Post-doctoral position at CEA in Fontenay aux Roses, France

A post-doctoral position is open at the Service of Immuno-Virology in the Institute of emergent diseases and innovative therapies (iMETI) at CEA in Fontenay aux Roses, France, to work on the basic mechanisms of vaccine-induced immune responses.

Our research unit was initially created more than 15 years ago to evaluate the immunogenicity, safety and efficacy against experimental challenge of candidate vaccines in non-human primate models of AIDS. Animal models are powerful tools for increasing our understanding of the complexity of HIV infection and disease and macaques infected with pathogenic strains of simian immunodeficiency virus (SIV) or related chimeras expressing the envelope of HIV-1 (simian/human immunodeficiency virus or SHIV) are considered as one of the most relevant models. The biological properties of SIV and SHIV are similar to those of HIV, and the infection of macaques with pathogenic isolates reliably induces an immunodeficiency syndrome in macaques strikingly similar to human AIDS.
Today, our major objectives are 1) the study of early virus/host interactions including the crossing of mucosal barriers, 2) the study of early viral dissemination and the establishment of early viral reservoirs, 3) the study of the impairment of immune cell functions and T-cell homeostasis, and 4) to formulate and to evaluate new strategies for preventing HIV/SIV transmission, including vaccines, microbicides and post-exposure chemoprophylaxis.
The postdoctoral position we are proposing is for a three year period and is associated to new European project (MuNanoVac) dedicated to vaccine research. The selected candidate will have the opportunity to collaborated with a team of 8 senior scientists with skills in fundamental immunology and virology and working in a highly equipped environnement: BSL3 laboratories and animal facilities, 13 parameters flow cytometry (BD LRS-II), cell sorter (BD FACS-ARIA), automated platforms for molecular biology. In addition, exchanges (workshops, short period trainings) with collaborators, within the European Community, will be organized.

The aim of the proposed project is to study basic cellular mechanisms of the induction and regulation of vaccine-induced immune responses with the aim to define vaccine strategies optimized for different specific pathways of the immune response. The work will be focused 1) on the characterization of the involvement of innate and adaptive immunity in the responses to the recombinant antigens of interest encoded by viral vectors used for vaccine priming versus the viral antigens of the vectors; 2) on the optimization of combinations of viral antigens, adjuvants and molecules activating and/or targeting APC (TLR ligands, lymphokines), with the aim of increasing the intensity and persistence of the specific immune effectors after the vaccine boosts. Such combinations will be formulated using synthetic biodegradable polymers as vehicles of adsorbed proteins. Previous works, in the laboratory, have shown the immunogenicity of vaccines based on the use of these polymers.
The candidate should have a PhD in immunology or virology. Technical experiences in cellular culture, monitoring cellular immune responses, flow cytometry, nucleic acid extraction and PCR are required. Experience in immuno-histochemistry would be appreciated.

Please send a CV, a list of publications, a statement of research interests and the names and contact details of referees to:

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