

15 Ph.D. positions within a Marie Skłodowska Curie Actions project on virology and immunology

EDGE (Training network providing cutting-edge knowledge on Herpes Virology and Immunology) is a Marie Skłodowska-Curie Innovative Training Network for early stage researchers (ESRs) funded by the European Commission under the H2020 Programme, the EU framework programme for research and innovation.

EDGE will provide a comprehensive and cross-disciplinary structured curriculum for doctoral students in the fields of virology and immunology. Key research aims of EDGE are to improve the basic understanding of the interactions between herpesviruses and host cells and to uncover implications for the clinical outcome of infections as well as development of vaccines. While each ESR will be based in a host institution, there will be extensive interactions between laboratories involved, and all positions involve secondments in other laboratories of the network, which also includes a theoretical training program.

Description

EDGE consists of 9 beneficiaries and 2 partner organizations from 5 countries, bringing a balanced portfolio of expertise in-depth knowledge of herpes virology and immunology. The principal goal of EDGE is to train a new generation of researchers to become capable of addressing the great challenges associated with herpesvirus infections.

Herpesviruses are widely spread: most individuals carry multiple herpesviruses that can cause severe diseases, especially in children, immunocompromised individuals, and the elderly. There are currently almost no licensed vaccines against herpesvirus infections and current treatments are also not satisfactory. With new insights into the molecular basis for diseases caused by immunodeficiency, and with the increasing numbers of elderly in Europe, there is a current unmet demand for improved treatments of herpesvirus infections. Recent advances in the understanding of herpesvirus-host interactions therefore call for education of a new generation of scientists with strong research skills, advanced insights into disease mechanisms, and an understanding of how industry brings innovative research into the market.

EDGE will be an interactive education program for ESRs in leading European laboratories, academic hospitals, and biotech companies. The focus will be on the virology and immunology of herpesvirus infections in the context of basic research as well as application of research-acquired knowledge. EDGE will prepare the ESRs to manage goal-oriented interactions between academic science, the clinics, and the biotech industry. The ESRs will acquire a broad theoretical and methodological expertise involving several sectors to obtain the skills required for overcoming the cultural gaps *From Bench to Bedside* and *From Discovery to Innovation*. The ESRs will be ideally trained to translate cutting-edge discoveries to novel products and to innovative treatment serving the European people, and hence to improve health care, to handle present and emerging health challenges, and to foster the European biopharmaceutical industry sector.

- **ESR1:** Proteome of cytosolic HSV-1 capsid interactions. (Medizinische Hochschule Hannover, Germany; Supervisor: Beate Sodeik)
- **ESR2:** Quantitative and qualitative proteome changes after herpesvirus infection (Max Planck Institute, Martinsried, Germany; Supervisor: Andreas Pichlmair)
- **ESR3:** Functions of EBV-encoded microRNAs in the viral life cycle and in EBV-associated malignancies (University Medical Center Utrecht, The Netherlands; Supervisor: Emmanuel Wiertz)
- **ESR4:** Cytomegalovirus genetic variability and its interplay with viral DNA sensors (University of Turin, Italy; Supervisor: Santo Landolfo)
- **ESR5:** Innate antiviral control of herpesvirus infections *in vivo* (Aarhus University, Denmark; Supervisor: Søren Paludan)
- **ESR6:** Stimulation of innate immune responses by herpesvirus DNA (Aarhus University, Denmark, Supervisor: Søren Paludan)
- **ESR7:** Immune responses induced by replication-incompetent HSV-2 (Janssen, Netherlands; Supervisor: Hanneke Schuitemaker)
- **ESR8:** Novel primary immunodeficiencies associated with susceptibility to herpes simplex encephalitis (Aarhus University Hospital, Denmark; Supervisor: Trine Mogensen)
- **ESR9:** DNA sensors in the pathogenesis of autoimmune diseases during herpes infection. (University of Turin, Italy; Supervisor: Santo Landolfo)
- **ESR10:** Identification and characterization of new cytosolic HSV-1 restriction factors (Medizinische Hochschule Hannover, Germany; Supervisor: Beate Sodeik)

- **ESR11:** Innate immune sensing and restriction of Varicella zoster virus (University of Oxford, UK; Supervisor: Jan Rehwinkel)
- **ESR12:** Novel primary immunodeficiencies associated with herpes zoster (Aarhus University Hospital, Denmark; Supervisor: Trine Mogensen)
- **ESR13:** Identification of novel immune modulatory mechanisms of human cytomegalovirus (Helmholtz Centre for Infection Research, Braunschweig, Germany; Supervisor: Melanie Brinkmann)
- **ESR14:** Characterisation of the pro- or antiviral role of cellular proteins induced upon infection with Human Cytomegalovirus (Helmholtz Centre for Infection Research, Braunschweig, Germany; Supervisor: Melanie Brinkmann)
- **ESR15:** Elucidation of herpesvirus evasion mechanisms through CRISPR/Cas-mediated engineering of virus and host genes (University Medical Center Utrecht, The Netherlands; Supervisor: Emmanuel Wiertz)

Research Fields

Virology
 Innate and Adaptive immunology
 Cell biology
 Biochemistry
 Molecular biology
 Protein chemistry
 Animal science
 Immunogenetics

Career Stage

Early stage researcher shall at the time of recruitment be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.

Profile for applicants

In the selection of candidates, EDGE will favour people with laboratory experience within the topics of the specific projects. In addition, the ESRs of EDGE should be curiosity-driven in their approach to science and innovation, and at the same time have a goal-oriented nature. Finally, the ESRs should be team-players and strive to work with their supervisor and project group to take the projects to the highest level.

Benefits

The monthly gross salary will be in accordance with the EC Marie Skłodowska Curie rates and will be paid by the host organization. The salary may be subjected to tax according to applicable national regulations. The positions are full-time and designed for a duration of 36 months.

Prospective date for start of project: Sep 1, 2016

Web site for additional job details

For more information about the projects, eligibility criteria, and requirements for the application please visit: www.edge-ITN.eu

Please submit applications through the on-line application portal at www.edge-ITN.eu

Deadline for applications: May 6, 2016

