

## Course of Medical Entomology

**Location:** Institut Pasteur of Laos

**Dates:** 10 June to 22 June 2019

**Participants:** 15, at least with a master degree in VBDs or related subjects

**Personnel in charge:** Paul BREY (IP Laos), Anna-Bella FAILLOUX (IP Paris), Vincent ROBERT (IRD), Marie VAZEILLE (IP Paris)

**IPL Organization Committee:** Khamsing VONGPHAYLOTH, Pouthmany THAMMAVONG, Paniphone PANOLITH, Antoine des GRAVIERS, Paul BREY

### Programme

#### WEEK 1

##### Monday 10 June

**Morning (Lecture)** *Medical entomology, past and present* (Vincent ROBERT/IRD Montpellier) - 3 hours

**Afternoon (Practical work)** *Insect morphology and Physiology* (Vincent ROBERT/IRD, Marie VAZEILLE/IPP, Khamsing VONGPHAYLOTH/IPL) - 3 hours

##### Tuesday 11 June

**Morning (Lecture)** *Vectorial transmission* (Anna-Bella FAILLOUX/IPP) – 3 hours

**Afternoon (Practical Work)** *Mosquito identification (MosKeyTool)* (Vincent ROBERT/IRD, Marie VAZEILLE/IPP, Khamsing VONGPHAYLOTH/IPL, Sebastien MARCOMBE/IPL, Phoutmany THAMMAVONG/IPL) - 3 hours

##### Wednesday 12 June

**Morning (Lecture)** *Flaviviruses (Dengue, Yellow Fever, Japanese Encephalitis)* (Marc GRANDADAM/IPL) - 3 hours

**Afternoon (Lecture)** *Last emergences: Chikungunya and Zika* (Anna-Bella FAILLOUX/IPP, Marc GRANDADAM/IPL) - 3 hours

##### Thursday 13 June

**Morning (Lecture)** *Real situation of mathematical modelling in the fight against dengue* (Marc CHOISY/IRD Hanoi, Oliver TELLE/CNRS India, Marc GRANDADAM/IPL) - 3 hours

**Afternoon (Practical Work)** *Dissections, intrathoracic inoculation of mosquitoes* (Anna-Bella FAILLOUX/IPP, Marie VAZEILLE/IPP) - 3 hours

##### Friday 14 June

**Morning (Lecture)** *Wolbachia as a novel Dengue/Arbovirus Control strategy* (To be confirmed) - 3 hours

**Afternoon (Practical work)** *Experimental infections of mosquitoes* (Anna-Bella FAILLOUX/IPP, Marie VAZEILLE/IPP, Elodie CALVEZ/IPL, Elliott MIOT/IPL) - 3 hours

##### Saturday 15 June

**Morning (Lecture)** *Ticks: classification, biology, proteomic identification, infectious process* (Nathalie BOULANGER/Univ. Strasbourg) - 3 hours.

**Afternoon (Practical work) Rearing ticks and Dissections** (Nathalie BOULANGER/Univ. Strasbourg) - 3 hours.

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## **WEEK 2**

### **Monday 17 June**

**Morning (Lecture) Malaria Vector bionomics and sibling species** (Sebastien MARCOMBE/IPL) - 3 hours

**Afternoon (Lecture) Current control strategies against malaria and dengue** (Sebastien MARCOMBE/IPL) - 3 hours

### **Tuesday 18 June**

**Morning (Lecture) Sandflies** (Jerome DEPAQUIT/Univ. of Reims France, Khamsing VONGPHAYLOTH/IPL) - 3 hours

**Afternoon (Practical work) Sandfly identification** (Jerome DEPAQUIT/Univ. of Reims France, Khamsing VONGPHAYLOTH/IPL) - 3 hours

### **Wednesday 19 June**

**Morning (Lecture) Ticks and Transmission of pathogens** (Khamsing VONGPHAYLOTH/IPL, Matt ROBINSON/Wellcome Trust, Vientiane) - 3 hours

**Afternoon (Lecture & Practical Work) Resistance to Insecticides** (Sebastien MARCOMBE/IPL) – 3 hours

### **Thursday 20 June & Friday 21 June: Field Trip to Vang Vieng: Tick, Mosquito and Sandfly Collections; Speleo-entomology**

*The Field trip to Vang Vieng (4 hours by bus from IP Lao PDR) will provide the students with a real experience to collect larvae and adult blood sucking arthropods, potential vectors of human and animal diseases using different collection methods: dipping, sweep nets, BG traps Ovitrap, CDC Light traps in different biotopes. Some collections will be made in rice fields and secondary forests surrounding limestone Karsts, whereas other collections will be carried out in caves.*

### **Saturday 22 June, return to Vientiane and Departures**

### **Sunday 23 June – Departures**

#### **List of teachers**

1. BOULANGER Nathalie/Univ. Strasbourg: nboulanger@unistra.fr
2. CALVEZ Elodie/IPL: e.calvez@pasteur.la
3. CHOISY Marc/IRD Hanoi
4. DEPAQUIT Jerome/Univ. of Reims France: Jerome.depaquit@univ-reims.fr
5. FAILLOUX Anna-Bella/IPP: anna-bella.failoux@pasteur.fr
6. GRANDADAM Marc/IPL: m.grandadam@pasteur.la
7. MARCOMBE Sebastien/IPL: s.marcombe@pasteur.la
8. MIOT Elliott/IPL: e.miot@pasteur.la
9. Peter RYAN/World Mosquito Project, Ho Chi Minh City
10. ROBERT Vincent/IRD Montpellier: Vincent.robert@ird.fr
11. ROBINSON Matt/Wellcome Trust, Vientiane
12. Telle Oliver/CNRS India

13. THAMMAVONG Phoutmany/IPL
14. VAZEILLE Marie/IPP: [marie.vazeille@pasteur.fr](mailto:marie.vazeille@pasteur.fr)
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