

# THE ICAVT ALUMNI REFRESHER VACCINOLOGY COURSE 2025

## COURSE OBJECTIVES

### General objectives

The course aims at providing a refresher course and latest updates on immunization and vaccines to the alumni of the various existing advanced vaccinology training courses worldwide and their partners, already trained in vaccinology/immunology.

The International Collaboration of Advanced Vaccinology Training is a partnership of more than 30 vaccinology courses worldwide ([www.icavt.org](http://www.icavt.org)). Those trainings have different history, background, content and audiences but they all have trained, over the years, altogether, thousands of experts in the area of vaccinology.

However, alumni from those various trainings have constantly requested to attend again the trainings they attended initially or other ones to update their knowledge as the vaccinology area is in constant evolution and changes thanks to a strong research pipeline and a rich and diverse implementation community.

Instead of allowing alumni to attend the trainings they already completed again or attend another course and therefore reduce the number of new experts trained, ICAVT members have agreed to jointly develop a single common refresher course. This course will provide annually to people from various backgrounds, with lectures on the last updates on immunization and on new topics key for their daily activities.

The alumni refresher vaccinology course will provide updates in the following key areas of vaccinology: immunology, vaccine development, clinical trials, regulatory processes, vaccine-specific issues including new vaccines, vaccination strategies and policies, programme implementation, humanitarian emergencies, social, economic, political and ethical issues, financing, and communication. It will also provide lectures on new areas of the discipline uncovered by previous courses.

The course is limited in duration but focuses on relevant updates for alumni of all courses around the world and their partners already trained in vaccinology/immunology.

By the end of the course, participants should be able to get an updated knowledge on:

- (1) the last development in immunology,
- (2) the existing vaccines (combination, antigens included...),
- (3) the innovations and new platforms used to deliver traditional and new vaccines,
- (4) the immunization programs policies and strategies at global, regional, national, and local levels,
- (5) the regulatory processes for vaccines,
- (6) the vaccines production and quality control,
- (7) the role of communities and individuals for vaccines demands.

The ICAVT Alumni Refresher Vaccinology Course will help the audience to translate the updated scientific and epidemiological evidence into effective policy development and program implementation related to vaccines and immunization.



ICAVT Refresher Vaccinology Course also aims to update the scientific foundation of the alumni and their partners and their knowledge in vaccinology areas outside of their current expertise, showing the multifaceted constantly evolving aspects of vaccinology, allowing them to explore novel technologies and think more globally and holistically, and providing them with a unique skill set to develop their leadership in vaccinology.

Finally, this Refresher Vaccinology Course represents a unique networking opportunity where participants can form valuable and sustainable professional relationships beyond those developed during their initial vaccinology course and serves as a platform where problems to professional challenges can be shared, and solutions identified.

## **Specific objectives for each training activity (lectures, panels)**

### **DAY 1**

#### **Updates on RSV (including adults) and GBS vaccines**

- Describe the current situation of the diseases' epidemiology
- Describe the vaccines currently available, the ones under development
- Describe the possible strategies for prevention and response in HICs and LMICs, in all age groups

#### **Updates on enteric viral pathogens vaccines (Rota, Noro)**

- Describe the current situation of the diseases' epidemiology
- Describe the vaccines currently available, the ones under development
- Describe the possible strategies for prevention and response in HICs and LMICs, in all age groups

#### **Updates on enteric bacterial pathogens vaccines (ETEC, Shigella)**

- Describe the current situation of the diseases' epidemiology
- Describe the vaccines currently available, the ones under development
- Describe the possible strategies for prevention and response in HICs and LMICs, in all age groups

#### **Updates on PCV**

- Describe the current situation of the diseases' epidemiology
- Describe the vaccines currently available, the ones under development
- Describe the possible strategies for prevention and response in HICs and LMICs, in all age groups

### **DAY 2**

#### **Artificial Intelligence in the Vaccinology Development and use**

- Describe the recent development in Artificial Intelligence
- Describe the current use of AI in vaccines development and use
- Describe the potential future use of AI in vaccines development and use

#### **Developing Vaccines for outbreaks (including pandemics)**

- Identify the challenges and issues countries and manufacturers will face for a vaccine to be developed, produced and distributed in case of a pandemic/ large outbreak
- Identify the areas where time can be gained without jeopardizing safety for a vaccine to be developed, produced and distributed
- Share about the current initiatives worldwide aiming at accelerating the delivery of a vaccines in case of a pandemic



### **Climate Change and vaccines (through the example of arboviruses?)**

- Describe the recent changes of the climate
- Describe the impact of climate changes on the vaccine preventable diseases epidemiology
- Describe the possible future impact of climate changes on the vaccine preventable diseases epidemiology
- Describe the possible solutions vaccines can bring to the health issues related to climate change

### **Panel 1: What's new on the vaccine policy and country support front?**

- Describe the current global targets, achievements, and challenges with respect to immunization coverage worldwide.
- Discuss how to increase vaccination coverage and options to simplify and facilitate vaccine delivery.
  - Describe the latest recommendations for immunization and vaccines from the WHO (Strategic Advisory Group of Experts on Immunization, SAGE).
  - Describe the latest policies for support to countries immunization programs at UNICEF.
  - Describe the latest policies for support to countries immunization programs at GAVI, the vaccine alliance.

## **DAY 3**

### **Panel 2: Reduction of the international aid development: what consequences and what perspectives for the immunization programs?**

- Describe the recent international development aid cuts
- Describe the health impact of the recent international development aid cuts
- Share countries' examples and describe the possible solutions for countries to address the recent international development aid cuts (prioritization, integration, increase of domestic funding etc.)

### **Prioritization and Optimization of the immunization schedule**

- Describe the concept of optimization of the immunization schedule
- Share examples of optimizations
- Describe the tools and support available for countries to conduct optimization

### **Vaccine market, market shaping & regional initiatives for vaccine production**

- Who are the vaccine manufacturers and what do they produce
- How prices and productions are considered
- What are the regional and global activities to try to shape the vaccine production

### **Human Challenge Trials (TBC)**

- Explain the concept of Human Challenge Trials.
- Explain the increased interest in using Human Challenge Trials (HCT) to shorten the time required to identify the best vaccine candidate and thus shorten the time/expense associated with licensure of vaccines.