

Monday, the 6th of July 2015 (14:00-18.00)

Auditorium of Biopark - 11 rue Watt 75013 Paris

### **Mini-symposium**

#### **“Current and Future Research trends on Climate Change and Health”**

Convenor –Pr Yves Lévy, Chairman, French Alliance for life and Health Sciences (Aviesan)

#### **Objectives and Summary**

The human health consequences of global environmental changes are among the top priorities of citizens worldwide. There is strong evidence that climate change has already had significant effects on population health and additional negative consequences are expected in coming decades. One of the critical issues is how climate change, together with other associated environmental and social stressors, leads to specific health consequences. Understanding such effects and possible interactions will be critical for effective public health planning.

The mini-symposium will present state of the art knowledge on the health effects of climate change and its possible interactions with other stressors as well as future research trends. It is motivated in part by the exposome concept which aims to integrate in comprehensive manner environmental exposures and their impacts on health. Addressing climate change health effects in this context has several important implications: health effects at various levels from early biological modifications to clinical symptoms are studied taking into consideration climate change as well as other stressors such as atmospheric pollution, biological pathogens and socio-economic factors. In addition, observational, epidemiological and experimental studies are carried and integrated using multidisciplinary approaches. Finally, it is critical to gather large amounts of environmental, behavioral and health data, as well as models of future trends, and to develop the methods to analyze and to integrate those data.

The mini-symposium will include two sessions and a round table. The first sessions consists of presentations on critical health outcomes of climate change and related environmental stressors. Talks will address: i) air pollution, including how climate change, meteorological factors and atmospheric pollutants contribute to particulate and gaseous air pollution and consequent impact on health; ii) the emergence and spread of infectious diseases due to climate change in interaction with other environmental and social drivers; iii) the contribution of socio-economic, age or gender vulnerabilities to the exacerbation of climate change effects. The second session will focus on innovative methods that will shape the research of the future. These include the gathering and mathematical analysis of big data obtained from surveying the environment and human health, modeling the interactions between ecological changes and human health, in addition to monitoring exposures as well as physical and behavioral parameters using new sensors and devices. Such methods will have significant impacts on future environmental, biomedical, public health and socio-economic research. The round table will focus on future trends in research, research needs and translation of science findings into public health decisions.

## Preliminary Program

14:00 **Pr Yves Lévy**, (Inserm/Aviesan): Opening

14:10 **R Barouki** (Inserm, UPD, Paris): Short introduction on applying the exposome concept in the context of climate and health

### 14:20 Session 1: critical health effects

14:20: **R Slama** (Inserm, Grenoble): « Influence of meteorological factors and atmospheric pollutants on human reproduction »

14:40: **I Annesi-Maesano** (Inserm, UPMC, Paris): « The burden of meteorological factors to allergic and respiratory health and risk factors »

15:00: **JF Guégan** (IRD, Montpellier): « Both short and long-term climatic patterns drive the epidemics of water-borne infections, disentangling the impact of climate change on epidemics »

### 15:20 Session 2A: new methodologies

15:20 **P Roy** (CNRS, Lyon): « On the importance of biostatistics in a big data world »

15:40 **M de Paula Corrêa** (Brasil): « Sensors in UV detection »

16:00: *Coffee break*

### 16:20 Session 2B: new methodologies

16:20: **R Sauerborn** (Heidelberg): « Using ongoing decade-long health cohorts from Africa and Asia to quantify health impacts of climate change »

16:40: **JP-Gaudillière** (CNRS, Villejuif): « Social sciences and climate change »

17:00: **C Caminade** (UK): « Modelling the impact of climate change on human and animal vector-borne diseases »

17:20 Round table: *chair by P Kinney (Columbia, USA).*

**A Flahault** (UPD Paris/Genève), **C Flamand** (Institut Pasteur, Guyane), **S Joussaume** (IPSL, GIS Climat), **JP Moatti** (IRD, Marseille), **M Pascal** (Invs), **A Stauffer** (HEAL, Brussels), **N Watts** (Lancet commission, UK), *all speakers and the audience*

18:00 **P Kinney** (Columbia, USA) and **JP Moatti** (IRD, Marseille): Conclusion

**To register, send email before the 30<sup>th</sup> of June to [marion.le-gal@inserm.fr](mailto:marion.le-gal@inserm.fr)**

## Organizing committee

Robert Barouki, Isabella Annesi-Maesano, Pascal Beaudeau, Geneviève Chêne, Anna-Bella Failloux, Antoine Flahault, Jean-François Guégan, Didier Hauglustaine, Jennifer Heurley, Sylvie Joussaume, Patrick Kinney, Alice Kopel, Johanna Lepeule, Marie Lhosmot, Francelyne Marano, Sylvia Medina, Mathilde Pascal, Charles Persoz, Philippe Saiag, Rainer Sauerborn, Rémy Slama, France Wallet