Title of the PhD project: Studying the impact of early life exposures on the risk of testicular germ cell tumors during adulthood (TESTIS project)

Disciplines: Epidemiology, biostatistics, geospatial sciences, occupational health
Laboratory: Centre de Recherche en Cancérologie de Lyon, UMR INSERM 1052-CNRS 5286, Equipe « Signalisation des hormones stéroïdes et cancer du sein »; Département Cancer et Environment, Centre Léon Bérard Lyon
Doctoral school: Interdisciplinary Doctoral program in health-sciences (EDISS) - ED 205 Interdisciplinary Doctoral program in health sciences (EDISS), ED 205, University Lyon1

Description
Scientific background and rationale: The incidence of testicular germ cell tumors (TGCT), the most common cancer in men aged 15 to 45 years, has doubled over the last 30 years in developed countries. A role of occupational and environmental exposures, especially during critical periods of development, is strongly suspected. Early life or combined early and later-life exposures are advanced.

Aim: The proposed research aims to study the association between TGCT risk and exposures (occupational and environmental) to xenoestrogen pollutants during critical time periods of development and the life course.

Description of the project methodology: Multicenter case–control study recruited through 21 French University Hospitals. The PhD student will examine life course exposures to multiple xenoestrogen pollutants based on occupational history and life-time residential history using a geographic information system. 2/ assess gene-environment interactions.

Expected results: Our research will contribute to better understanding the causes of TGCT, using an innovative approach that will include investigation of combined early and later-life exposures from multiple sources at a fine spatio-temporal scale, and analyses of interaction between lifetime environmental exposures and known or suspected biological and socio-economic risk factors.

Perspectives: This research will contribute to improve our knowledge on the long term effects of xenoestrogen exposures on cancer development, and potentially provide support for decisions in future healthcare policies.

Skills required: Applicants should have epidemiology or biostatistics master level qualification or in a related field (environmental health sciences, geospatial sciences). Solid skills in biostatistics are required. Knowledge of epidemiological methods and/or research experience would be an advantage. Applicants need to be fluent in both written and spoken French and/or English.

Bibliography:

Key-words: Case–control studies, Environmental exposure, Occupational exposures, Maternal exposure, Paternal exposure, Life course, Geographic information systems, Testicular germ cell tumors, Gene-environment interaction

Contact supervisor: Pr. Béatrice Fervers beatrice.fervers@lyon.unicancer.fr; Co-supervisors : Pr. Barbara Charbotel, Unité Mixte de Recherche Épidémiologique et de Surveillance Transport Travail Environnement, University Claude Bernard Lyon 1, Dr. Joachim Schüz, IARC.

To apply: Please send your application letter, CV, as well as names and addresses of two academic referees not later than 15th of April to Pr Béatrice Fervers, Département Cancer et Environment, Centre Léon Bérard, Object: PhD TESTIS katia.nardot@lyon.unicancer.fr

The open competitive recruitment process is in two steps: 1. Internal laboratory procedure. 2. Interdisciplinary jury of EDISS.