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## CRCT - Centre de recherches en cancérologie de Toulouse

Rapport Hcéres

► **To cite this version:**

Rapport d'évaluation d'une entité de recherche. CRCT - Centre de recherches en cancérologie de Toulouse. 2015, Université Toulouse 3 - Paul Sabatier - UPS, Centre national de la recherche scientifique - CNRS, Institut national de la santé et de la recherche médicale - INSERM. hceres-02033827

**HAL Id: hceres-02033827**

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Submitted on 20 Feb 2019

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# HCERES

High Council for the Evaluation of Research  
and Higher Education

Research units

HCERES report on research unit:

Cancer Research Center of Toulouse

CRCT

Under the supervision of the following  
institutions and research bodies:

Université Toulouse 3 Paul Sabatier

Centre National de la Recherche Scientifique - CNRS

Institut National de la Santé et de la Recherche

Médicale - Inserm

# 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>*

Éric SOLARY, chairman of the committee

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Under the decree N°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:	Cancer Research Center of Toulouse
Unit acronym:	CRCT
Label requested:	UMR, ERL, Inserm and university
Present no.:	UMR 1037, ERL 5294, Toulouse 3
Name of Director (2014-2015):	Mr Jean-Jacques FOURNIÉ
Name of Project Leader (2016-2020):	Mr Jean-Jacques FOURNIÉ

## Expert committee members

Chair:	Mr Éric SOLARY, Institut Gustave Roussy, Paris Sud University, Inserm
Experts:	Mr Ahmed ASHOUR, University of Oxford, United-Kingdom
	Mr Nicolas BOURMEYSTER, Poitiers University (representative of the CNU)
	Ms Anne GALY, Inserm Genethon (representative of the CSS Inserm)
	Mr Lluís FAJAS, Coll Faculty of Biology and Medicine, University of Lausanne, Switzerland
	Mr Ramon GARCIA SANZ, University of Salamanca, Espagne
	Mr Hinrich GRONEMEYER, IGBMC, Illkirch (representative of the CoNRS)
	Mr Eyal GOTTLIEB, Cancer Research UK Beatson Institute, United-Kingdom
	Mr Arjan W. GRIFFIOEN, VUMC - Cancer Center Amsterdam, the Netherlands
	Mr Ken HERRMANN, Universitätsklinikum Würzburg, Germany
	Ms Brigitte KERFELEC, Centre de recherche en cancérologie de Marseille (representative of CoNRS)
	Mr Roland KUIPER, Research Institute for Oncology, Radboud university medical centre, The Netherlands
	Mr Michael F. OLSON, Beatson Institute of Cancer, Glasgow, United-Kingdom
	Mr Michael PLATTEN, German Cancer Research Center, Germany
	Ms Cecile ROCHETTE-EGLY, IGBMC, Illkirch (representative of the CSS Inserm)

### Scientific delegate representing the HCERES:

Ms Maryam MEHRPOUR

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

Mr Michel ATTAL, cancer care center

Ms Armelle BARELLI, Inserm

Mr Alain EYCHENE, CNRS

Ms Christelle GUEGAN, Inserm

Ms Marie-Josèphe LEROY-ZAMIA, Inserm

Mr Philippe VALET (representative of the Doctoral School "Biologie-Santé-Biotechnologies" n°151)

Mr Alexis VALENTIN, Université Toulouse 3 Paul Sabatier

## 1 • Introduction

### History and geographical location of the unit

The Cancer Research Center of Toulouse (CRCT) is part of the Toulouse Oncopole located south west of the city of Toulouse. The Oncopole was built in the recent years on the site of the AZF chemical factory blast that occurred on september 21, 2001. It is a 220 hectares site, well connected to the airport, highways, university and hospitals. The Oncopole includes a cancer care center (university, Institute of Cancer - IUC, 304 beds and places), the french operator of blood transfusion (EFS), pharmaceutical and biotech companies (Pierre Fabre and Sanofi mainly) and public research laboratories (ITAV, Institute of Advanced Technologies for life sciences - and CRCT). The CRCT building is a 13,000 m<sup>2</sup> building including 8,000 m<sup>2</sup> host labs, core facilities, offices and services. The research center is connected directly (corridors) to the cancer care center. A large animal facility is located on the ground floor, below the labs and other facilities. The current research teams arrived on site mid-2014, a few weeks before the HCERES site-visit. Most of the teams belonging to the CRCT plan are located in this new building, excepted two teams hosted in the closely connected care center.

### Management team

The CRCT is headed by Mr Jean-Jacques FOURNIÉ, supported by the deputy director Mr Stéphane PYRONNET and the administrative director Mr Sébastien GUIBERT, forming the direction board.

### HCERES nomenclature

SVE1\_LS1, SVE1\_LS2

### Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
<b>N1:</b> Permanent professors and similar positions	40	41
<b>N2:</b> Permanent researchers from Institutions and similar positions	42	39
<b>N3:</b> Other permanent staff (without research duties)	38	38
<b>N4:</b> Other professors (Emeritus Professor, on-contract Professor, etc.)		
<b>N5:</b> Other researchers (Emeritus Research Director, Postdoctoral students, visitors, etc.)	28	28
<b>N6:</b> Other contractual staff (without research duties)	14	
<b>TOTAL N1 to N6</b>	<b>162</b>	<b>146</b>

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	50	
Theses defended	67	
Postdoctoral students having spent at least 12 months in the unit	28	
Number of Research Supervisor Qualifications (HDR) taken	15	
Qualified research supervisors (with an HDR) or similar positions	64	64

## 2 • Overall assessment of the unit

### Global assessment of the unit

The Cancer Research Center of Toulouse (CRCT) is a multidisciplinary research center dedicated to cancer. It was composed of 12 teams located in 5 different places in Toulouse when created in 2011. All the teams moved together very recently to a new building of the Toulouse Oncopole, closely linked to the anticancer clinical center. Taking advantage of this new place with a very high potential, the project of CRCT for the next 5 years includes the emergence of 5 new teams (17 teams in total, numbered 1-18 with a skip). The program includes strong basic and translational projects dedicated to tumor progression, cell metabolism, and the development of new anticancer therapies. Hematological malignancies occupy a central place in this program.

The CRCT is planned to be organized into four departments dedicated to tumor progression (team 1, 2 and 3), metabolism and cell death, tumor growth, immunity (team 4, 5, 6 and 17), leukemias and lymphomas (team 7, 8, 9, 16 and 18) and new cancer drugs (team 10, 11, 12, 13 and 15).

Most teams develop research programs that are connected to the care center and related to specific malignancies, with a dominant role of onco-hematology (multiple myeloma, non-hodgkin lymphoma, acute myeloid leukemia) but also programs dedicated to diverse solid tumors. The care center hosts a biobank of 21,000 annotated clinical samples, including tumor and control tissues. There is a strong intent to further enforce the translational aspects of the research, and to develop new drugs in oncology.

The CRCT is connected with several structures that have been created and awarded in the recent years, including CAPTOR (Cancer Pharmacology of Toulouse Oncopole and Region), a program that received 10M€ over 5 years through the Investissements d'Avenir (Partnership with Sanofi, Pierre Fabre and Affichem), and TOUCAN, a Laboratoire d'Excellence (LabEx) granted in 2013 with 5M€ over 5 years to explore therapeutic resistance in hematological cancers (partnership with Innate Pharma). These two programs funded equipments and teams in the CRCT.

The center is also connected to the ONCODEVICE initiative launched in the setting of the IDEX/PRES Université de Toulouse to develop new technologies and nanodevices in partnership with a CNRS Physics lab. Lastly, the center planned to create a collection of cell lines from its own tumor bank in order to screen new drug candidates, in a manner similar to that created by the National Cancer Institute in the US (NCI60-like set).

The CRCT is today in a transient phase. The center is nicely organized and obtained a 10% increase in its resources in the last 3 years. All the needed committees have been set up, and they appear to be nicely organized and very efficient. The regroupment of the teams in a brand new building now offers a unique and tremendous opportunity to set up an ambitious strategy in order to get international visibility, to recruit outstanding researchers, and to further promote excellence. Such a strategy has to be built in strong link with the hospital, including clinical research direction, in order to develop a comprehensive cancer center. Such a strategy may be supported by the national programs (Cancer Pharmacology of Toulouse Oncopole and Region, CAPTOR, LabEx TOUCAN), together with

the university and the Regional Council, in order to create packages that will enforce attraction of outstanding teams, which was almost impossible to organise before team grouping in a unique site with empty space and development perspectives.

### Strengths and opportunities in relation to the context

The center groups a panel of excellent and very good teams with complementary expertise in fundamental and translational research.

The management is excellent, with researchers, engineers, technicians and students in a very positive and open minded spirit, and a series of well-equipped facilities.

There is a close connection with the clinics in Oncology (in the building and through integration of physicians in the research teams) offering unique opportunities for very strong translational medicine.

The CRCT is hosted in a brand new building that offers impressive space: dispersed on 5 independent sites until recently, the teams will now interact more easily in a single building linked to the hospital to build their common strategy taking advantage of the site and the surrounding structures (Pharma companies, blood transfusion, other research institutes).

The CRCT has established excellent core facilities, including a large and technologically impressive animal facility with programs that may strongly support the objectives of the research teams.

### Weaknesses and threats related to the context

The CRCT is still too much Toulouse-centered. Recently grouped on the unique site, the center has to build a strategy to attract outstanding international talents, junior ATIP/Avenir teams, and international students and post-doctoral fellows. Young teams will need to be mentored by external researchers in the field.

The global strategy of the CRCT may facilitate interactions between teams and by working in close connection with the cancer care center to further enforce the interactions through well-identified and granted programs, from basic to clinical research, including MD-PhD tracks in oncology and programs to exploit the biobank of 21,000 samples.

The global strategy may define how to increase the International visibility of this relatively new center, and to collect more funding from the European Community (including ERC grants and Marie-Curie fellowships).

Efforts might be done to increase the number of post-doctoral researchers in the research teams, and to develop genomic facilities, together with a bioinformatic core facility.

The role of the four proposed research departments may be clarified. A more flexible organisation, for example on the basis of common programs that can evolve with time, could be envisioned.

### Recommendations

The CRCT being now closely connected to a cancer dedicated clinic, all the efforts must be focused on the strategy for the next 5 years: how to exploit the added value of coming on such a brand new site, how to create a comprehensive cancer center and give to this center, in functional connection with surrounding private and public research groups, a strong international visibility?

The recruitment of international outstanding teams might be the next priority. When these teams will be installed, international meetings will help to increase the visibility of the site.

The center may favor the attraction of foreign students and post-doctoral researchers and impose English as the scientific language in internal meetings.