


Post-doctorant

 CDD 24 mois

 Début : as soon as possible

 94000 Créteil

 Bac >5

L'Inserm est le seul organisme public français entièrement dédié à la recherche biologique, médicale et en santé des populations. Il dispose de laboratoires de recherche sur l'ensemble du territoire, regroupés en 12 Délégations Régionales. Notre institut réunit 15 000 chercheurs, ingénieurs, techniciens et personnels administratifs, avec un objectif commun : améliorer la santé de tous par le progrès des connaissances sur le vivant et sur les maladies, l'innovation dans les traitements et la recherche en santé publique.

Rejoindre l'Inserm, c'est intégrer un institut engagé pour la parité et l'égalité professionnelle, la diversité et l'accompagnement de ses agents en situation de handicap, dès le recrutement et tout au long de la carrière. Afin de préserver le bien-être au travail, l'Inserm mène une politique active en matière de conditions de travail, reposant notamment sur un juste équilibre entre vie personnelle et vie professionnelle.

L'Inserm a reçu en 2016 le label européen HR Excellence in Research et s'est engagé à faire évoluer ses pratiques de recrutement et d'évaluation des chercheurs.

Emploi

Poste ouvert aux candidats

- Agents fonctionnaires de l'Inserm par voie de mobilité interne
- Agents fonctionnaires non Inserm par voie de détachement
- CDD agents contractuels

Catégorie

A

Corps

Chercheur Postdoctorant

Emploi-Type

Chercheur Postdoctorant

Structure d'accueil

Département/ Unité/ Institut

Vaccine Research Institute (VRI)-Institut Mondor de Recherche Biomédicale IMRB
U955 Inserm-UPEC

A propos de la Structure

The Vaccine Research Institute (VRI), which has been established in 2011 under the banner of the French Government, aims at accelerating research for an effective HIV/AIDS vaccine development. The VRI gathers national and international leading scientists and physicians who strengthen the links between basic, translational research, patients associations and the socio-economic world.

The VRI (<http://vaccine-research-institute.fr/>) is also actively investigating with international collaborators vaccine strategies against the emerging COVID-19. Prof. Yves Levy, Head of the VRI and Pr Veronique Godot are co-leading the evaluation of immune responses elicited by the CD40.PanCoV vaccine developed at the VRI in Humans and preclinical models, respectively

The Mondor Institute of Biomedical Research (IMRB, U955 Inserm - Université Paris Est Créteil, UPEC) is one of the main biomedical research centers in eastern Paris with a national and international influence. The research teams develop high-level translational research in a wide variety of fields in direct liaison with

with health care services and a large number of patient cohorts. The IMRB was created in 2009 and was recently successfully evaluated in the framework of the last wave E of the HCERES. It has been recreated by Inserm and UPEC for 5 years starting January 1, 2020. It comprises almost 600 people belonging to 14 research teams, a General Secretariat in charge of the management of the Institute, logistical support for the teams and the technological platforms

Directeur

Yves Lévy

Adresse

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94010 Créteil

Délégation Régionale

Paris IDF Centre EST

Description du poste**Mission principale**

Despite the outstanding achievement of efficacious COVID-19 vaccines, the need of a next generation of vaccines capable to boost durably protective immune responses against SARS-CoV-2, its current and emerging variants remains a high priority. The field is also moving to a preparedness track with generation of vaccine targeting other or next pandemics. For this, the need to target specifically highly conserved regions from Sarbecoviruses, less prone to mutate and to evade vaccine responses, is warranted.

To accelerate the development of such candidate vaccines, the use of ready-to-use vaccine platforms tailored and adapted to emerging and re-emerging pathogens is crucial. Targeting antigens to dendritic cells (DC) is a vaccine technology concept supported by more than a decade of animal model and human pre-clinical experimentation. Therefore, DC targeting strategy emerges as attractive targets to develop vaccines eliciting strong and durable T and B cell responses. Since the beginning of the pandemic, the VRI has developed two CD40 targeting vaccines aimed at eliciting anti-RBD responses for the first one (Marlin R. et al. Nat comm 2021) and anti-panCoV responses for the second one (Coleon S. et al. BioRxiv 2022). The CD40 targeting platform is a fusion protein composed by a humanized monoclonal antibody targeting CD40 receptor fused to specific epitopes from SARS-CoV-2. The two generations of CD40 Covid vaccines contain specific T and B cell epitopes from the Spike and Nucleocapsid proteins from SARS-CoV-2. Previous studies (in vitro, mice and primate models) have shown that these vaccines are capable to elicit strong, cross neutralizing IgG and cross reacting T cell responses against SARS-CoV-2 and its related Variants, SARS-CoV-1 and to a lesser extent against MERS. One significant advantage of the CD40.PanCov vaccine is to recall specific CD8 T cell responses in pre-exposed patients with cytokine-secretion and cytotoxic properties. Of note these two candidate vaccines are under manufacturing for clinical development, the CD40 vaccine platform being de-risked in terms of safety thanks to a clinical phase I/II trial of a CD40 HIV vaccine currently tested in healthy volunteers

Activités principales

i) Task 1: To characterize the phenotype, function, cytotoxic activity, of SARS-CoV-2 specific CD8 T cells in natural infection and post vaccination in healthy donors (HD) and in individuals from various clinical conditions (immunosuppressed, cancer, auto immune and inflammatory diseases). For this the Post doc will benefit from a large cohort of patients and HD (Covicis Horizon Europe funded program) and a large array of tests developed by the VRI platforms (cytometry, cellular, genomics, data science).

ii) Task 2: To deeply characterize CD8 T cell responses induced by our CD40.PanCoV vaccine compared to mRNA licensed vaccines using blood samples from convalescent patients or vaccinated healthy donors collected at different time points. The study will include TCR repertoire analyses by scRNAseq and functional *ex vivo* T cell assays. The candidate will also have to decipher the molecular pathways activated by our vaccine and involved in the activation of such strong CD8 T cell responses.

Spécificité(s) et environnement du poste

Work in BSL2 laboratory

Connaissances

We are looking for a qualified and motivated Ph.D. in immunology. The candidate should have a strong experience in flow cytometry and immune functional assays and more specifically in CD8 T cell responses. Excellent technical skills, strong motivation, autonomy and ability to quickly and effectively develop the proposed project in relation with the group leaders and collaborators will be essential.

Savoir-faire

- Flow Cytometry
- Cellular Biology/immunology

Aptitudes

- Technical skills
- Strong motivation
- Autonomy

Expérience(s) souhaité(s)

- Immunology, CD8 T cell responses, cellular biology

Niveau de diplôme et formation(s)

- PhD

Informations Générales**Date de prise de fonction**

As soon as possible

Durée (CDD et détachements)

24 mois

Renouvelable : OUI NON**Temps de travail**

- Temps plein
- Nombre d'heures hebdomadaires 38h30
- Congés Annuels et RTT :44 jours

Activités télétravaillables OUI * NON

* Préciser les modalités de télétravail possible.

Rémunération

- Depending on experience and in accordance with the Inserm policy.

Modalités de candidature**Date limite de candidature**

30/06/2022

Contactveronique.godot@gmail.com; aurelie.wiedemann@inserm.fr; yves.levy@inserm.fr**Contractuels**

This position is available for 24 months, and needs to start at month one post-selection. Applicants should submit to Veronique Godot (veronique.godot@gmail.com), Aurélie Wiedemann (aurelie.wiedemann@inserm.fr) and Yves Levy (yves.levy@inserm.fr) a curriculum vitae, a brief description of their research accomplishments and career goals, the list of their publications and the name of three referees.

Pour en savoir +

- Sur l'Inserm : <https://www.inserm.fr/> ; site RH : <https://rh.inserm.fr/Pages/default.aspx>
- Sur la politique handicap de l'Inserm et sur la mise en place d'aménagements de poste de travail, contactez la Mission Handicap : emploi.handicap@inserm.fr

