

**Module I :
Introduction to Vaccinology, an integrative discipline**

Monday, February 29

- 10:00 -11:00 **Introduction to the course** A. PHALIPON, F. TANGY
and Institut Pasteur registration office
- 11:00 - 12:30 **The legacy of smallpox eradication: immunization
strategies to control, eliminate or eradicate
vaccine-preventable diseases** D. TARANTOLA
(Univ. New South Wales, Australia)
- 12:30 - 14:00 *Lunch*
- 14:00 -15:30 **Poliovirus: the next successful eradication story?** F. DELPEYROUX
(Institut Pasteur, France)
- 15:30-16:00 *Sharing experience session: Eradication, elimination or control?*
D. Tarantola/ F. Delpeyroux
- 16:00 - 16:30 *Coffee break*
- 16:30 - 18:00 **Short presentations of students**

Tuesday, March 1

- 9:00 -10:30 **The Pasteurian contribution to the history
of vaccines** M. GIRARD
- 10:30 - 11:00 *Coffee break*
- 11:00 - 12:30 **Epidemiology of infectious diseases:
prerequisite for decision-making in
vaccine development** H. CAMPBELL
(Public Health England, UK)
- 12:30 - 14:00 *Lunch*
- 14:00 -15:30 **Mathematical modeling of infectious disease
transmission** P. WHITE
(Imperial College, UK)
- 15:30 - 16:00 *Coffee break*
- 16:00 – 17:00 *Sharing Experience Epidemio White/Campbell*
- 17:00 – 18:00 **Presentation of the Workshop Dengue Vaccine** A. PHALIPON, F. TANGY

Wednesday, March 2

- 9:00 -11:00 **What a vaccinologist should know about the basic
aspects of immune responses** C. LECLERC
(Institut Pasteur, France)

- 11h - 11:30 *Coffee break*
- 11:30 - 13:00 **Immunological memory: the challenge of conferring long-term protection?** R. SEKALY
(Case Western Reserve Univ., USA)
- 13:00 - 14:30 *Lunch*
- 14:30 -16:00 **Vaccinomics: the future of vaccinology?** R. SEKALY
(Case Western Reserve Univ., USA)
- 16:00 - 16:30 *Coffee break*
- 16:30 -18:30 **Correlates of vaccine-induced immunity - Current problems in vaccine development and possible solutions** S. PLOTKIN
(Vaxconsult, USA)

Thursday , March 3

- 9:00 – 10:30 **Adjuvants: past and future directions** G. DEL GIUDICE
(GSK, Italy)
- 10:30 - 11:00 *Coffee break*
- 11:00 - 12:30 **Vaccination in pregnant women** F. MUNOZ
(Baylor College of Medicine, USA)
- 12:30 - 14:00 *Lunch*
- 14:00 - 15:30 **Hurdles to vaccination in early life: revisiting immunological immaturity in human newborns** A. MARCHANT
(Univ. Libre de Bruxelles, Belgium)
- 15:30 – 16:00 *Coffee break*
- 16:00 -17:00 ***Sharing experience session: What is the future for mother versus newborn vaccination and adjuvants?***
(F. Munoz, A. Marchant, Del Guidice, A. Phalipon and F. Tangy)

Friday, March 4

- 9:00 - 10:30 **Antigen discovery: from genomics to proteomics** G. GRANDI
(????, Italy)
- 10:30 - 11:00 *Coffee break*
- 11:00 - 12:30 **Mucosal immunity: advantages and limitations developing mucosal vaccines**
(.....)
- 12:30 - 14:00 *Lunch*
- 14:00 - 15:30 **Novel strategies for delivering vaccines** B. COMBADIÈRE
(Univ. P&M Curie, France)
- 15:30-16:00 *Coffee break*
- 16:00-17:00 **Sharing: *How to choose the appropriate strategy?***
(B. Combadière, G. Grandi, ??? A. Phalipon and F. Tangy)

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Module II: Preclinical and clinical steps: basic principles

Monday, March 7

9:00 - 10:30	GMP production: which prerequisites and how to proceed	S. BROWN (BE Vaccines SAS, France)
10:30 - 11:00	<i>Coffee break</i>	
11:00 - 12:30	Preclinical safety testing of vaccines	R. FORSTER (CitoxLab, France)
12:30 - 14:00	<i>Lunch</i>	
14:00 - 16:00	Measurement of immune responses during vaccine trials	M.- L. GOUGEON (Institut Pasteur, France)
16:00-16:30	<i>Coffee break</i>	
16:30 - 18:00	Preparation Workshop Dengue vaccine design	

Tuesday , March 8

9:00 - 10:30	Phase I/II vaccine trials: methodology and implementation	D. LEWIS (University of Surrey, UK)
10:30 - 11:00	<i>Coffee break</i>	
11:00 -12:30	Phase III vaccine trials: methodology and implementation	A. PODDA/ (GSK, Italy)
12:30 - 14:00	<i>Lunch</i>	
14:00 - 15:30	Finding correlates of protection or the holy grail to avoid large phase III clinical trials	JODAR ou FLETCHER (Pfizer, USA)
15:30 - 16:00	<i>Coffee break</i>	
16:00 - 18:00	Preparation Workshop Dengue vaccine development Experience sharing in early phase vaccine development	C. ARTAUD (Institut Pasteur, France)

Wednesday, March 9

9:00 - 10:30	Post license Clinical Trials and pharmacovigilance through a practical example	C. LAMBERMONT (Sanofi Pasteur MSD, France)
10:30 - 11:00	<i>Coffee break</i>	
11:00 -12:30	Preparation Workshop Dengue vaccine development Arboviruses: complexity, emergence, prevention	A. PHALIPON F. TANGY and V. DEUBEL

12:30 - 14:00 *Lunch*

14:00 - 16:00 **Dengue: epidemiology, physiopathology, immune response, vaccine development**

A. SAKUNTABHAI
(Institut Pasteur, France)

15:30 - 16:00 *Coffee break*

16:00 - 18:00 **Group work**

Thursday, March 10

9:00 - 11:00

11:00 -11:30 *Coffee break*

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Module III: Update of vaccine development for the major infectious diseases

Thursday, March 10

THE EXAMPLE OF NEW VACCINES MADE RECENTLY AVAILABLE

11:30 - 13:00	The success of the glycoconjugate vaccines	M. BEURRET (Crucell, The Netherlands)
13:00 - 14:30	<i>Lunch</i>	
14:30 - 16:00	HPV: a vaccine against virus-induced cancer	K. HARDT (GSK Biologicals, Belgium)
16:00 – 16:30	<i>Coffee break</i>	
16:30 - 17:30	<u>Sharing experience session: M. Beurret/ K. Hardt</u>	

Friday, March 11

ACUTE RESPIRATORY INFECTIONS

9:00 - 10:30	Influenza viruses	S. MUNIER (Institut Pasteur, France)
10:30 - 11:00	<i>Coffee break</i>	
11:00 - 12:30	Influenza vaccines: the challenge to make a new vaccine each year, vaccines for pandemic flu, towards a universal vaccine	O. ENGELHARDT (NIBSC, UK)
12:30 - 14:00	<i>Lunch</i>	
14:00 - 15:30	Challenges for development of vaccines against respiratory diseases: the example of RSV	R. KARRON (Johns Hopkins University, USA)
15:30 - 16:00	<i>Coffee break</i>	
16:00 - 17:30	<u>Sharing experience session: The development of vaccines against pathogens evolving antigen drifting</u> (S.Munier, O. Engelhardt, R. Karron, A. Phalipon and F. Tangy)	

Monday, March 14

MAJOR POVERTY-ASSOCIATED INFECTIOUS DISEASES

9:00 - 11:00	Tuberculosis: epidemiology, physiopathology, immune responses, vaccine approaches	S. STENGER (IMMH, Germany)
11:00 - 11:30	<i>Coffee break</i>	
11:30 - 13:00	BCG vaccination in European and African populations: implications for the design of new tuberculosis vaccines	H. DOCKRELL (LSHTM, UK)
13:00 - 14:00	<i>Lunch</i>	
14:00 - 15:00	<i>Sharing experience session: Will it be possible to do better than BCG?</i> (S. Stenger, H. Dockrell, A. Phalipon and F. Tangy)	
15:00 - 15:30	<i>Coffee break</i>	
15:30 - 18:00	Preparation Workshop Dengue vaccine development	A. PHALIPON and F. TANGY

Tuesday, March 15

9:00 - 11:00	Malaria: epidemiology, physiopathology and current, state of malaria vaccine R&D	Z. REED (Vac-4-All SAS, France)
11:00-11:30	<i>Coffee break</i>	
11:30 - 13:00	Progress in malaria vaccine development: RTS, S/AS01 and beyond	J. VEKEMANS (GSK Biologicals, Belgium)
13:00 - 14:30	<i>Lunch</i>	
14:30 - 15:30	Sharing/ What will be the next step in malaria vaccine development? Z.Reed, J. Vekemans, AP, FT	
15:30 - 16:00	<i>Coffee break</i>	
16:00- 18:00	Preparation Workshop Dengue vaccine development	A. PHALIPON and F. TANGY

Wednesday, March 16

Workshop Dengue vaccine development

A. PHALIPON and F. TANGY
V. DEUBEL, J.F. SALUZZO
J.-P. KRAEHENBUHL, A. SAKUNTABHAI
and E. PLENNEVAUX

12:30 - 14:00 *Lunch*

14:00 - 17:00 **Workshop (continued)**

Thursday, March 17

9:00 - 10:30	HIV-AIDS: epidemiology and physiopathology	G. SILVESTRI <i>autre date</i> (Emory University, USA)
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10:30 - 11:00	<i>Coffee break</i>	
11:00 - 12:30	Towards an AIDS vaccine?	B. AUTRAN (Hôpital Pitié-Salpêtrière, France)
12:30 - 14:00	<i>Lunch</i>	
14:00 - 15:30	Preventing diarrheal diseases, a complex issue	Ph SANSONETTI (Institut Pasteur, France)
15:30 - 16:00	<i>Coffee break</i>	
16:00- 17:00	Rotavirus vaccines: success and drawback	T. VESIKARI
17:00-18:00	The Burden of Diarrhoeal Diseases and Prospects for Vaccine Impact	D.STEELE (Gates Foundation, USA)

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Module IV: Future challenges

Friday, March 18

- 9:00 - 10:30 **Globalization of vaccine production** J. CALMET
(Sanofi Pasteur, France)
- 10:30 - 11:00 *Coffee break*
- 11:00 - 12:30 **The long and winding road to make vaccines accessible to the population in need: an infrastructure issue** D. CHANG BLANC
(WHO, Switzerland)
- 12:30 - 14:00 *Lunch*
- 14:00 - 15:30 **The long and winding road to make vaccines accessible to the population in need: an economical issue** D. ATHERLY
(PATH, USA)
- 15:30 - 16:00 *Coffee break*
- 16:00 - 17:00 *Sharing experience session: How to improve vaccine implementation on the field?*
(J. Calmet , D. Atherly, D. Chang Blanc, A. Phalipon and F. Tangy)

Monday, March 21

- 9:00 - 10:30 **What are the issues vaccine manufacturers take into account for go/no go in developing a new vaccine** R. RAPPUOLI
(GSK, Italy)
- 10:30 - 11:00 *Coffee break*
- 11:00 - 12:30 **Anti-cancer vaccines: dream or reality?** C. LECLERC
(Institut Pasteur, France)
- 12:30 - 14:00 *Lunch*
- 14:00 - 15:30 **Aging population and vaccination** R. ASPINALL
(Postgraduate Med. Institute, UK)
- 15:30 - 16:00 *Coffee break*
- 16:00 - 17:00 ***Sharing experience session :***

Tuesday, March 22

- 9:00 - 10:30 **Of the importance of following epidemiology upon vaccination: the example of pertussis and diphtheria vaccines** N. GUISO
(Institut Pasteur, France)
- 10:30 - 11:00 *Coffee break*
- 11:00 - 12:30 **Of the importance of maintaining vaccine coverage: the example of measles** D. LEVY-BRUHL
(InVS, France)

12:30 - 14:00 *Lunch*

14:00 – 15:30 **Perception of vaccination**

15:30 - 16:00 Coffee break

16:00- 18:00 **Free to prepare the exam**

A. THOMSON *autre date*
(Sanofi Pasteur, France)

Wednesday, March 23

9:00 - 10:00 **Written examination: Multiple choice question paper**
Duration: one hour

10:00 - 11:00 *Coffee break*

11:00-13:00 [Smart Vaccine Workshop Presentation](#)

13:00-14:00 Lunch

14:00-17:00 [Smart Vaccine Workshop](#)

Thursday, March 24

9:00 - 12:00 [Smart Vaccine Workshop](#)

12:00 - 13:30 *Lunch*

13:30 - 17:00 [Smart Vaccine Workshop](#)

Friday, March 25

9:00 - 10:00 **Visit of the Institut Pasteur Museum**

10:00 - 13:00 **Feedback exam / Visit of laboratories** A. PHALIPON and F. TANGY

13:00 - 14:30 *Closing party*
