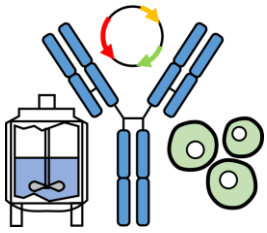
# 1ER CURSO INTERNACIONAL TEÓRICO Y PRÁCTICO SOBRE CULTIVO DE CÉLULAS DE MAMÍFERO Y LA PRODUCCIÓN DE BIOFÁRMACOS

INSTITUTO DE INVESTIGACIONES BIOMÉDICAS

AUDITORIO "ALFONSO ESCOBAR IZQUIERDO" | UNIDAD DE BIOPROCESOS

| may-23 | |
|---|---|
| 9:00 - 9:30 | Registration |
| 9:30 - 10:00 | Inauguration |
| 10:00 - 11:00 | (Theory) Bioprocesses principles ande develpment.<br>**Ph.D. Michael Butler** |
| 11:00 - 12:00 | (Theory) Protein expression systems for mammalian cells.<br>**Ph.D. Adriana Valdez** |
| 12:00 - 12:15 | **BREAK** |
| 12:15 - 13:00 | (Theory) Culture media and raw materials optimization.<br>**Ph.D. Michael Butler** |
| 13:00 - 14:30 | **LUNCH** |
| 14:30 - 15:30 | (Theory) Analysis and control of post-translational modification.<br>**Ph.D. Michael Butler** |
| 15:30 - 16:30 | (Theory) Basic concepts: kLa, hydrodynamic stress and exponential growth.<br>**M.S. Ramsés Gamboa** |
| 16:30 - 17:00 | (Theory) Analysis of metabolites, viability or osmolality in cutures<br>**Ph.D. Matt McRae** |
| 17:00 - 19:00 | (Practice)<br>- Operation of equipment for cell culture.<br>- Sterilization and preparation of cell culture media.<br>- Cell culture management, counting and viability.<br>**Ph.D. Adriana Valdez**<br>**Ph.D. Claudia Altamirano** |



| may-24 | |
|---|---|
| 9:30 - 10:00 | (Theory) Bioreactors for animal cell culture<br>**Ph.D. Claudia Altamirano** |
| 10:00 - 10:45 | (Theory) Cell culture strategies to improve productivity and methabolism.<br>**Ph.D. Claudia Altamirano** |
| 10:45 - 11:30 | (Theory)Transport phenomena on product quality.<br>**Ph.D. Mauricio Trujillo** |
| 11:30 - 11:45 | **BREAK** |
| 11:45 - 12:30 | (Theory)The use of omics tools for bioprocesses characterization.<br>**Ph.D. Adriana Valdez** |
| 12:30 - 13:00 | (Theory) On line and off line monitoring and control of bioprocceses.<br>**Ing. Mario Novoa** |
| 13:00 - 14:30 | **LUNCH** |
| 14:30 - 15:00 | (Theory) Capillary electrophoresis and identification of glycoforms.<br>**Inolab** |
| 15:00 - 16:00 | (Practice)<br>Cellular bank.<br>Freezing and thawing of cells.<br>**Ph.D. Adriana Valdez** |
| 16:00 - 17:00 | (Practice)<br>- Cell count and viability.<br>- Starting of cell cultures in bioreactors.<br>**Ph.D. Adriana Valdez**<br>**Ph.D. Claudia Altamirano** |
| 17:00 - 19:00 | (Practice)<br>-Starting of cell cultures in shake flasks.<br>- Use of different bioreactors for mammalian cell cultures:<br>- Agitated bioreactor. (Sartorius)<br>- Wave biorreactor. (Inolab)<br>- Bioreactor-mini. (Applikon and Merk)<br>- Single use elements and bioreactors.<br>**Ph.D. Valdez and Ph.D. Altamirano** |

| may-25 | |
|---|---|
| 9:00 - 9:30 | (Theory) Protein recovery and purification methods.<br>**Ph.D.** |
| 9:30 - 10:00 | (Theory) Recovery of a biomolecule: case study.<br>**Ph.D.** |
| 10:00 - 11:00 | (Theory) Effect of culture conditions on the glycosylation of biotherapeutics.<br>**Ph.D. Laura Palomares** |
| 11:00 - 11:15 | **BREAK** |
| 11:15 - 12:00 | Analytical methods of protein identification and characterization.<br>**Ph.D. Ricardo Castro** |
| 12:00 - 13:00 | (Practice)<br>- Cell count and viability.<br>**Ph.D. Adriana Valdez**<br>**Ph.D. Claudia Altamirano** |
| 13:00 - 14:30 | **LUNCH** |
| 14:30 - 16:30 | (Theory and practice)<br>- Purification methods by Merk:<br>- Clarification.<br>- Chromatography.<br>- Viral removal.<br>- Ultrafiltration.<br>**MERK** |
| 16:30 - 18:30 | (Theory and practice)<br>- Purification methods by Sartorius:<br>- Clarification.<br>- Chromatography.<br>- Ultrafiltration.<br>**SARTORIUS** |
| 18:30 - 19:00 | (Theory and practice)<br>Gel electrophoresis.<br>**M.S. Giroshi Bando** |

CON EL APOYO DE: