University of La Reunion (RUN-UNIV)

Call for candidacy for talented young scientists on infectious diseases

Number of positions: 05
Duration: 2 years each
Location: Ile de la Réunion-France (South Western Indian Ocean)
Scientific field: Life sciences
Level: Post-doctoral
Funding program: FP7 / Capacities / Regpot 1-2010/ Project RUN Emerge /RUN-UNIV
Application deadline: 1/03/2011
Submission of application: Applicants are invited to send detailed CV, a covering letter and 3 references to:

Prof. J. Smadja (smadja@univ-reunion.fr) and Prof. K. Dellagi (koussay.dellagi@ird.fr).

Selection procedure: A pre-selection stage will be conducted by the selection committee. Pre-selected candidates will be invited to an interview. Visio-conference interviews will be conducted for candidates residing outside Reunion Is.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Starting date</th>
<th>Specialty</th>
<th>Working place (research lab)</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>March-April 2011</td>
<td>Ornithology, telemetry</td>
<td>Laboratory of Marine Ecology-ECOMAR (RUN-UNIV) St Denis</td>
<td>Prof. M. Le Corre. Email: <a href="mailto:matthieu.lecorre@univ-reunion.fr">matthieu.lecorre@univ-reunion.fr</a> Tel: +262 262.93.86.86</td>
</tr>
<tr>
<td>2</td>
<td>March-April 2011</td>
<td>Virology (RNA viruses)</td>
<td>CRVOI (Centre de Recherche et de Veille sur les Maladies Emergentes dans l'Ocean Indien) St Denis</td>
<td>Dr. H. Pascalis Email: <a href="mailto:herve.pascalis@ird.fr">herve.pascalis@ird.fr</a> Tel: +262 262 93 88 35</td>
</tr>
<tr>
<td>3</td>
<td>March-April 2011</td>
<td>Cell Biology &amp; immunology</td>
<td>GRI- CYROI St Denis</td>
<td>Prof. P. Gasque Email: <a href="mailto:gasque@univ-reunion.fr">gasque@univ-reunion.fr</a> (or) <a href="mailto:gasque@hotmail.com">gasque@hotmail.com</a> Mob: +262 692 597037</td>
</tr>
<tr>
<td>4</td>
<td>March-April 2011</td>
<td>Phylogenetics</td>
<td>UMR PVBMT RUN–UNIV</td>
<td>Prof. D. Strasberg Email: <a href="mailto:umrc53@univ-reunion.fr">umrc53@univ-reunion.fr</a> Tel : +262 692 86 28 37</td>
</tr>
<tr>
<td>5</td>
<td>March-April 2011</td>
<td>Bacteriology</td>
<td>CRVOI (Centre de Recherche et de Veille sur les Maladies Emergentes dans l'Ocean Indien) St Denis</td>
<td>Dr. P. Tortosa Email: <a href="mailto:pablo.tortosa@univ-reunion.fr">pablo.tortosa@univ-reunion.fr</a> Tel: +262 262 93 88 35</td>
</tr>
</tbody>
</table>
Background.
Réunion Island is an outermost European region located in the South Western Indian Ocean. University of La Réunion is implementing a capacity building program, called Run-Emerge, funded by the Capacity programme of FP7 RegPot1-2010 that aims at fostering its research potential on emerging infectious diseases in the South Western Indian Ocean region. This programme is multidisciplinary and involves local and European research teams working on ecology, entomology, microbiology, immunology, emerging plant pathogens, phytochemistry and social sciences. The present call aims at identifying young talented researchers to be involved in the ongoing research programs on Emerging Infectious Diseases in Réunion Island. These researchers are also expected to generate program synergies in the frame of this multidisciplinary project. Gross monthly salary 3200€ (This salary includes health insurance and retirement contribution); Net salary 2590€.

Profile 1: Investigating the role of sedentary and migrant wild birds as vectors of emerging diseases.

A two year position in ecology is available at the “Seabird Team” of the Laboratory of Marine Ecology of Réunion Island (ECOMAR). This group is conducting research on ecology and conservation of seabirds of the tropical western Indian Ocean. Our first topic is the study of the links between the marine environment and the foraging strategies and reproductive performances of tropical seabirds. The second topic concerns the impacts of alien mammals on seabird reproduction and survival at breeding colonies and the implementation of rehabilitation actions on islands.

Our group is also involved in a multidisciplinary research programme (wild fauna pathogens inventory project) jointly funded by EU, regional and national funds. This programme aims at assessing the role of sedentary and migrant wild fauna in the emergence of infectious diseases potentially impacting human people. In this programme, our group is in charge with the work package on wild birds. The young researcher to be recruited will be appointed to this work package.

The young researcher will study the role of wild birds in the dispersion and exchanges of infectious diseases and their vectors within the western Indian Ocean and between islands of the western Indian Ocean and other parts of the world from where migrating birds come (Europe, Middle East, East Africa). He or she will use both telemetry data and biological samplings to investigate these questions. Telemetry will track the migrating routes of the most frequent migrant birds of the region (mostly seabirds). Biological samples (blood and ectoparasites) will be analysed by virologists and entomologists to identify the main pathogens and their vectors transported by wild birds.

The young researcher will be based on Réunion Island (lab. ECOMAR; RUN Univ) and will work within the team headed by Pr. Matthieu Le Corre and under his supervision. He or she will be in constant interactions with the other partners of wild fauna pathogens inventory project and will contribute to the capacity building objectives of the RUN-EMERGE programme.

He or she will do frequent field work in the various studied islands: Europa, Seychelles, Mauritius, Madagascar and Réunion Island.

The successful candidate must have:

- A recent Ph-D in shorebird or seabird ecology and/or migrating behaviours.
- Excellent skills in wildlife telemetry, spatial analysis, GIS, and biological sampling
- A good field experience and ability to work in an insular and isolated environment
- Ability to conduct scientific research to a high standard and to produce scientific writing
- Ability to work as part of a pluridisciplinary programme and interact with experts of very different fields (virologists, bacteriologists, epidemiologists, entomologists, veterinarians, doctors, public health decision makers...).

It would be an added advantage if the candidates had:

- Experience or knowledge of tropical environments
- Travel experience and foreign language skills desirable

For more details on the position contact Dr Matthieu Le Corre at ECOMAR lecorre@univ-reunion.fr
Profile 2: Investigating viral pathogens associated to wild fauna and ectoparasites in South Western Indian Ocean

A two year position in virology is available at CRVOI (www.crvoi.org) on Reunion Island to investigate viruses prevalent in the wild fauna from Madagascar, the archipelagos of the Comoros, Seychelles, and Mascarenes (Mauritius and Reunion Island).

CRVOI is leading a multidisciplinary research programme (wild fauna pathogens inventory project) jointly funded by EU, regional and national funds. This programme aims at assessing the role of sedentary and migrant wild fauna in the emergence of infectious diseases potentially impacting human people. In this programme, our group is in charge of the work package “virology”. The young researcher to be recruited will be appointed to this work package. She/He will benefit from a large sample collection originating from the SWIO region.

She/he will use standard techniques in virology in a BSL3 Lab as well as molecular detection techniques (degenerated or multiplex PCR, etc.) to investigate tissue samples from wild fauna (including bats, rodents, birds and arthropods). She/he will bring to the research team her/his expertise in systematic virology and replication mechanisms of RNA viruses.

The researcher will be based at CRVOI (www.crvoi.org) on Reunion Island and will work within the team headed by Dr Herve Pascalis. She/he will contribute to the capacity building objectives of the RUN-EMERGE programme.

Applicants should have a PhD in Virology. Validated expertise in virus culture, molecular biology and phylogeny is required. A previous post-doctoral experience in tropical medical virology or emerging infectious diseases will be appreciated.

For more details on the position contact Dr Hervé Pascalis (herve.pascalis@ird.fr, or phone: + 262 262 93 88 35).

Profile 3: Immunology of infectious diseases in acute and chronic conditions

A two year position in immunology/cell biology is available at the ‘immunopathology and infectious disease grouping, IRG’ of the new faculty of Medicine at the University of la Réunion. The IRG is a team of twenty members (clinicians and scientists) seeking to have a better understanding of the protective as well as the pathological roles of the innate immune system in health and diseases. A major focus over the last four years has been to decipher the molecular and the cellular innate immune responses in infectious diseases (chikungunya, leptospirosis) and with the identification of novel neuroimmune regulatory proteins (NIRegs). The young researcher will study in vitro and in vivo the role of the innate immune response in chronic alphavirus infection. To this aim, he/she should have a good experience in cell immunology and validated expertises in techniques such as FACS, ELISA, cell transfection, qRTPCR, and confocal imaging.

The young researcher will be based on Réunion Island (lab. GRI; RUN Univ) and will work within the team headed by Pr. Philippe Gasque (. He/she will contribute to the capacity building objectives of the RUN-EMERGE programme.

The candidate must have:

- A Ph-D in immunology or cell biology/biochemistry and some postdoctoral working experience.
- A good knowledge of the recent literature on innate immunity of infectious diseases
- Excellent skills in specialist techniques for cell immunology (FACS, ELISPOT) and other molecular and biochemical techniques (RTPCR, qRTPCR, WB, Immunofluorescence and imaging techniques)
- Good ability to conduct scientific research and to produce bimonthly scientific reports

For more details on the position contact Pr Philippe Gasque gasque@univ-reunion.fr (or) gasquep@hotmail.com

Profile 4: Investigation of lineage diversification in the South western Indian Ocean, by phylogenetics

A two year position in Phylogenetics is available at UMR PVBMT (CIRAD-RUN UNIV) on Reunion Island. The young scientist
will have to develop understanding of patterns and processes of lineages diversification (hosts, vertebrates, molluscs, arthropods, parasites, etc ...). The position implies a strong interest and a good academic level in evolution.

Skills are needed in molecular tools, phylogeny reconstruction and biogeography. Good background in biology in insular systems and field experience in the South Western Indian Ocean region will be appreciated. Results from this post-doctoral fellowship will have to be published in the best peer-reviewed journals in evolutionary biology. The researcher will contribute to the capacity building objectives of the RUN-EMERGE programme.

For more details on the position contact: Pr Dominique Strasberg : umrc53@univ-reunion.fr
Tel : +262 692 86 28 37

Profile 5: Investigation of leptospirosis epidemiology in the South Western Indian Ocean Islands

A two year position in Bacteriology is available at CRVOI on Reunion Island. The young scientist will conduct the bacteriological aspects of a research programme on leptospirosis in the Indian Ocean Islands. The region displays some of the world’s highest human leptospirosis incidence levels with contrasted epidemiology between the islands. The recruited scientist will explore this contrasted epidemiology through the investigation of Leptospira genetic diversity and prevalence in the wild animal reservoirs. She/he will perform leptospira PCR diagnosis and genotyping on tissue samples collected on rodents, bats and endemic insectivores previously sampled throughout the islands of the region. In addition, she/he will isolate Leptospira from wild animals’ urine or kidney tissues. For this, she/he will have to work within a multidisciplinary network involving clinicians, conservation biologists, phylogeneticists and geographers.

The researcher will be based at CRVOI (www.crvoi.org) on Réunion Island and will work within the team headed by Dr. Pablo Tortosa (http://www.crvoi.org/spip.php?article46). She/he will be integrated within the research programme on leptospirosis and will contribute to the capacity building objectives of the RUN-EMERGE programme.

The successful candidate will have a PhD with a validated experience in bacteriology (including classic techniques: culture, identification, and serology). Good skills in molecular biology are required. A previous experience on leptospira research will be highly appreciated.

For more details on the position, contact Dr Pablo Tortosa: pablo.tortosa@univ-reunion.fr
Phone +262 262 93 88 39