







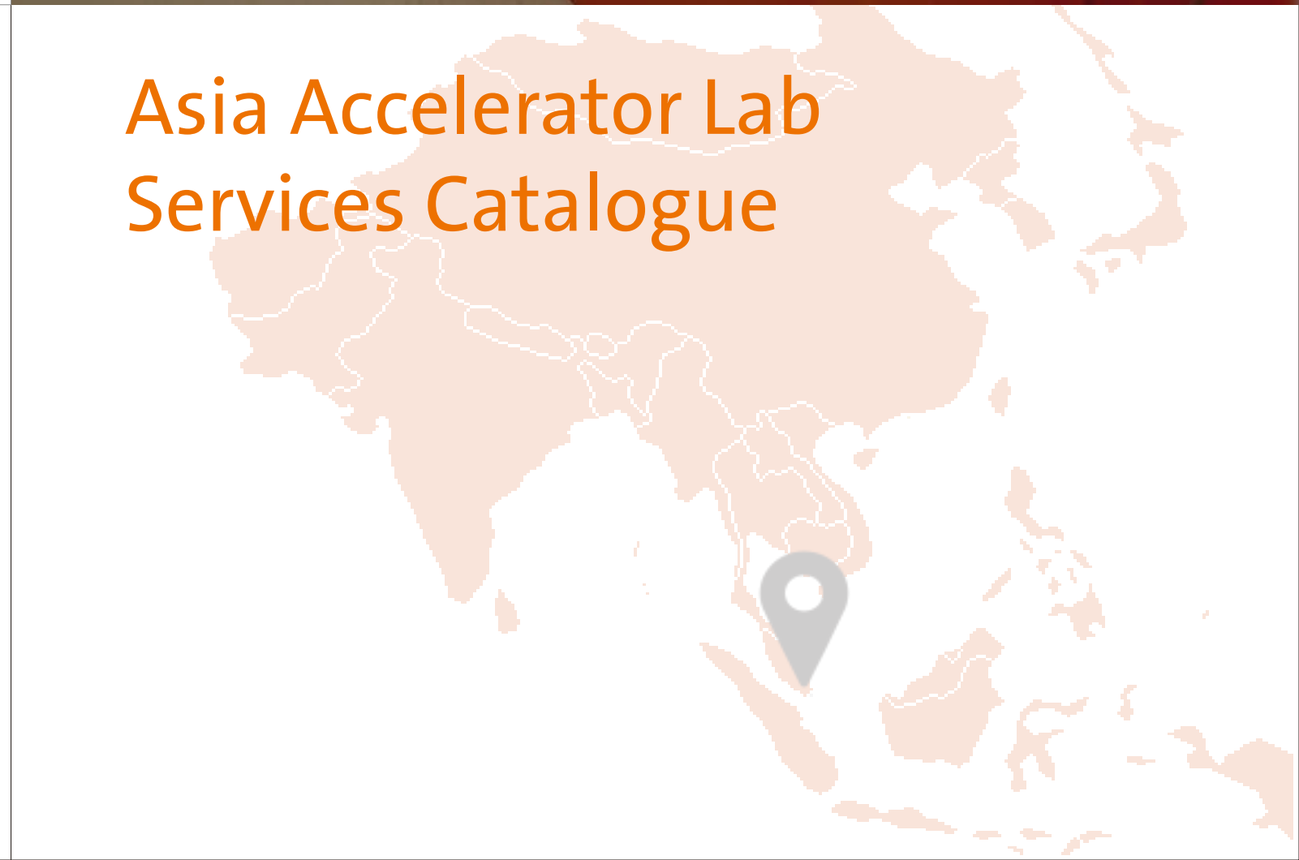








Asia Accelerator Lab Services Catalogue



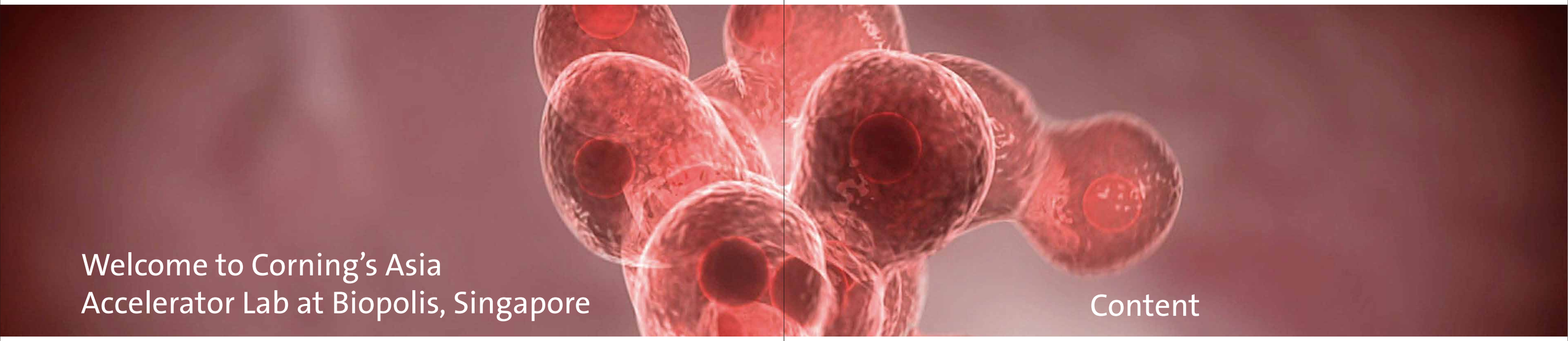
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Welcome to Corning's Asia Accelerator Lab at Biopolis, Singapore

Corning's Asia Accelerator Lab (AAL) was officially opened in 2023 in Singapore. Strategically located in Biopolis, Singapore's premier research hub for biomedical sciences, our lab is set to drive bioprocess innovation for the Greater Asia region.

In collaboration with A*STAR's Bioprocessing Technology Institute (BTI), the Asia Accelerator Lab integrates Corning's cutting-edge technology and expertise to advance bioprocessing. Our lab features Corning's advanced platforms such as the Corning® Ascent® FBR System, HYPERStack® and HYPERFlask® vessels, and the CellCube® and CellSTACK® systems, all designed for high-yield, scalable cell culture solutions. These technologies exemplify our commitment to innovation and excellence, offering researchers and industry professionals the tools they need to achieve groundbreaking results.

The Asia Accelerator Lab offers a comprehensive range of services and workshops designed to support the scientific community and foster innovation. Our services include:

- **Training and Technical Support:** Hands-on training programs and technical support to help you maximize the potential of Corning's technologies.
- **Bioprocess Development and Optimization:** Tailored solutions to improve process efficiency and product quality, leveraging Corning's advanced technologies.
- **Custom Cell Culture Solutions:** Specialized support for custom cell culture projects, including process optimization and scale-up strategies.

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Course #1: Mastering Cell Cultures

Training Duration: 2 days
Time: 9:30 a.m. to 5 p.m.
Who should attend:

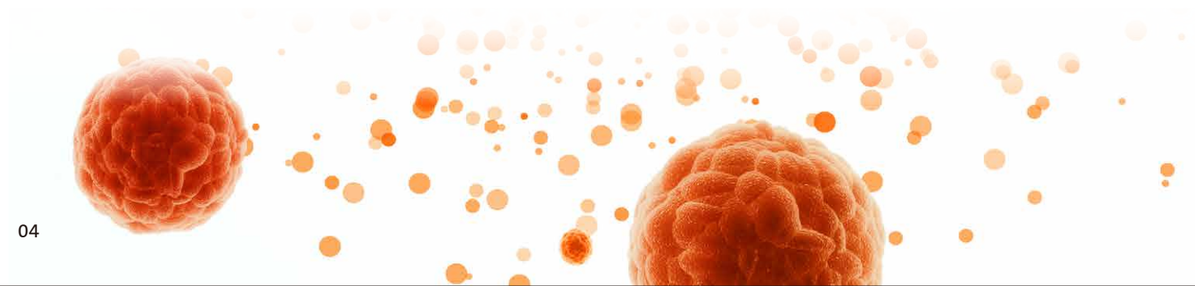
- Research Scientists and biotechnologist involved in the application of biological organisms
- Bioprocess/cell culture technicians
- Lab managers/production supervisors
- Quality Control personnel
- Professionals working in the biotechnology and pharmaceutical industries looking to enhance their cell culture skills.

Course Overview

Cell Culture is a critical foundational tool to support advances in medical research and drug discovery. This training gives you an in-depth understanding of cell culture technologies including application of different cell lines, cell culture media, maintaining optimal cell growth conditions, and various cell culture strategies. Participants will gain hands-on experience growing live cells on Corning® CellSTACK® and HYPERFlask® vessels. The theoretical and practical knowledge will help you better understand cell culture processes and apply knowledge during your day-to-day cell culture operations.

Training Objectives

- Learn about common cell lines, their applications, and workflows.
- Acquire a comprehensive understanding of cell culture media and the conditions required to maintain a cell line.
- Explore different bioprocess platforms and modes, including batch, fed-batch, and continuous culture.
- Master aseptic techniques and strategies for contamination prevention.
- Gain insights into Corning's advanced surfaces for adherent culture, including the Corning CellBIND surface and various coatings.
- Gain hands-on experience working with Corning CellSTACK and HYPERFlask vessels.

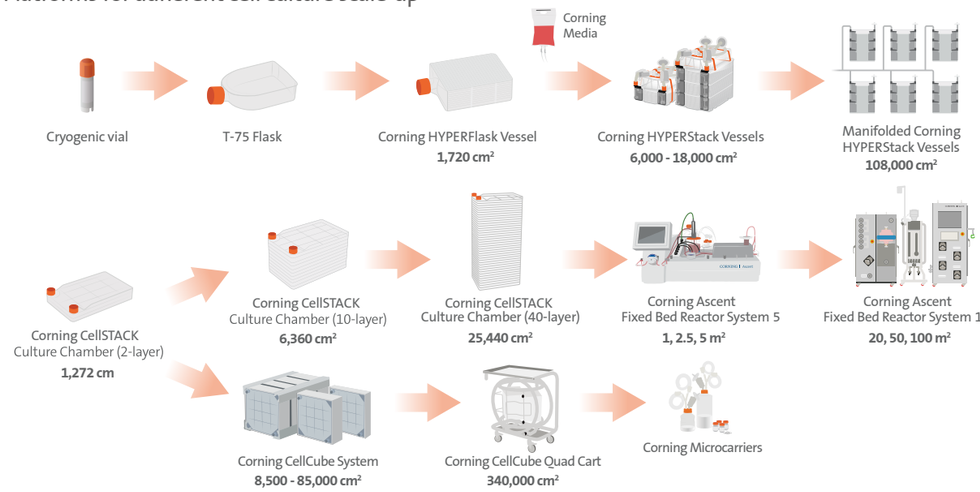


Course #2: Bioprocess Techniques and Scaling up of Adherent Cell Culture

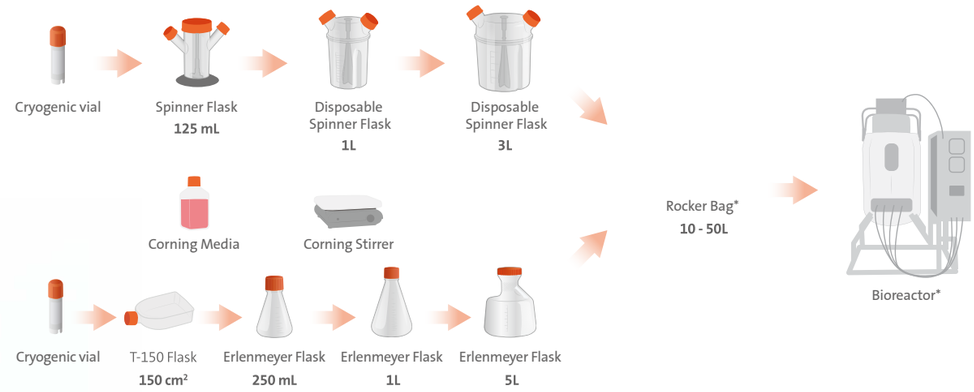
Training Duration: 3 days
Time: 9:30 a.m. to 5 p.m.
Who should attend:

- Scientists and biotechnologists
- Bioprocess/cell culture technicians
- MSAT/ technical operations engineer
- Bioproduction supervisors
- Having a basic knowledge of cell culture would be helpful

Platforms for adherent cell culture scale-up



Suspension Workflow



Course #2: Bioprocess Techniques and Scaling-up of Adherent Cell Culture

Course Overview

This comprehensive bioprocess training course delves into the intricacies of modern bioprocess modalities, including cell therapy, gene therapy, protein, and viral-based therapeutics. Participants will gain valuable insights into scaling up and scaling out bioproduction processes, ensuring high quality and consistent product yields. The course also features hands-on training with Corning's advanced cell culture platforms, such as the Corning® HYPERStack® and CellCube® vessels, and introduces Corning Ascent® FBR, a cutting-edge fixed bed bioreactor for high-density cell culture. This blend of theoretical knowledge and practical experience prepares attendees to excel in the evolving field of bioprocessing.

Training Objectives

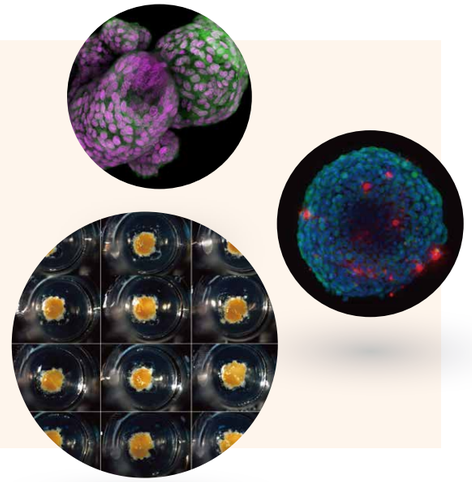
- Have a comprehensive understanding of various bioprocess modalities and their applications.
- Develop skills to effectively scale up and scale out adherent bioprocesses using different platforms including multi-layer vessels, bioreactor and microcarriers etc.
- Gain hands-on experience in handling advanced cell culture platforms like the HYPERStack and CellCube vessels.
- Be equipped with knowledge of cutting-edge bioreactor technologies to improve bioprocess efficiency and output.



Course #3: 3D Cell Culture Methods

Training Duration: 2 days
Time: 9:30 a.m. to 5 p.m.
Who should attend:

- Drug discovery and development scientists
- Cancer researchers
- Stem cell/tissue engineering researchers
- Lab managers
- Academic researchers and graduate students



Course Overview

The "3D Cell Culture Methods" workshop provides participants with a comprehensive understanding of the techniques and applications of 3D cell culture, including, spheroids and organoids, as well as other 3D models. This workshop will cover essential protocols for forming spheroids, including practical tips and tricks for handling Corning® Matrigel matrix and other extracellular matrices. Participants will explore the advantages of 3D cell culture over traditional 2D culture, and how these techniques can be applied in various research and therapeutic contexts. Through a blend of theoretical knowledge and hands-on practice, attendees will gain the skills necessary to implement and optimize 3D cell culture systems in their own laboratories.

Training Objectives

- Have an understanding of the fundamental techniques and applications of 3D cell culture, including the formation and use of spheroids and organoids.
- Learn detailed protocols for forming spheroids and gain practical insights into optimizing these processes.
- Master tips and tricks for handling Matrigel matrix and other extracellular matrices to ensure successful 3D culture.
- Understand the benefits and challenges of 3D cell culture compared to traditional 2D culture.
- Develop the ability to implement and troubleshoot 3D cell culture systems in their own research or production environments.

Design Your Own Course (DYOC)

Welcome to "Design Your Own Course“ (DYOC) a unique and flexible training program designed to meet your specific needs and objectives. Recognizing that each research project and bioprocess workflow is unique, this course allows you to customize your training experience by selecting the topics and techniques that are most relevant to your work. Leveraging our extensive expertise in bioprocessing and cell culture, we deliver tailored solutions to help you achieve your goals efficiently and effectively.

How it Works

Inquiry

- Contact us with your project requirements and objectives.

Discussion

- Engage in a discussion with our experts to discuss your specific requirements and goals.

Proposal

- Develop a tailored training proposal outlining the topics, techniques, and schedule.

Delivery & Follow Up

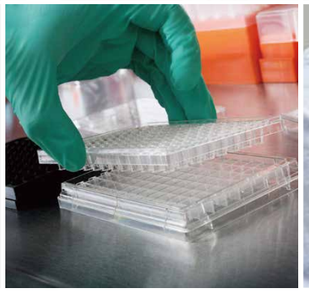
- Participate in the customized training sessions, receiving personalized instruction and hands-on practice.
- Benefit from complementary support and follow-up to ensure the successful implementation of your new skills and knowledge.












AAL Technical Services

Our Fee-for-Service program is designed to provide you with customized project design and execution to meet your specific research and bioprocessing needs. Leveraging our state-of-the-art facilities and expert team, we offer a range of services that ensure high-quality results and valuable insights for your projects. Whether you need protocol generation, process development, or customized material testing, our lab is equipped to deliver precise, reliable outcomes tailored to your requirements.

Example of Services

- Serum reduction and cell line adaption to Corning® CellBIND® surfaces
- Protocol generation using Corning HYPER technologies, CellSTACK® or CellCube® vessels
- Small scale microcarrier process development

How it Works

Inquiry

- Contact us with your project requirements and objectives.

Discussion

- Engage in a detailed discussion with our experts to discuss your needs and goals.

Proposal

- Receive a customized project proposal outlining the scope, methodologies, and deliverables.

Project Execution

- Our team will carry out the project according to the agreed-upon plan.
- Regular update meetings will be scheduled.

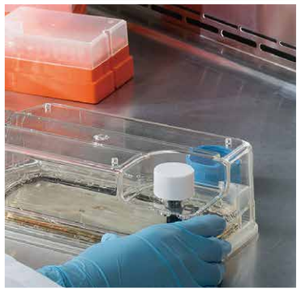
Closure

- Receive comprehensive deliverables, including raw data, detailed protocols, material lists, and a final report.
- Benefit from ongoing training and technical support to ensure successful project implementation and continuity.







Registration

Registration

- All registrations must be submitted through our registration form:
  https://www.corning.com/asean/en/products/life-sciences/resources/webforms/AAL_course_registration.html.
  A confirmation email will be provided upon acceptance. For training courses, there is no minimum number of participants required; however, each session is limited to a maximum of 10 participants to ensure optimal learning.

Rescheduling and Cancellations

- Cancellations will be accepted if made in writing at least two weeks prior to the start of the course. After this period, the full course fee will be payable. We reserve the right to cancel the course or offer an alternative date in the event of unforeseen circumstances, such as trainer illness or other unexpected events.

Substitutions

- Registered participants may appoint a substitute to attend the course at any time.

Course Materials

- We reserve the right to modify the content and schedule of the training courses while maintaining the overall essence of the course. All course materials provided during the training are the intellectual property of Corning and are for personal use only. Participants are not permitted to reproduce or distribute these materials without prior written consent from Corning.

Contact Us

For any inquiry, please reach out to your local Corning representatives or email:

Corning Asia Accelerator Lab at
sgaal@corning.com