



## Call for Applications for a Doctoral Position 2026-2029

# Ultra-Processed Foods, Individual Choices and Cardio-Renal Health: Integrated Analyses from the STANISLAS (DeTRA-CARE)

### 1. Background and Project presentation

#### *Societal Context*

Over recent decades, ultra-processed foods (UPFs) have become increasingly prevalent. These industrial ready-to-eat products are highly palatable and of low nutritional quality, and they currently account for approximately 35% of total energy intake in France. High UPF consumption is associated with an increased risk of obesity and cardiovascular diseases (Lane et al., 2024; Monteiro et al., 2025; Touvier et al., 2023). In this context, a recent report by ANSES highlighted that the level of evidence regarding certain cardiovascular pathologies remains limited, calling for further investigation.

In particular, chronic kidney disease is a major public health issue that has been little studied in relation to UPF consumption, although it is projected to become the fifth leading cause of death worldwide by 2040. Cardiovascular and renal diseases share risk factors and pathophysiological mechanisms, with bidirectional interactions. It is therefore essential to study the impact of UPFs on cardio-renal health trajectories, as well as the determinants influencing exposure to these products and their long-term effects. Indeed, UPF consumption does not result solely from nutritional characteristics or individual choices, but from the complex interaction of nutritional, behavioral, social, and structural factors (Ilieva et al., 2025; Machado et al., 2017; Moran et al., 2019; Vignola et al., 2021). Age, urbanization, and food insecurity are relatively stable determinants, whereas the effects of education level and socioeconomic status vary depending on the context (Dicken et al., 2024).

In France, UPF consumption is higher among younger individuals and those with higher levels of education (Calixto Andrade et al., 2021), whereas in the United States it is more prevalent among low-income households (Moran et al., 2019). In families with children, UPFs are often favored for their convenience, acceptability, and shelf life, despite awareness of nutritional recommendations. These factors reflect trade-offs between taste, price, and convenience, demonstrating constrained rationality rather than a lack of nutritional knowledge (Caputo & Scarpa, 2022; Machado et al., 2017). Understanding the determinants shaping dietary choices and their impact on cardio-renal health trajectories beyond the sole nutritional dimension is therefore crucial to limiting the contribution of UPFs to the deterioration of public health.

#### *Research Program Context*

The doctoral project is part of the interdisciplinary program LIFE TRAVEL (Life Trajectories, Multimorbidity, Functional Ability, Quality of Life and Longevity), developed within the framework of the Initiative d'Excellence Lorraine (I-SITE Lorraine - France 2030) and involving the medical, biomedical, digital, and social sciences communities of the University of Lorraine.

The program aims: (i) to better understand the mechanisms through which health determinants (biological, environmental, social, economic, and behavioral) influence life trajectories, functional ability, quality of life, and healthy longevity; (ii) to develop and evaluate innovative prevention and health promotion interventions that support healthy aging while considering individual and territorial contexts.

The partnership between the Bureau d'Économie Théorique et Appliquée (BETA) and the Nancy Multidisciplinary Clinical Investigation Center (CIC-P Nancy) seeks to generate new knowledge on the multifactorial determinants of health and longevity, and on their interconnections, through the systematic integration of biological, environmental, social, and economic dimensions.

This program aligns with the One Health approach, considering that health trajectories result from complex interactions between environmental exposures, dietary practices, lifestyles, socioeconomic conditions, and biological determinants. In this perspective, the One Health framework also makes it possible to identify interventions capable of simultaneously pursuing several objectives (health-related, environmental, and social).

The analyses are divided into two main areas:

1. Determinants of dietary behaviors, evaluating the extent and direction of interactions between dietary behaviors, food environments, and cardio-renal health.
2. The impact of environmental and dietary exposures (air pollutants, natural environments, climate, biodiversity, and diet quality) on cardiovascular health and health trajectories, while taking social and territorial contexts into account.

Within this framework, the research program led jointly by [Nicolas Girerd](#) and Sandra Wagner in health sciences, and [Jens Abildtrup](#), [Lesly Cassin](#), [Eric Kamwa](#), and [Youba Ndiaye](#) in economics, will launch three doctoral theses in 2026 across these two research areas.

### *Objectives of the Doctoral Project*

The doctoral project aims to study the impact of ultra-processed food consumption on cardio-renal health trajectories. Using data from the STANISLAS cohort, it will analyze the social, behavioral, and environmental determinants of dietary choices through a multidisciplinary approach combining economics, epidemiology, and biostatistics. The project will rely on advanced methods such as: discrete choice experiments, multilevel models, causal inference, mediation analyses.

## **2. Supervision and Research Environment**

### *Thesis Supervision*

- **Eric Kamwa** is Professor of Economics at the University of Lorraine. His research focuses on public economics and collective decision-making (social choice theory). He is particularly interested in interdisciplinarity and participatory research.
- **Sandra Wagner** is a researcher in nutritional epidemiology at CIC-P, Nancy University Hospital. Her work mainly focuses on the links between nutrition and cardiovascular and renal health.

### *Co-supervision*

- **Lesly Cassin** is Associate Professor of Economics at BETA, University of Lorraine. Her research focuses on global health and inequalities in exposure to environmental risks.

### *Host Research Units*

The BETA and CIC-P Nancy research units jointly host the doctoral candidate. The collaboration between BETA and CIC-P relies on a close and balanced integration of economic, epidemiological, and clinical expertise. CIC-P provides individual health data and expertise in clinical epidemiology, while BETA contributes expertise in the analysis of economic behaviors and trade-offs, environmental variables, and econometric processing.

#### **Bureau d'Économie Théorique et Appliquée (BETA)**

Le BETA BETA is a joint research unit specializing in applied economics, recognized for its work in health economics, environmental economics, and econometrics. The doctoral project is part of the "Environment, Forest, Energy" (EFE) research axis, which addresses environmental transition issues through: environment and health, including One Health approaches, ecosystem services, externalities, and environmental impacts, natural resources and energy.

Doctoral candidates benefit from dedicated office space and computing facilities, integration into research teams and seminars, close scientific supervision, and financial support for conferences and summer schools.

#### **Centre d'Investigation Clinique Plurithématique de Nancy (CIC-P Nancy)**

CIC-P Nancy, affiliated with Nancy University Hospital, specializes in clinical and epidemiological research and provides advanced methodological and statistical expertise, as well as privileged access to large-scale clinical and longitudinal cohort data, notably the STANISLAS cohort.

The doctoral candidate will have access to the STANISLAS database and benefit from co-supervision in health sciences and epidemiology.

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### **3. Proposed PhD Topic**

La The consumption of ultra-processed foods (UPFs) represents a major public health issue, particularly with regard to cardiovascular diseases. However, the mechanisms explaining differential exposure to UPFs and their long-term effects on health, especially cardio-renal health, remain insufficiently characterized. In particular, the combined role of social, behavioral, and environmental determinants is still poorly integrated into epidemiological analyses. The originality of this project lies in its integrated multidisciplinary approach, combining economics, epidemiology, and biostatistics to jointly analyze the non-biological determinants of UPF consumption, their longitudinal effects on cardio-renal health, and the environmental impacts of dietary patterns. The objectives are: (1) to identify the non-biological determinants of dietary choices related to UPFs; (2) to evaluate the longitudinal impact of UPF consumption on cardiovascular and renal health trajectories; and (3) to assess the environmental impacts of dietary patterns, particularly UPF consumption, in order to quantify the potential environmental benefits associated with their reduction.

The analysis will rely on the rich longitudinal data from the existing monocentric observational STANISLAS cohort ("Suivi Temporaire Annuel Non-Invasif de la Santé des Lorrains Assurés Sociaux").

Between 1993 and 1995, 1,006 families (4,295 individuals), each composed of at least two parents and two children, were recruited at the Preventive Medicine Center of Vandœuvre-lès-Nancy. Participants were invited to return for follow-up visits (Visit 2: 1998-2000; Visit 3: 2003-2005; Visit 4: 2011-2016; Visit 5: 2023-2028). This cohort combines biomarkers, dietary questionnaires, and socioeconomic information, and has already been used in several research studies (Ferreira et al., 2018; Xia et al., 2025).

### *Research Areas and Proposed methodologies*

#### **Area 1 – Determinants of Dietary Choices and UPF Consumption**

The analysis will combine observational and experimental quantitative approaches. Multilevel models will be used to analyze the influence of individual, household, and territorial characteristics (food accessibility using a Two-Step Floating Catchment Area (2SFCA) approach, food supply density, and consumption environment) on UPF consumption. Causal inference methods (propensity score weighting and sensitivity analyses) will be employed to estimate the specific effects of food environments. In addition, dedicated surveys incorporating discrete choice experiments will be conducted to identify the trade-offs individuals make between price, nutritional quality, degree of processing, time constraints, product origin, and environmental impacts, according to the socioeconomic heterogeneity of respondents (Lizin et al., 2022).

#### **Area 2 – Cardio-Renal Health Trajectories**

Changes in renal function and blood pressure over a 20-year period will be assessed. Longitudinal mixed-effects models, including random family effects, will be used to estimate the associations between UPF consumption and these trajectories, as well as markers of subclinical cardiovascular and renal damage. Interaction analyses will test the modifying role of socioeconomic factors and total energy intake. Mediation analyses will explore the role of nutritional intake and biomarkers of inflammation or fibrosis.

#### **Cross-Cutting Area – Integration of the Environmental Impacts of Dietary Patterns**

At each stage of Areas 1 and 2, dietary consumption profiles will be linked to indicators of the environmental impacts of dietary patterns. These indicators will be constructed using life cycle assessment (LCA) databases, carbon emission factors, and resource use indicators (water and land use). Counterfactual scenario analyses will be conducted to evaluate the potential environmental benefits associated with the adoption of healthier nutritional profiles.

### *Project Timeline*

- **Year 1:** Literature review; development of dietary indicators (UPF consumption according to the NOVA classification), social and environmental indicators; design and pre-testing of surveys and discrete choice experiments (DCEs).
- **Year 2:** Analyses related to Area 1 (multilevel models, DCEs, and causal inference analyses).
- **Year 3:** Longitudinal analyses related to Area 2, mediation analyses, environmental analyses, and scientific dissemination of results.

### *Originality and Contributions of the Project*

The project mobilizes multidisciplinary expertise, fostering an integrated approach to the determinants of health. It aims to identify modifiable determinants of UPF consumption and to provide original

evidence to inform preventive health policies that take into account social constraints, individual choices, and environmental challenges.

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## 4. Candidate profile

- **Required degree:** Master's degree in Economics, Public Health, Epidemiology, or Biostatistics applied to Life Sciences.
- **Expected Scientific Skills**
  - Strong command of statistical tools (R or Python).
  - Advanced knowledge of statistics and survey methodologies.
  - Knowledge of behavioral economics.
  - Background knowledge in nutrition would be an asset.
- **Working Languages:** French and English.
- **Additional Qualities**
  - Scientific curiosity and enthusiasm for research.
  - Autonomy, rigor, and organizational skills.
  - Strong analytical and synthesis abilities, as well as good oral communication skills.
  - Team spirit.
  - Ability to write scientific documents in both French and English.

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## 5. Contract Conditions

- Duration: 36 months.
  - Location: Nancy, France.
  - Contract start date: Autumn 2026.
  - Gross monthly salary: €2,300.
  - Doctoral enrollment: Doctoral School of Law, Political Science, Economics and Management (ED SJPEG), University of Lorraine.
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## 6. Modalités de candidature

### Required Documents :

- CV
- Cover letter
- Master's degree transcripts
- Master's thesis/theses or a scientific article
- Two letters of recommendation

Submission Format: PDF format.

### Application submission addresses:

[eric.kamwa@univ-lorraine.fr](mailto:eric.kamwa@univ-lorraine.fr), [s.wagner2@chru-nancy.fr](mailto:s.wagner2@chru-nancy.fr), [lesly.cassin@univ-lorraine.fr](mailto:lesly.cassin@univ-lorraine.fr),

**Application deadline: June 14, 2026**

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## 7. Selection timeline

Call closing date: June 14, 2026

Expected interview period: week of June 15, 2026

Results publication date: June 22, 2026

Expected start date: October 1, 2026

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## **8. Contacts**

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Lien vers le site du BETA : <https://www.beta-economics.fr/>

Lien vers le site du CIC-P : <https://cic-p-nancy.fr/>