

# CPTP - Centre de physiopathologie de Toulouse Purpan

## Rapport Hcéres

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# HCERES

High Council for the Evaluation of Research  
and Higher Education

Research units

HCERES report on research unit:

Center for Pathophysiology Toulouse Purpan

CPTP

Under the supervision of  
the following institutions  
and research bodies:

Université Toulouse 3 – Paul Sabatier - UPS

Institut National de la Santé Et de la Recherche  
Médicale - INSERM

Centre National de la Recherche Scientifique - CNRS

# HCERES

High Council for the Evaluation of Research  
and Higher Education

Research units

*In the name of HCERES,<sup>1</sup>*

Didier Houssin, president

*In the name of the experts committee,<sup>2</sup>*

Renato MONTEIRO, chairman of the  
committee

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Under the decree N.º 2014-1365 dated 14 november 2014.

<sup>1</sup> The president of HCERES "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5)

<sup>2</sup> The evaluation reports "are signed by the chairman of the expert committee". (Article 11, paragraph 2)

# Evaluation report

This report is the result of the evaluation by the experts committee, the composition of which is specified below. The assessments contained herein are the expression of an independent and collegial deliberation of the committee.

Unit name:	Center for Pathophysiology Toulouse Purpan
Unit acronym:	CPTP
Label requested:	INSERM, CNRS, UNIVERSITY
Present no.:	UMR 1043 - CNRS 5282
Name of Director (2014-2015):	Mr Roland LIBLAU
Name of Project Leader (2016-2020):	Mr Roland LIBLAU

## Expert committee members

Chair:	Mr Renato MONTEIRO, Faculté de Médecine Paris Diderot, Paris
Experts:	Ms Laurence ARDOUIN-BATAILLE, Curie Institute, Paris (representative of the CNRS)
	Ms Céline COLNOT, Imagine Inst, Paris
	Ms Stéphanie HUGUES, Geneva Medical School, Geneva, Switzerland
	Mr Jean-Daniel LELIEVRE, Vaccine Research Inst, Créteil (representative of the CNU)
	Mr Christopher LININGTON, University of Glasgow, UK
	Mr Salah MECHERI, Pasteur Institute, Paris
	Ms Clotilde THERY, Curie Inst, Paris (representative of the INSERM)

Scientific delegate representing the HCERES:

Ms Sophie EZINE

## Representatives of the unit's supervising institutions and bodies:

Ms Armelle BARELLI, Déléguée Régionale INSERM MPL

Ms Christelle GUEGAN, INSERM

Mr Bruno LUCAS, CNRS

Mr Alexis VALENTIN, Toulouse University

Mr Philippe VALLET (director of the Doctoral School n° 151 "Biologie, Santé, Biotechnologie")

## 1 • Introduction

Mr Roland LIBLAU proposes the reconduction of the CPTP, 'Centre de Physiopathologie Toulouse-Purpan' (CPTP, Inserm UMR 1043 - CNRS 5282), a center resulting from merging of different Inserm laboratories working in the fields of Immunology, Inflammation and Infection within the Purpan hospital campus.

### History and geographical location of the unit

The CPTP was created in 2002 and constitutes one of the major Biomedical Research Centers in Toulouse, which also includes the Cancer Center located at Langlade (CRCT, Inserm UMR 1037) and an Obesity, Diabetes and Cardiovascular Center (I2MR, Inserm UMR 1048) located in Rangueil hospital campus.

From 2009-2014, the CPTP had 14 teams. Four teams were not included in the CPTP structure for the next five years. Mr Philippe LE BOUTEILLER is retiring by the end of 2014 and his team will be closed. The teams headed by Ms Nathalie VERGNOLLE, Mr Eric OSWALD and Ms Marie-Paule ROTH / Ms H  l  ne COPPIN have decided to leave and constitute a new research Laboratory focusing on digestive health. Pr Antoine BLANCHER and the immunologists working at the University hospital propose to create a University research Team that will be hosted within the Center. Thus, the CPTP remains with 10 teams and is in the process of recruiting a senior French scientist currently working in the USA.

The CPTP is localized on the Purpan University hospital site in 3 adjacent and interconnected buildings. The CPTP has a remarkable activity in creating several research core facilities. Of note, a building totalizing 800 m<sup>2</sup> was inaugurated in November 2012 and is devoted essentially for core facilities (imaging and flow cytometry). The total surface including laboratory spaces and offices, research facilities and the central administration is 3600 m<sup>2</sup>.

### Management team

The CPTP will be composed of more than 180 members including scientists, teaching scientists, clinicians, research assistants, technicians, post-docs and students. The management of the center is presented as follows. The center will be managed by a Director and a deputy Director assisted by a Board of team leaders (one per team). The administrative and financial manager is well established in the CPTP and is in charge of the daily administrative and financial running of the center and of supervising the staff dedicated to common-use services. The CPTP council composed of 12 elected representatives, 4 for each of the 3 staff groups (research scientists, research and administrative assistants, PhD students and post-docs), is the body that makes suggestions and discusses organizational issues of the research unit with the Director and the administrative and financial manager. An 'internal rules' document has been established and is available. The Director and the board of team leaders are responsible for the strategic decisions, management and more generally the scientific life of the center and meet at least every three months. Decisions are made by consensus and, in rare occasions, by vote. The responsibility of the financial and administrative management of each team rests on the team leaders, who are assisted by the centralized administrative structure. Each team will keep financial control of their individual research grants except for a 5% tax (salaries and equipment excluded) that will also be used for strategic scientific initiatives. The Inserm, CNRS, and University yearly budget is allocated to 3 main sectors: 1) general common expenses (roughly 25% of the yearly budget), 2) research budget given to each team based on the number of researchers, post-docs and PhD students (ETP); 3) strategic scientific initiatives.

Concerning scientific animation, in addition to the internal laboratory meetings organized by each individual team, different mechanisms have been established and are actively pursued to guaranty scientific exchanges between the members of the center. These include journal clubs, seminars delivered by students and post-docs to all scientists of the center, weekly seminars organized in the campus with invited speakers from other institutes in France, meetings held every two months in which senior scientists present their projects to the other teams for open discussion.

An International Scientific Advisory Board (SAB) composed of seven prestigious scientists from different countries (3 from France and 4 from The United States, Italy, United Kingdom and Switzerland) has evaluated the CPTP in March 2014 and has approved the team compositions and research topics. The SAB is invited on site every four years to make recommendations on scientific directions. The last SAB site-visit was organized on March 27-28, 2014. A report is available with an excellent appreciation of the CPTP science. Whenever it is necessary, members of the SAB can be consulted to give their advice. The next SAB meeting is scheduled for the beginning of 2019.

## HCERES nomenclature

SVSE-LS4, LS5, LS6, LS7

## Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
<b>N1:</b> Permanent professors and similar positions	33	34
<b>N2:</b> Permanent researchers from Institutions and similar positions	21	20
<b>N3:</b> Other permanent staff (without research duties)	44	44
<b>N4:</b> Other professors (Emeritus Professor, on-contract Professor, etc.)		
<b>N5:</b> Other researchers (Emeritus Research Director, Postdoctoral students, visitors, etc.)	21	18
<b>N6:</b> Other contractual staff (without research duties)	12	11
<b>TOTAL N1 to N6</b>	<b>131 FTE 106.9</b>	<b>127 FTE 103.1</b>

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	32	
Theses defended	44	
Postdoctoral students having spent at least 12 months in the unit	45	
Number of Research Supervisor Qualifications (HDR) taken	9	
Qualified research supervisors (with an HDR) or similar positions	41	

## 2 • Overall assessment of the unit

### Global assessment of the unit

The leader of the CPTP project has shown his remarkable dynamism and expertise in federating local research forces and establishing a strong network with regional economical forces. The CPTP has had a remarkable achievement with a very impressive rate of recruitments since 2009. The CPTP regroups approximately 127 staff members including 20 Scientists and 34 Teaching Scientists or Physician-Scientists (professors/associate-professors), 21 Post-docs, 32 PhD students. Six engineers or research assistants with permanent positions are in charge of common platforms including Imaging, Flow cytometry and Immunomonitoring facilities. Despite of a medium size center, the CPTP provides scientific critical mass and technological know-how and a highly stimulating work environment.

Broad but complementary research themes are developed by the CPTP which includes fundamental aspects of T lymphocyte and dendritic cell biology and signaling (Team 1, Team 2, Team 4 and Team10), role of gender differences in immunity (Team 3), immunopathology (Team 5), viral and parasitic infections (Team 6, Team 7 and Team 8), as well as a team establishing crosstalks between immune and bone systems (Team 9).

The proximity of the CPTP with the patient's bedside in the Purpan Hospital and the strong involvement of clinician scientists within the teams favored translational research projects. These projects involve internal medicine, rheumatology, neurology, tropical and infectious diseases, and pediatrics. Several physician-scientists (n=23) from the hospital are involved in the teams. During the 2010-2014 period, 10 public translational grants (PHRC, DHOS, Inserm) were awarded to the CPTP teams.

The three ATIP-Avenir recruitments of the CPTP demonstrate the strong attractivity of the structure. Moreover, 3 teams from the CRCT (Cancer Center) that were hosted in the CPTP will move to a new research building. This will allow free laboratory space in Purpan in order to sustain the recruitment objectives of the CPTP. They have already announced international calls for junior or senior team leader positions. Among 54 applications received, they performed 8 on-site interviews between Nov. 2013 and Feb. 2014, and have selected one senior and one junior candidate, who are in the process of being evaluated. Moreover, a teaching scientist was also recruited in 2013 on 'Excellence Chair' of Toulouse 3 University and Inserm. He was awarded a prestigious FRM 'emerging team' grant to study the role of epigenetic factors in T cell biology. In addition, four dynamic young scientists have succeeded the competitive national evaluation program for permanent position at Inserm or CNRS.

More recently, the CPTP has obtained an attractivity chair from an IdEx grant and recruited an outstanding professor, Ms Ellen ROBEY (Berkeley University), with a 5 year budget of 750 keuros.

### Strengths and opportunities in relation to the context

Strong forces in fundamental and clinical research based on large cohorts of patients with a spectrum of immune-mediated disorders, inflammatory or infectious diseases.

Strong activity in recruiting young scientists resulting in three ATIP-Avenir groups created during the last period. These ATIP-Avenir laureates are now proposed as team leaders for the next period (2016-2020), which illustrates the ability of young scientists to emerge as team leaders within the CPTP. Attractiveness for PhD and post-doc students can be appreciated by a number of these scientists coming from cities outside Toulouse and from abroad (USA, Italy, Spain, and Austria).

A very dynamic, sightful and federative unit leader able to drive fostering interactions between the teams of the Center as well as between academic and non academic partners of the Center.

Strong efforts for the different CPTP teams to combine expertise and develop interactive translational projects with already effective and efficient interactions. A human immunomonitoring platform composed of 2 research associates has been set up to help scientists from the Center to develop translational projects.

Strong support from Toulouse University to federate a large center around the theme of immunology, inflammation and infection with regional, national and international visibility.



### Weaknesses and threats related to the context

The relative infrequency of transversal interactions between team leaders and concerns regarding specific questions (ex: authorship by technicians if their own work deserves it).

Lack of balance between scientists and clinicians among the teams.

Students suffer from a lack of communication and information regarding decisions taken by the central administration.

### Recommendations

The committee recognizes the efforts of the CPTP to create outstanding common facilities and to increase its scientific output by recruiting young scientists, technicians and students/post-docs. There is a need to foster communication between all member categories of the CPTP and the direction committee.

There is a crucial need for more proximity with the human resource administration: for instance via a dedicated person for that task.

As the director and the deputy director are both PU-PH with half-time at the hospital, the committee suggests the addition of a full-time scientist as a second deputy director to become fully available on a daily basis for the administrative duties within the CPTP.