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## I2MC - Institut des maladies métaboliques et cardiovasculaires

Rapport Hcéres

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# HCERES

High Council for the Evaluation of Research  
and Higher Education

Research units

HCERES report on research unit:

Institute of Metabolic and Cardiovascular Diseases

I2MC

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

# 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>*

Xavier JEUNEMAITRE, chairman of the  
committee

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Under the decree N<sup>o</sup>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:	Institute of Metabolic and Cardiovascular Diseases
Unit acronym:	I2MC
Label requested:	Inserm / Université Toulouse 3 - Paul Sabatier
Present no.:	1048
Name of Director (2014-2015):	Mr Angelo PARINI
Name of Project Leader (2016-2020):	Mr Angelo PARINI

## Expert committee members

Chair:	Mr Xavier JEUNEMAITRE, Paris-Cardiovascular Research Center
Experts:	Ms Lina BADIMON, Cardiovascular Research Center, Spain
	Ms Elisabetta CERBAI, University of Florence, Italy
	Mr Christos CHATZIANTONIOU (representative of the CSS Inserm)
	Mr Paul HOLVOET, KU Leuven university, Belgium
	Mr Folkert KUIPERS, University of Groningen, The Netherlands
	Mr Philippe LESNIK, Inserm, Hôpital de la Pitié Salpêtrière, Paris
	Mr Assaf RUDICH, Ben-Gurion University of the Negev, Beer-Sheva, Israël
	Ms Jane-Lise SAMUEL, Inserm, Hôpital Lariboisière, Paris
	Mr David SAVAGE, University of Cambridge, UK
	Mr Mauro TORTI, IRCCS San Raffaele Roma, Italy

Scientific delegate representing the HCERES:

Mr Patrick LACOLLEY

Representatives of the unit's supervising institutions and bodies:

Ms Armelle BARELLI, Inserm  
 Mr Raymond BAZIN, AVIESAN ITMO CMN  
 Mr Jonathan BELCASTRO, CHU Toulouse  
 Ms Chantal LASSERRE, Inserm  
 Mr Alexis VALENTIN, University Toulouse 3

## 1 • Introduction

The visit took place over three days, the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> December 2014. The chairman of the visiting committee previously asked the national and international experts to write a brief report on each team which was used as a basis of the minutes report and general evaluation. The visit was very well organized on 3 days, with a first presentation of the director of the Centre I2MC (Mr Angelo PARINI) on the past and future of the Centre (40 min) followed by 20 min of questions by the experts. Then each of the 16 teams was allocated to a 50 min session (30 min presentation + 20 min questions). The atmosphere was very professional, opened and friendly. All documents of the presentations were given and all was done to facilitate the evaluation of the centre. The morning of the 3<sup>rd</sup> day was dedicated to the visits of the platforms, to parallel meetings with personnel, discussions with the representatives of the managing bodies, the Doctoral school director and the Head of the Centre (director Mr Angelo PARINI and the vice-director Mr Dominique LANGIN). The final afternoon was dedicated to the evaluation of Team 16, to revisit the evaluation of each team and the overall Centre by the experts committee.

### History and geographical location of the unit

The “Institut des maladies métaboliques et cardiovasculaires”, “I2MC”, is located on the site “Rangueil” of University Paul Sabatier in Toulouse. It is established mainly on 2 buildings owned by Inserm and UPS respectively allowing a surface of research of 6838 m<sup>2</sup>. It was created in 2011, and the current project corresponds to its first renewal for the period (2016-2020). It is interesting to observe the extension of this centre within the last period with initially 12 teams and 1 Inserm Avenir teams compared now to the proposition of 16 research teams. This dynamism is also attested by the evolution of the research personnel (254 in 2011, 279 in 2014).

### Management team

The center is unique in Toulouse, bringing together researchers, lecturers/researchers, Engineers and technicians, working in the field of metabolic (obesity, diabetes, dyslipidemia) and cardiovascular diseases (thrombosis, atherosclerosis, heart and kidney). The research teams are working on the cardiovascular risk factors and their consequences using multidisciplinary approaches from basic science to clinical protocols. An extension to ageing has been recently taken.

The Centre is headed by the director Mr Angelo PARINI and the vice-director Mr Dominique LANGIN. The 13 research teams are organized in three Departments, with also common services and several technological platforms. The policy of recruitment of new research teams and researchers as well as the external and internal mobility of the personnel is adequate and efficient, the highest priority for the technicians and engineers being given to common services and platforms.

The connections with the hospital and the university are very strong. A willingness for in house collaborative projects (n=28) has been pursued but still represent a minority of the scientific outputs (n=63 / 829 original publications). For the next period, the I2MC proposes the remodelling of 4 research teams, and the creation of 3 new research teams to a total of 16 teams.

### HCERES nomenclature

SV1\_LS4

## Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
<b>N1:</b> Permanent professors and similar positions	57 (22,5 FTE)	66 (25,3)
<b>N2:</b> Permanent researchers from Institutions and similar positions	36 (34,6 FTE)	43 (42,6)
<b>N3:</b> Other permanent staff (without research duties)	62 (52,4 FTE)	54 (49,4)
<b>N4:</b> Other professors (Emeritus Professor, on-contract Professor, etc.)		
<b>N5:</b> Other researchers (Emeritus Research Director, Postdoctoral students, visitors, etc.)	36 (29,4 FTE)	34
<b>N6:</b> Other contractual staff (without research duties)	23	20
<b>TOTAL N1 to N6</b>	<b>214 (161,9)</b>	<b>217 (171,3)</b>

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	41	
Theses defended	49	
Postdoctoral students having spent at least 12 months in the unit	20	
Number of Research Supervisor Qualifications (HDR) taken		
Qualified research supervisors (with an HDR) or similar positions	73	73

## 2 • Overall assessment of the unit

## Global assessment of the unit

This I2MC research center dedicated to metabolic and cardiovascular diseases created in 2011 by Inserm and the University Paul Sabatier in Toulouse, is undeniably a success. In the last 5 years, the center has grown and is now presented as a set of 13 research teams with more than 270 persons (n=44 permanent Inserm/CNRS researchers; n=55 lecturers/researchers, n=87 engineers and technicians with a permanent (n=53) or temporary (n=34) position). The organization in three topic-specific departments allows better coordination and definition of scientific strategies. Publication level is excellent (>800 original publications on the relevant period), although I2MC should aim for more publications in very high quality top-ranked journals. The center has a strong national and international reputation, leading or participating to many national and international networks and programs. The visiting committee has strongly appreciated the dynamism and vision of the translational research proposed by the management as well as his recruitment policy and the strong effort put on the development of technical platforms and the organization of common services. The collaboration with the industry (n=18 R&D contracts) and the policy of creation of start-up companies (n=8) is extremely dynamic. The committee also appreciated the strong involvement of I2MC in education and training (n=729 ranging in background from high school students to post-doctoral fellows).

### Strengths and opportunities in relation to the context

Scientific quality: a unique research centre devoted to cardiovascular and metabolic disorders in Toulouse with a strong critical mass of talented researchers. In the last five years, the centre demonstrated its capacity to assemble teams in the field, but also to attract new ones. Excellent research with multidisciplinary approaches from basic science to clinical trials. Publication level is excellent (>800 original publications on the relevant period) but I2MC should seek for more publications in very high quality top-ranked journals.

Academic reputation and appeal: national and international reputation. Capacity to attract new researchers, and a new research team with an excellent foreign leader (team 16) has just applied to join the I2MC.

Social, economical interaction: The I2MC centre also developed strong interactions with the hospital and university. Numerous structured collaborations with private companies and outstanding dynamism in terms of creation of start-up companies (n=8) and patents deposits.

Unit organization and life: very good general organization and governance. Remarkable efficiency of the administrative platform. Excellent policy in terms of development of technical platforms and common services.

Training: Importance of the implication in training research. The “training” strategy has been particularly efficient and successful as a total of 15 researchers has been recruited by either the Inserm (n=8) or the University (n=7) with permanent positions since 2011.

Strategy: Excellent overall scientific strategy for a centre dedicated to a large but focused research area on cardiovascular metabolism with a smart progressive move to the pathophysiological aspects of ageing process within the various topics of the teams.

### Weaknesses and threats related to the context

Scientific quality and outputs: taken into account the quality of most of the teams, more publication in top-ranked generalists journals should be targeted.

Academic reputation and appeal: researchers and research teams should apply more to European funding and programs. No ERC or H2020 fund was obtained at the last call. Team leaders should have a stronger dynamism in the organization and participation to international meetings

Unit organization and life: despite a very positive appreciation of the overall organization, even stronger interactions between teams should be encouraged and the role of the Departments more visible. Although efficient, the small platform of bioinformatics has to be developed. The governance could be improved, especially the relations and communication with some technicians and engineers.

Training: All teams are involved in training research, but only few of them are strongly involved in or coordinating Master and PhDs programs. The policy for attracting young MDs in research as well as foreign postdocs should be more dynamic. Taken into account the size of I2MC, internal seminars should be more frequent (1/week) to help a better diffusion of knowledge between teams and also with technological platforms.

Scientific strategy: The interactions with the Hospital and University allow applications through IDEX, LabEx and FHU. An interesting trend has been presented to orientate part of some research teams on “ageing process”. Although this strategic turn seems appropriate with more space labs available and probably more grants to apply for, this thematic has to mature in the coming years.

### Recommendations

The general evaluation of the I2MC centre is very positive. The I2MC centre conducts an excellent transversal research using multidisciplinary approaches from basic science to clinical trials on cardiovascular and metabolic disorders, a major health challenge. The visiting committee was strongly impressed by the organisation, attractiveness, scientific quality, training activity and the general policy of the centre together with its links with the local institutions (university and hospital). A remarkable and unique dynamism of creation of start-up companies demonstrates the insertion of the I2MC in the city. The development of technological platforms is also excellent and should be encouraged by Inserm and University Paul Sabatier by the creation of further permanent positions of technicians and engineers. The “training” strategy has also been particularly efficient and successful as a total of 15 researchers has been recruited since 2011. This increased critical mass of researchers should help to reach even higher scientific objectives for the next 5 years.

Even though the centre is very dynamic in terms of scientific publications, it should aim to get more publications in top-ranked generalists journals taken into account the quality of most of the teams. Also, team leaders should apply more to European funding and programs and have a stronger dynamism in the organization and participation to international meetings. Finally, the remodeling and/or creation of new research teams is a proof of the dynamism of the governance policy of the direction of I2MC, but a few of them did not seem mature enough yet to be at the level of excellence required for such a center.