingen, Tübingen, Germany

13:30-14:30 Practical Session (***Cryo-revive, trypsinization and passaging***)

Tuesday, December 15, 2020

12:00-13:00 Lecture 2 entitled, "Treatment of cells, management of contamination and troubleshooting" by **Dr. Alexander Sturzu**, University of Tübingen, Tübingen, Germany

13:00-14:30 Practical Session 2 (***Cell counting, plating and cryo-preservation***)

14:30-14:45 Closing Ceremony

REGISTRATION PROCESS

Please register

at <https://docs.google.com/forms/d/e/1FAIpQLSdFuxdQd7OBVVUubOWwkQ2v-cK089NsDcoFNoeuH72grEL3m9A/viewform> **before December 10, 2020.**

Registered participants will receive e-certificates.

CONTACT PERSON

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