

What is the ExposUM Doctoral Nexus?

The Doctoral Nexus proposed by the [ExposUM Institute](#) are networks of 3 to 4 PhD students from different disciplines and affiliated to at least two different research units.

Compared with a traditional PhD, taking part in a Doctoral Nexus will encourage the ability to work in a team and to design projects in a transdisciplinary way while deepening one's own field of expertise.

A specific teaching programme will be offered and the doctoral students concerned will also have the opportunity to organise a seminar within the Nexus network.

Theses are funded from the outset for 4 years, including the PhD student's salary and an environmental allowance



Thesis Title: Impact of Environmental Disasters on Psychotropic Drug Consumption

Expected Start Date: 01/10/2025

Thesis Director: ARTERO Sylvaine, Institute of Functional Genomics (IGF), UMR 5203

Co-director: PARMENTIER Marie-Laure, Institute of Functional Genomics (IGF), UMR 5203

Context

"Natural" or rather environmental disasters such as storms, fires, extreme heat waves (heatwaves), and floods have profound consequences on the physical and mental health of populations. Direct exposure to these events can lead to acute stress, post-traumatic stress disorder, or exacerbate pre-existing psychiatric conditions. In France, several recent environmental disasters, such as floods or wildfires in Gironde, have highlighted significant impacts on the mental health of affected populations, contributing to an increase in anxiety and depressive disorders, as well as a rise in psychotropic drug consumption. Scientific projections indicate that climate change will lead to an increase in the frequency and intensity of these disasters in the coming decades. This evolution will exacerbate their impact on the prevalence of psychiatric disorders, making it essential to better understand and quantify this mechanism. Additionally, the extensive media coverage of such major disasters, whether they occur in France or abroad, can generate a sense of helplessness, psychological distress, and an increased perception of climate threats, which is known as eco-anxiety. Individuals exposed to catastrophic images and stories through the media may experience distress comparable to, or greater than, those directly affected.

Objectives

This thesis project aims to explore the impact of both direct and indirect exposure to environmental disasters on psychotropic drug consumption and the emergence of psychiatric conditions, across France, using data from the National Health Data System (SNDS).

The objectives are to:

- Analyze variations in psychotropic drug consumption in areas directly impacted by natural disasters.
- Study fluctuations in psychotropic drug consumption in the weeks following highly publicized climate disasters.
- Differentiate between types of psychotropic drugs (antidepressants, anxiolytics, antipsychotics, mood stabilizers, hypnotics).
- Compare the impact of directly experienced disasters with that of media-publicized disasters on mental health.
- Evaluate differences between media exposure and direct exposure based on socio-demographic categories.

Methods

Data from SNDS: The SNDS is a medico-administrative database that covers almost the entire French population and provides access to information on medication reimbursements, hospitalizations, and medical procedures. We will use reimbursement data for psychotropics to assess changes in their consumption before and after environmental disasters. Access to this data will require specific authorization in compliance with current regulations.

Identification of natural disasters directly affecting specific areas: We will use disaster declaration databases (CATNAT), the National Observatory of Natural Risks (ONPN), and Météo France to locate and characterize major environmental events in France, including extended heatwave episodes.

Expected Outcomes

- Improved understanding of the psychological impact of environmental disasters, whether directly experienced or mediated through the media.
- Identification of vulnerable populations requiring specific psychological support.
- Guidance for public policies on disaster prevention and post-disaster psychological care.

Required Profile and Skills

- Master's degree in Epidemiology/Biostatistics
- Expertise: Multivariate statistical analyses, time series, management of large-scale databases. R/SAS software.

Details on Supervision

Supervision will be provided by S. Artero, epidemiologist in neuropsychiatry, with co-supervision by M.L. Parmentier, recognized for her work on eco-anxiety. M.L. Parmentier is a member of the management committee of the European COST CliMent network, which will allow the PhD student to



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participate in activities of this network dedicated to studying the impact of climate change on mental health. The student will also receive training in SNDS data and statistical supervision through the BEN platform (Biostatistics and Epidemiology for Neurosciences) led by S. Artero at IGF.

Application procedure

The application must include the following

- a CV
- a letter of motivation
- a copy of the degree required for registration
- any additional specific information requested by the doctoral school CBS2

<https://edcbs2.umontpellier.fr>

If you would like to apply for this position, please send an e-mail to sylvaine.artero@inserm.fr, with a CC to marie-laure.parmentier@igf.cnrs.fr and exposum-aap@umontpellier.fr to inform them of your interest.

Before Monday 31 May, 2:00 PM CET



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The University of Montpellier

KEY FIGURES

51857
students



73
research facilities

15
technology platforms

657
National and
institutional diplomas

17
faculties, schools and
institutes

9
doctoral schools

TOP 200
in the Shanghai
ranking

5132 employees
including **2818** teachers, researchers and research assistants

7800
scientific publications
in 2022

RESEARCH CENTERS

From space exploration and robotics to ecological engineering and chronic diseases, UM researchers are inventing tomorrow's solutions for mankind and the environment. Dynamic research, conducted in close collaboration with research organizations and benefiting from high-level technological platforms to meet the needs of 21st century society.

The UM is committed to promoting its cutting-edge research by forging close links with local industry, particularly in the biomedical and new technologies sectors.

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SCIENTIFIC APPEAL

Open to the world, the University of Montpellier contributes to the structuring of the European higher education area, and strengthens its international positioning and attractiveness, in close collaboration with its partners in the I-SITE Program of Excellence, through programs adapted to the major scientific challenges it faces.

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