

Appel à manifestation d'intérêt - Chaire Inserm
Fiche projet type

Research director (equivalent full-time prof.)

Établissement/organisme porteur : Inserm

Nom du chef d'établissement/d'organisme : Gilles Bloch

Site concerné : Rennes

Région académique : Rennes

Établissements/organismes partenaires envisagés : Université de Rennes 1 et EHESP (Ecole des Hautes Etudes en Santé Publique)

Nom du projet : Exposome and chronic diseases / Exposome et maladies chroniques

Mots-clés : Exposome, épidémiologie environnementale, facteurs de risques, Maladies chroniques

Durée visée: 3 years

Scientific domain: Public health, exposomics, environmental exposure

Section (s) CNU/CoNRS/CSS correspondante (s) : CSS6 Inserm

Strategy of the host institution:

The French National Institute of Health and Medical Research (Inserm), the only French public research organization entirely dedicated to human health, covers a wide range of health research fields, from basic research to clinical research, to public health research, the latter being under the supervision of a fully-fledged multi-organization thematic institute. Thus, in its "*Contrat d'Objectifs de Moyens et de performance 2021-2025*", Inserm clearly displays priority scientific axes, responding to major health and societal issues. Among the research themes highlighted as leading scientific prospects, Inserm is committed to the fields of metabolic and chronic inflammatory diseases, public health, including health-environment issues, the impact of climate change and the exposome. This request for a chair on the theme of "Exposome and chronic diseases" is therefore fully in line with this approach and the chair is a tool for this strategy.

Strategy of the host laboratory:

The Research Institute for Environmental and Occupational Health (IRSET) is a large inter- and multidisciplinary research center on environmental and work-related risks in the field of public health. The main objective of this institute, with more than 305 people, is to study and understand how environmental factors, i.e. certain physical agents such as electromagnetic waves, chemical agents such as environmental pollutants including pesticides, biological agents such as certain viruses or parasites, occupational exposures and socio-economic factors, influence human health. Through the chair, IRSET wishes to reinforce its scientific strategy in the field of environmental health by promoting research in environmental epidemiology, allowing to better characterize the role of the exposome and environmental exposures in the occurrence and progression of chronic diseases. This chair also supports IRSET's attractiveness policy and its dynamic of renewal and creation of new teams in innovative disciplinary fields.

Summary of the scientific project:

The set of environmental exposures to which an individual is exposed, from conception and throughout his or her life (notion of exposome), provides an unprecedented conceptual framework for the study of multiple environmental risks (physical, chemical and biological agents, lifestyles, climate change...) and their combined effects on the occurrence and progression of chronic tumor and non-tumor diseases, the number of which is clearly increasing. The chair holder will draw on his/her expertise in environmental epidemiology and his mastery in the construction and implementation of appropriate studies, the measurement of exposures and the statistical processing of data, to further investigate the links between the exposome and health and thus contribute to the improvement of prevention strategies. The chair will interact with the various IRSET research teams, particularly in environmental epidemiology and occupational health, as well as with the IRSET's LERES platform. He/she will build his project by taking part in European projects in the field of the exposome and will aim to create a new team at the end of his/her contract.

Summary of the teaching project:

The chair holder will be able to teach in the Master of Public Health program, co-accredited by the University of Rennes 1, the Ecole des hautes études en santé publique (EHESP-School of Public Health) and the University Rennes 2, which includes 12 Master 2 programs. Thanks to his/her competences in environmental epidemiology and causal inference methods, the chair holder could teach more particularly with the students of the courses "Modeling in Clinical Pharmacology and Epidemiology (MPCE)" and "Methods and tools for the evaluation of environment-related health risks (METEORES)". In this context, he/she could develop courses on the methodology for evaluating environmental exposures in epidemiology in its field of competence (e.g. use of geographic information systems, air pollution), on how to consider errors in measuring these exposures and on advanced statistical models for studying the relationship between the exposome and health.

Funding:

ANR package	200K€
Co-funding* (Univ Rennes 1 grant for PhD salary + Irset's operating funding)	100K€
Total project	300K€

*source et montant

Scientific communication and dissemination:

The chair holder will aim to publish regularly in the best international scientific journals. He/she will communicate on the results of his/her research during international congresses dealing with his/her research fields, and will participate in the organization and animation of scientific events in France and abroad. To do this, he/she will rely on the partnerships already in place between the IRSET and prestigious centres in public health research across Europe and North America. He/she will also develop new international partnerships in the field of exposomics.

Open Science:

The Université de Rennes 1 defines itself as a sustainable organisation, committed to accompany societal evolution. It has adopted a global and proactive policy in favour of open science, open education and open innovation, and has implemented rules for systematic publication to the open

archive HAL. This approach marks an important step towards generalizing open resources in research and education.

Science and society:

Thanks to the close links between IRSET members and the communication services at the Université de Rennes 1, the Inserm, the EHESP and the Rennes University-Hospital, our main scientific discoveries and medical advances are regularly taken up by the local and national media. Dissemination to the general public is continuous, through both actions of communication and participations in local or national events.

Indicators:

Beyond scientific production, the evolution of the chair holder will be evaluated according to the following criteria: international networking, grant securing, training by research and supervision, innovation and teaching activities. In addition to this regular follow-up, in-depth annual evaluation will be carried out to ensure that, at the end of the 3-year period, the chair holder will be appointed to a permanent position of Research Director by the Inserm.