



agence d'évaluation de la recherche  
et de l'enseignement supérieur

Section des Unités de recherche

Report from the visiting committee

Research unit : Groupe de recherche sur les maladies  
infectieuses et inflammatoires (GRII)

University of Réunion



February 2008



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Section des unités  
de recherche

*Le Directeur*

**Jean-Jacques Aubert**

february 2008



# Report from the visiting committee

## The research unit :

Name of the research unit : Groupe de recherche sur les maladies infectieuses et inflammatoires (GRII)

Requested label : UMR\_S

N° in case of renewal :

Head of the research unit : Mr Philippe Gasque

## University or school :

University of Réunion

## Other institutions and research organization:

INSERM

## Date(s) of the visit :

14-15 February 2008

# Members of the visiting committee



## Chairman of the committee :

Mr Jean-Laurent Casanova, Paris

## Other committee members :

Mr Robert Meynard, Paris

Mrs Andrea Cooper, Trudeau Institute, USA

Mr Charles Bangham, USA

Mr Marc Parmentier, Brussels, Belgium

Mr Frédéric Geissman, Paris

Mr Jean Dubuisson, Lille

Mr Guido Poli, Milano, Italy

Mr Joost Van Meerwijk, Toulouse

Mrs Pascale Mercier, Toulouse

## CNU, CoNRS, CSS INSERM, (représentant INRA, INRIA, IRD.....) representatives :

Mr Camille Locht, Lille, INSERM representative

Mr Pierre Galanaud, CNU representative

## Observers



## AERES scientific representative:

Mr Nicolas Glaichenhaus

## University or school representative:

## Research organization representative (s) :

Mrs Christine Tuffereau, INSERM

# Report from the visiting committee



## 1 • Short presentation of the research unit

- Number of lab members with teaching duties : 9 including 2 PU and 7 MCU
- Number of postdoctoral fellows : 1
- Number of engineers, technicians and administrative assistants : 6 including 2 engineers and 4 technicians
- Numbers of HDR : 6
- Numbers of PhD. Students who have obtained their PhD since : 2
- Numbers of PhD students currently present in the research unit : 6
- Number of PhD students with fellowships : 4
- Number of « publishing » lab members : 8 out of 9

## 2 • Preparation and execution of the visit

The unit is localized in La Réunion island. For this reason, the head the Unit was invited to come to Paris. The Head of the unit presented the scientific accomplishment of his team and its project for 30 minutes. This was followed by 15 minutes of discussion.

## 3 • Overall appreciation of the activity of the research unit, of its links with local, national and international partners

Research axis include (1) infection and innate immunity and (2) inflammation and innate immunity.

## 4 • Conclusions

- Strengths :

Chikungunya is an emerging and important viral disease that has already spread beyond the Indian Ocean basin to at least one European country (Italy). It causes a persistent RNA virus infection representing an interesting and even unique model of infection among the alpha viruses. La Réunion is an excellent place to study this infection and the corresponding disease in a natural, endemic region and the research facilities already present (including two BSL-3 laboratories) coupled with the enthusiasm and immunological competence of the leader represent strong points of this Unit.



- **Weaknesses :**

The Unit has a too diffuse research program revolving around the concept of « innate immunity » rather than on specific pathogenic hypotheses. In addition, not enough effort on viral and/or clinical epidemiology of this disease emerged from both the documents and the presentation. Research devolved to investigate the immunopathological implications of obesity is discouraged in consideration of the unique opportunity to become an international reference point for the study of Chikungunya virus infection in spite of the fact that La Réunion is geographically and scientifically isolated.

- **Recommendations :**

A central line of research should be identified as a function of the competence of the leader and, particularly, of the peculiarity of the research setting in the heart of Chikungunya virus endemic region of infection. Therefore, a major effort should be devoted to focus on what can best be done in La Réunion (clinical epidemiology, vector epidemiology, viral epidemiology, fresh blood sample rather than TLR7 signaling in synovial fibroblasts). The lab should emphasize the medical aspects of their study rather than artificially superimposing innate immunity on the viral illness.

The committee evaluated this unit to be within the lower 50% internationally in its field. It may scale up in the future if the recommendations are endorsed.

Saint-Denis, le jeudi 22 mai 2008



Bureau de la  
Recherche et des  
Etudes  
Doctorales

Référence  
PB.BM N°795/ 2007 – 2008

Vos références :  
HVSDV-LA REUNION-UMRS-NG-V1

Dossier suivi par  
Cédric CHARLIER

Téléphone  
0262 93 80 05  
Fax  
0262 93 80 56.  
Courriel  
bred@univ-reunion.fr

Adresse postale :  
15, Avenue  
René Cassin  
BP 7151  
97715 Saint-Denis Messag Cedex 9

Le Président

A

- AERES  
Monsieur Jean-Jacques AUBERT  
Directeur de la section des unités

**Reply to the AERES visiting committee by Pr Philippe Gasque  
(University of la Réunion, head of Groupe de recherche sur les maladies  
infectieuses et inflammatoires).**

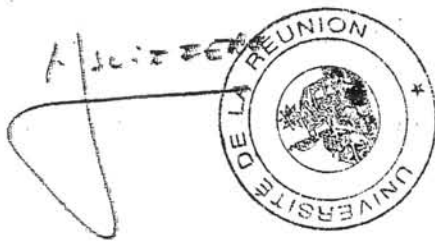
Dear colleagues,

Many thanks for taking your precious time in assessing our project and the proposed guidelines will be of benefit to all of us. Nevertheless and regrettably, we (the team) felt that a lack of long term vision by the committee led to a rather focused view on a single theme of research which does not reflect the multidisciplinary setting of our grouping. From the 'weaknesses' point of view, it is important to stress that a great deal of commitment has been put forward in recent years by all members to develop an original research on chronic diseases and to have a better understanding of the cellular and molecular routes of these diseases. We are convinced that research on the innate immune response will help us to decipher the ill-characterized mechanisms and to propose new therapies. Obesity has been and remains a major burden and health issue in la Reunion and it is only recently that we have been under the siege of a new health issue in the form of emerging viral diseases. I will add that over 30 publications (including several top 1% ranking) have been published by the team and leading to unique observations. For example, we were first to describe the expression and the role of a cannabinoid system in fat tissue and this is now further explored in partnership with industry.

With regard to 'strengths': We agree that a great deal of work need to be done in emerging diseases in the Indian Ocean and our laboratory in la Réunion is uniquely placed for fundamental and clinical studies of large cohorts of patients. Several collaborations are up and running with INSERM Units (B Autran, V Lotteau, A Perianin), CNRS Unit (C Devaux), CNR on arbovirus (P Despres) and IRD (X Delamballerie, K Dellagi, F Remoue). However, we are not epidemiologists and this aspect is better done in collaboration with the team of Dr Favier (CIC-EC INSERM, la Réunion). The immunology, virology and pathology of chikungunya are currently pursued by several members of the team 1 (2PU,1MCU, 1ATER, 2Postdocs, 2Docs and importantly 3 PH and 1ARC from the CHR of la Réunion) and with the recruitment of new staffs over the next couple of months. This project is funded by our university (PPF), a PHRC, ANR, overseas Ministry, Regional council and, as indicated, with state of the art research facilities in terms of P3 labs at the hospital and CYROI. This unique expertise particularly aiming to address the chronic pathologic mechanism post infection will be of further benefit to studies on other emerging diseases blooming at our doorsteps from the region (West Nile, Rift valley fever).

Hence, we trust that the research team1 focusing on fundamental and clinical aspects of the 'physiopathology of chikungunya and other emerging diseases' is important and timely for our university and the future university hospital. Thus, we endorse the recommendations of the AERES committee and hope that doing so we will have the recognition for an ESPRI unit (team supported by the region and by INSERM).

Le Président



Pr. Serge SVIZZERO