Creating a supportive environment for vaccine manufacturing in LMICs: contribution from ADVAC the Advanced Course of Vaccinology

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ADVAC was created in 1998 at the instigation of Charles Mérieux and Stanley Plotkin.

Organized by Fondation Mérieux and University of Geneva

Co-sponsors
- Bill & Melinda Gates Foundation
- Coalition for Epidemic Preparedness Innovations
- US Centers for Disease Control and Prevention
- European Centre for Disease Prevention and Control
- European & Developing Countries Clinical Trials Partnership
- Johns Hopkins Bloomberg School of Public Health
- European Society for Paediatric Infectious Diseases
- National Foundation for Infectious Diseases
- National Institutes of Health and Fogarty International Center
- World Health Organization

Vaccine Industry and CEPI Education grants
- Glaxo-SmithKline
- Janssen
- Merck
- Pfizer
- Sanofi-Pasteur
- Serum Institute of India
- Takeda
- CEPI
ADVANCED TRAINING IN VACCINOLOGY

So many new vaccines!!

1986-2000
- Hepatitis B (recombinant)
- Typhoid (live and Vi polysaccharide)
- Cholera (live and recombinant toxin)
- Hepatitis A
- Varicella
- Acellular Pertussis
- Rotavirus
- Pneumococcal conjugate

2001-2022
- Live attenuated influenza
- More rotavirus reassortants
- Oral cholera
- Typhoid conjugate
- Mening A/C/W/Y conjugate
- Group B Mening
- Human Papillomavirus
- Zoster (live and subunit)
- Japanese Encephalitis (Vero)
- Ebola
- RTS,S Malaria
- Dengue
- COVID, RSV etc...

1. Need for more scientists with a broad vision of issues related to vaccines and immunization
2. Need for more qualified decision-makers to identify priority targets in vaccinology
3. Need for more qualified policy-makers for introduction of new vaccines in vaccination programs
4. Need to encourage/support cascade training in regions and countries
2000 – 2022

- 22 courses, 1355 participants
- 121 countries

**Selected participants**

- Highly motivated
- With previous experience in vaccinology
- Likely to have increasing responsibilities
- Diverse professional background: academia, government, industry, international organizations
- Diverse geographic origin: low and middle income countries & high income countries

**DISTRIBUTION OF 825 PARTICIPANTS: 2009-2021**

- High Income Countries: 36%
- Low & Middle Income Countries: 39%
- Industry: 25%
ADVAC 2022

In 2022:
- 71 participants
- 39 countries
- 21 BMGF, 6 EDCTP, 1 ESPID & 1 NFID fellowships

2000-2022
- 22 courses
- 1355 participants
- 121 countries

Distribution of participants per region:
- Europe: 31%
- North America: 17%
- Africa: 18%
- Asia: 8%
- Latin America/Caribbean: 3%
- Oceania: 23%
- Middle-East: 3%
Objective: to provide a broad view of the various aspects of vaccinology and tools for better decision-making

1. Understanding priorities for vaccine R&D
2. Understanding vaccine-induced immune responses
3. Being aware of new vaccine approaches
4. How to assess vaccine efficacy
5. Vaccine safety & regulatory aspects
6. Decision-making process for introduction of new vaccines
7. Define & implement optimal vaccination strategies
8. Deal with real or alleged adverse effects

- 11 days in person course at Pensieres, Annecy, France
ADVAC alumni network: more than 1400 experts in vaccinology

- [https://www.advac.org/alumni/my-account](https://www.advac.org/alumni/my-account)
- Regular alumni meetings around the year (SAGE, ESPID, IDSA, Webinars)
- Recording of ADVAC lectures posted on the alumni website
- A database of 1400 experts around the world in all areas and sectors
- Platform to share information with and between alumni
A global network of advanced vaccinology courses

- A network of 29 courses all over the world
- The objective is to assist courses to address challenges in priority areas and facilitate activities and exchange of information
- https://www.global-vaccinology-training.com
Perspectives

- Training of experts already working in immunization-vaccines creating a network of 1400 experts with around **60% from LMICs**
- The need to increase the LMICs participation to ensure that LMICs have even more vaccinology experts to create the environment needed for a thriving industry
- The need for DCVM to support this global effort (ADVAC and other courses, Alumni network, ICAVT)
- **Send more of your staff to the course!**
- Support the development of Alumni courses to keep them updated on the future of DCVMN