

Pasteur TB course 2017 Preliminary Program 13 Avril

Monday June 12 2017

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| 9:00 - 10:00 | Welcome and introduction to the course Pre-test for practical session | Brigitte GICQUEL Catherine PIERRE-AUDIGIER Howard TAKIFF (Institut Pasteur - Paris) |
| 10:30 - 11:00 | Lecture: The fight against Tuberculosis - general aspects | Brigitte GICQUEL (Institut Pasteur - Paris) |
| 11:15 - 12:15 | Lecture: Clinical aspects in Tuberculosis | Steffen STENGER (Ulm University - Ulm - Germany) |
| 13:15 - 13:45 | Laboratory presentation and use of available material | Isabelle LEQUEUTRE Insitut Pasteur - Paris |
| 13:45 - 14:00 | Synthesis of the day's activities in Context | |
| 14:00 - 14:30 | ZNStaining and microscopy | |
| 14:30 - 15:00 | Lecture: Mechanisms of resistance to RIF and Fluoroquinolones Practical workshop: Antibiotic Resistance sequencing | Howard TAKIFF Howard TAKIFF |
| 15:30 - 18:30 | Principal of test Preparaton of mix and amplification, preparing gels | |

Tuesday June 13 2017

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|---------------|---|--|
| 9:00 - 10:00 | Lecture: Immunology of TB | Steffen STENGER (Ulm University - Ulm - Germany) |
| 10:00 - 11:00 | Lecture: Evaluation of new diagnostic techniques | Howard TAKIFF |
| 11:15 - 11:30 | Course PHOTO | |
| 11:30 - 12:30 | Lecture: Phenotypic and molcular tests for diagnosis | Catherine PIERRE-AUDIGIER (Institut Pasteur - Paris) |
| 13:30 - 13:45 | Synthesis of the day's activities in Context | |
| 13:45 - 15:00 | Practical workshop: Antibiotic Resistance Sequencing Electrophoresis | Howard TAKIFF |
| 15:00 - 15:45 | Practical workshop Petroff demonstration, Kudoh inoculation | |
| 15:45 - 16:45 | Practical workshop: Antibiotic Resistance Sequencing Analysis electrophoresis PCR results | Howard TAKIFF |
| 17:00 - 18:00 | Lecture: TB mol Epi and Spoligotyping | Dick VAN SOOLINGEN (National Institute for Public Health and the Environment - Netherlands) |
| 18:00 - 19:00 | Intro to Bioinformatics | Howard TAKIFF |

Wednesday June 14 2017

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|------------------------|---|--|
| 09:00-9:30 (in Lab) | PCR spoligo | Dick VAN SOOLINGEN |
| 9:30 - 10:30 | Lecture: Pediatric TB | Christophe DELACOURT (Necker Enfants Malades Hospital - Paris France) |
| 10:45 - 12:00 | Lecture: TB mol Epi and Spoligotyping | Dick VAN SOOLINGEN |
| 13:00 - 13:15 | Synthesis of the day's activities in Context | |
| 13:15 - 18:00 | Practical Workshop: Spoligotyping, Hybridization + lecture during dead time | Dick VAN SOOLINGEN |
| 18:00 - 19:00 | Bioinformatics exercises | Howard TAKIFF |

Thursday June 15 201709:00-9:30
(in Lab)**Lecture:** MIRU**Philip SUPPLY**

(Institut Pasteur - Lille -France)

9:30-10:00

PCR MIRU

Veronique JOLY

(Hopital Bichat–Claude Bernard - Paris)

10:30-11:30

Lecture: TB HIV/Diabetes**Laurent ABEL**

(Necker Enfants Malades Hospital - Paris France)

11:45-12:45

Lecture: Genetic Susceptibility to TB

13:45 - 14:00

Synthesis of the day's activities in Context

14:00-16:00

Practical workshop: MIRU, electrophoresis (dépôts = 90') + lecture
MIRU gels overnight**Philip SUPPLY**

(Institut Pasteur - Lille - France)

16:30 - 18:00

Practical Workshop: Spoligotyping: Results and Discussion**Philip SUPPLY**

18:00 - 19:00

Bioinformatics exercises

Friday June 16 2017

9:00 – 10:00

Lecture: NTM Detection and speciation; when to treat**Jean-Louis HERRMANN**

(Hôpital Raymond Poincaré- Garches-France)

10:15-12:45

Lecture: Population structures and evolution of M. Tuberculosis**Sébastien GAGNEUX****MIRU and Spoligotyping in context with WGS****Sébastien GAGNEUX****Lecture:** WGS and SNPs and Transmission

(Swiss Tropical and Public Health Institute, Basel - Switzerland)

14:00 - 14:15

Synthesis of the day's activities in Context

14:15 - 16:30

Practical Workshop: MIRU Photos + Results and Discussion**Philip SUPPLY**

16:30 - 18:00

Comparison of results: Mol Epi. in the context of tuberculosis phylogeny

Philip SUPPLY*First week course evaluation***- WEEK 2 -****Monday June 19 2017**

9 - 10:30

Lecture: Treatment of Tuberculosis**Nicolas VEZIRIS**

Including MDR and XDR cases

(Hôpital Pitié Salpêtrière, Paris- France)

10:45 - 11:15

Lecture: The short term treatment for MDR tuberculosis**Arnaud TREBUCQ**

(The Union - Paris - France)

11:30-11:45

Synthesis of the day's activities in Context

-11:45-12:15

Practical workshop: Line Probe assay test (Hain) Genotype
MTBDRplus/sl**Catherine PIERRE-AUDIGIER**

Preparation of Mix and amplification

(Institut Pasteur – Paris)

12:15-12:45

Practical workshop: GeneXpert**Indira SOUNDIRAM**

Principle of test : first run

(Cepheid Europe - Maurens Scopont - France)

Practical workshop: Genotype MDRplus-hybridization**Catherine PIERRE-AUDIGIER**

(Institut Pasteur - Paris)

14:00-18:00

GeneXpert : Tests, Installation and maintenance

Indira SOUNDIRAM

Tuesday June 20 2017

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| 9:00 - 10:00 | Current and future technical options for the diagnosis of drug resistant tuberculosis | Elisa TAGLIANI Institut San Raffaele - Milano |
| 10:15-11:15 | Defining the boundaries of a healthy immune response for a better understanding of TB immunity | Darragh Duffy Institut Pasteur, Paris |
| 11:30 - 12:30 | Bioinformatics exercises | |
| 13:45 - 15:00 | Practical workshop: Interpretation of Genotype MTBDRplus/sl | Catherine PIERRE-AUDIGIER, Elisa TAGLIANI |
| 15:30 - 17:45 | Practical workshop: Interpretation and Discussion of GeneXpert | Indira SOUNDIRAM, Elisa TAGLIANI |
| 18:00 - 18:45 | Bioinformatics exercises | |

Wednesday June 21 2017

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|---------------|--|---|
| 9:00 – 11:00 | Lecture: New Drugs, New Regimens, Drug trials | Susan DORMAN (Johns Hopkins Center for Tuberculosis Research, - Baltimore - U.S.A.) |
| 11:15 - 13:00 | Lecture: Drug action and Resistance Mechanisms | Ying ZHANG (Johns Hopkins Center for Tuberculosis Research - Baltimore - U.S.A.) |
| 14:00 - 14:15 | Synthesis of the day's activities in Context | |
| 14:15 - 15:30 | Lecture: Clinical usefulness of WGS | Philip BUTCHER and Adam WITNEY (University of London) |
| 15:30 - 18:00 | Practical Workshop: Bioinformatics exercises Databases, WGS | Magnus FONTES and team (Institut Pasteur - Paris) |

Thursday June 22 2017

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|---------------|--|---|
| 9:00 - 11:00 | EXAM | |
| 11:15 - 12:30 | Lecture: Tuberculosis resistance: value of rapid testing in various infrastructure settings | Francis DROBNIEWSKI Imperial College - London |
| 13:30 - 13:45 | Synthesis of the day's activities in Context | |
| 13:45 – 18:00 | Practical workshop: WGS scanning, databases | Philip BUTCHER and Adam WITNEY |

Friday June 23 2017

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|---------------|--|---|
| 9:00 - 10:00 | Lecture: General Epidemiology of Tuberculosis | Philippe GLAZIOU (World Health Organisation - Geneva - Switzerland) |
| 10:15 - 11:15 | Pasteur Museum visit | |
| 11:30 - 13:00 | Correction of Tests | |
| 14:00 - 15:45 | Correction of Tests | |
| 16:00 - 18:00 | Group Discussion, Course Evaluation | |
| 18:00 - 18:00 | Presentation of Diplomas and course closure | |