

# Genes, Ecosystems and Risk of Infection

## Scientific programme

Version 17 April 2015

Monday 20 <sup>th</sup> April 2015	
16.00 – 18.00	<b>Registration</b>
Tuesday 21 <sup>st</sup> April 2015	
10.00 – 14.00	<b>Registration</b>
14.00 – 14.30	<b>Opening - General introduction</b>
<b>Session 1 - Genes</b>	
14.30 – 14.50 <i>Chairman: M. Niedrig (Robert Koch Institut)</i>	<b>Keynote address:</b> <b><i>Molecular taxonomy of sand flies: which species actually are out there? – Vit Dvorak (Charles University in Prague, Czech Rep.)</i></b>
14.50 – 15.05	Mosquito-borne viruses in south Moravia (Czechland) - summary of an EDENext study – <i>Zdenek Hubalek (Institute of Vertebrate Biology, Czech Rep.)</i>
15.05 – 15.20	May complete genome-based distances be of help for taxonomical classification of members of the genus <i>Phlebovirus</i> within the Bunyaviridae family? – <i>Rémi Charrel (Université de Marseille, France)</i>
15.20 – 15.35	Transcriptomic studies of <i>Ixodes ricinus</i> salivary glands lead to the identification of vaccine candidates against tick and tick-borne pathogens – <i>Ladislav Simo (INRA, France)</i>
15.35 – 15.50	Questions
15.50 – 16.00	Poster announcement 1.1. to 1.18 (see the list of posters)
16.00 – 16.30	<b>Coffee break and poster session</b>
16.30 – 16.45 <i>Chairman: Annapaola Rizzoli (Fondazione Edmund Mach)</i>	Using population genetics to assess tick dispersal, from the mainland to the landscape scale : a review of current knowledge and its utility to design tick-control methods – <i>Olivier Plantard (INRA, France)</i>
16.45 – 17.00	Modelling the effects of tick-host interaction on pathogen dynamics: TBE as a case study – <i>Roberto Rosa (Fondazione Edmund Mach, Italy)</i>
17.00 – 17.20	<b>Keynote address:</b> <b><i>The future of research on TB pathogens: shifting from the «one pathogen» vision to the pathobiome paradigm – Muriel Vayssier (INRA, France)</i></b>
17.20 – 17.35	Questions
17.35 – 18.30	<b>Welcome drink</b>
19.30 -	<b>EDENext Steering Committee dinner</b>

## Wednesday 22nd April 2015

### ***Session 2 - Ecosystems: vectors***

9.00 – 9.20 <i>Chairman: Guy Hendrickx (Avia-Gis)</i>	<b>Keynote address:</b> <b><i>Sharing scientific data: 1 + 1 = 3 – Els Ducheyne (Avia-Gis, Belgium)</i></b>
9.20 – 9.35	Network “Rodent-borne pathogens” in Germany: An Overview – <i>Rainer Ulrich (Friedrich-Loeffler-Institut)</i>
9.35 – 9.50	Host preferences and circadian rhythm of <i>Culicoides</i> (Diptera: Ceratopogonidae), potential vectors of African horse sickness and bluetongue viruses in Senegal - <i>Moussa Fall (ISRA, Senegal)</i>
9.50 – 10.05	Sandflies in the Cevennes Region: 3-year to investigate the parameters affecting their spatiotemporal dynamics – <i>Jorian Prudhomme (Institut de Recherche pour le Développement-MIVEGEC, France)</i>
10.05 – 10.20	Mechanistic modelling of midge vector population dynamics – <i>Steven White (Centre for Ecology and Hydrology, UK)</i>
10.20 – 10.35	Fur or feather? Feeding preferences of species of <i>Culicoides</i> biting midges in Europe and its consequences for pathogen transmission – <i>Josué Martínez-De La Puente (Estación Biológica de Doñana, Spain)</i>
10.35 – 10.50	Questions
10.50 – 11.00	Poster announcement 2.1. to 2.21 (see the list of posters)
11.00 – 11.30	<b>Coffee break and poster session</b>
11.30 – 11.45 <i>Chairman: Catherine Cetre-Sossah (CIRAD)</i>	Deer and rodents as determinants of tick density and <i>Borrelia burgdorferi s.l.</i> prevalence in ticks in the Netherlands – <i>Tim Hofmeester (Wageningen University, Netherlands)</i>
11.45 – 12.00	Seasonal activity of <i>Ixodes ricinus</i> and its dependence on weather factors in the course of the year: results of a multi-annual study under quasi-natural conditions – <i>Olaf Kahl (Tick-radar GmbH, Germany)</i>
12.00 – 12.20	<b>Keynote address:</b> <b><i>Ecology and eco-epidemiology of Culicoides-borne diseases: What have we learnt and where do we go from here? – Kate Searle (Centre for Ecology and Hydrology, UK)</i></b>
12.20 – 12.35	Questions
12.35 – 14.00	<b>Lunch</b>

## Wednesday 22nd April 2015

### ***Session 3 - Ecosystems: transmission***

14.00 – 14.20 <i>Chairman: Paul Reiter (Institut Pasteur France)</i>	<b>Keynote address:</b> <b><i>Understanding the ecology of West Nile virus transmission in Europe – Jordi Figuerola (Estación Biológica de Doñana, Spain)</i></b>
14.20 – 14.35	Evaluation of collection methods for <i>Phlebotomus</i> -borne viruses detection: isolation and viral RNA integrity performance – <i>Marina Gramiccia (Istituto Superiore di Sanita, Italy)</i>
14.35 – 14.50	Why Hantavirus prevalence does not always increase with host density: modeling the role of host spatial behavior and maternal antibodies – <i>Jonas Reijnders (University of Antwerpen, Belgium)</i>
14.50 - 15.05	Temporal variation of Dobrava-Belgrade virus (Bunyaviridae, Hantavirus) seroprevalence in a yellow-necked mice population in northern Italy – <i>Valentina Tagliapietra (Fondazione Edmund Mach, Italy)</i>
15.05 – 15.20	Delayed and direct impacts of rodents and climate on human Tularemia in Finland – <i>Heikki Henttonen (Finnish Forest Research Institute, Finland)</i>
15.20 – 15.35	Testing mechanisms of a dilution effect for Puumala hantavirus: results of a large field experiment – <i>Herwig Leirs (University of Antwerp, Belgium)</i>
15.35 – 15.50	Questions
15.50 – 16.00	Poster announcement 3.1. to 3.29. (see the list of posters)
16.00 – 16.30	<b>Coffee break and poster session</b>
16.30 – 16.45 <i>Chairman: Hans Heesterbeek (Utrecht University)</i>	Application of a Transdisciplinary Study Design for Understanding Dengue Transmission in Dhaka, Bangladesh – <i>Parnali Dhar Chowdhury (University of Manitoba, Canada)</i>
16.45 – 17.00	A Resource-based habitat approach for modelling vector-borne disease risks – <i>Sophie Vanwambeke (Université Catholique de Louvain, Belgium)</i>
17.00 – 17.20	<b>Keynote address:</b> <b><i>Vector-borne disease modelling; R0 and beyond – Nienke Hartemink (Utrecht University, Netherlands)</i></b>
17.20 – 17.35	Questions
18.00 – 19.00	<b>Presentation of VECMAP and drink</b>

## Thursday 23rd April 2015

### ***Session 4 - Ecosystems: change***

9.00 – 9.20 <i>Chairman: Heikki Henttonen (Natural Resources Centre Finland)</i>	<b>Keynote address:</b> <b><i>Many faces of rodent-borne infections in Europe – Tarja Sironen (University of Helsinki, Finland)</i></b>
9.20 – 9.35	Rift Valley fever in Senegal, 2013: a changing epidemiology? - <i>Ismaila Seck (ISRA, Senegal)</i>
9.35 – 9.50	Assessing the risks of Puumala virus emergence from immunogenomics of its reservoir, the bank vole <i>Myodes glareolus</i> , and its links with environmental variations – <i>Nathalie Charbonnel (INRA, France)</i>
9.50 – 10.05	Autochthonous Chikungunya transmission and extreme climate events in Southern France – <i>David Roiz (Institut de Recherche pour le Développement, France)</i>
10.05 – 10.20	Forest fragmentation and metapopulation dynamics of bank voles govern the persistence and spread of hantavirus Puumala in Western Europe – <i>Jean-François Cosson (INRA, France)</i>
10.20 – 10.35	Modelling the effect of environmental drivers on mosquito populations. How might changing temperature affect seasonal dynamics? - <i>David Ewing (Centre for Ecology and Hydrology, UK)</i>
10.35 – 10.50	Questions
10.50 – 11.00	Poster announcement 4.1. to 4.19. (see the list of posters)
11.00 – 11.30	<b>Coffee break and poster session</b>
11.30 – 11.45 <i>Chairman: Willy Wint (ERGO)</i>	Identifying main drivers and testing control strategies for CCHFV spread – <i>Thierry Hoch (INRA, France)</i>
11.45 – 12.00	The impacts of climate change on the habitability of <i>Aedes albopictus</i> : challenges in global forecasting – <i>Kamil Erguler (The Cyprus Institute, Cyprus)</i>
12.00 – 12.15	Vector-borne disease intelligence: Strategies to deal with disease burden and threats – <i>Marieta Braks (National Institute for Public Health and the Environment)</i>
12.15 – 12.30	Questions
12.30 – 14.00	<b>Lunch</b>

## Thursday 23rd April 2015

### Session 5 - Risk of infection

14.00 – 14.20 <i>Chairman: Martin Groschup (Friedrich-Loeffler-Institut)</i>	<b>Keynote address:</b> <b>Public Health perspectives on vector-borne infections in Europe – Kerstin Dressel (Sine-Institut gGmbH)</b>
14.20 – 14.35	Evaluation of the efficacy of Olyset® Plus in a village-based cohort study in the Cukurova plain, Turkey, in an area of hyperendemic cutaneous Leishmaniasis – <i>Mehmet Karakus (Ege University, Turkey)</i>
14.35 – 14.50	The use of insecticide impregnated nets against <i>Culicoides</i> spp.: state of the art and progress in the project Edenext – <i>Miguel Miranda (University of the Balearic Islands, Spain)</i>
14.50 – 15.05	Field efficacy of pour-on 1% flumethrin treatment on the tick infestations in cattle in a CCHF hyper-endemic region in Turkey – <i>Esin Guven (Ataturk University, Turkey)</i>
15.05 – 15.20	Control of the Asian Tiger mosquito, <i>Aedes albopictus</i> (Skuse, 1894): what's wrong? – <i>Saïd Boubidi (EID Méditerranée, France)</i>
15.20 – 15.35	Crimean-Congo haemorrhagic fever virus: the first line of protection is understanding – <i>Marc Mertens (FLI, Germany)</i>
15.35 – 15.50	The joint risk score for vector-borne diseases used for early detection – <i>Egil Fischer (Central Veterinary Institute, part of Wageningen UR, Netherlands)</i>
15.50 – 16.05	Questions
16.05 – 16.15	Poster announcement 5.1. to 5.23. (see the list of posters)
16.15 – 16.45	<b>Coffee break and poster session</b>
16.45 – 17.00 <i>Chairman: Renaud Lancelot (CIRAD)</i>	Clues and tools to model spatial distribution of zoonoses based on the tip of the iceberg, the human cases – <i>Caroline Zeimes (Université Catholique de Louvain, Belgium)</i>
17.00 – 17.15	Getting prepared: Climate-based forecasting of Puumala hantavirus disease risk through space and time in Western Europe – <i>Katrien Tersago (Evolutionary Ecology Group, University of Antwerp, Belgium - Epidemiology of Infectious Diseases Unit, Scientific Institute of Public health, Belgium)</i>
17.15 – 17.30	Questions
17.30 – 18.15	<b>Poster award and concluding session</b> <ul style="list-style-type: none"> <li>- Public health perspectives for Vector-borne diseases <ul style="list-style-type: none"> <li>o The ECDC point of view (Hervé Zeller, ECDC)</li> </ul> </li> <li>- Poster award</li> </ul>
Departure 20.00 –	<b>Conference dinner – Restaurant “El Greco”</b>

## Friday 24th April 2015

	Optional excursions (see on the website/practical information)
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