FINAL RESUME ON THE RESEARCH UNIT
GETBO - Thrombosis Study Group of Occidental Brittany

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND RESEARCH BODIES:
Université de Bretagne Occidentale - UBO

EVALUATION CAMPAIGN 2020-2021
GROUP B

Report published on September, 09 2021
Under the decree No.2014-1365 dated 14 November 2014,

1 The president of Hcéres “countersigns the evaluation reports set up by the experts committees and signed by their chairman.” (Article 8, paragraph 5);

2 The evaluation reports “are signed by the chairman of the experts committee”. (Article 11, paragraph 2).
UNIT PRESENTATION

Unit name:
The Thrombosis Study Group of Occidental Brittany

Unit acronym:
GETBO

Current label and N°:
EA3878

ID RNSR:
200415138S

Application type:
Renewal

Head of the unit (2020-2021):
Mr Francis Couturaud

Project leader (2021-2025):
Mr Francis Couturaud

Number of teams and/or themes:
1

EXPERTS COMMITTEE MEMBERS

Chair:
Mr Aron Ariel Cohen, Hôpital Saint-Antoine AP-HP, Paris, INSERM, Sorbonne-Université

Experts:
Mr Bruno Crestani, Université de Paris (representative of CNU)
Ms Yesim Dargaud, Université Claude Bernard Lyon 1-Hospices Civils de Lyon
Mr Christophe Guignabert, INSERM, Le Plessis-Robinson
Ms Muriel Laffargue, CNRS, Toulouse (representative of CSS INSERM)
Ms Malha Sadoune, INSERM, Paris

HCÉRES REPRESENTATIVE

Mr Claude Delcayre

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Raymond Bazin, ITMO Physiologie, Métabolisme, Nutrition
Mr Christian Berthou, Faculté de médecine de Brest
Mr Christian Boitard, ITMO Physiologie, Métabolisme, Nutrition
Mr Christian Brosseau, Université de Brest
Ms Florence Favrel-Feuillade, CHU de Brest
Mr Mathieu Gallou, Université de Brest
Mr Éric Stindel, Faculté de médecine de Brest
INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The research laboratory EA3878 “GETBO - Thrombosis Study Group of Occidental Brittany” was created in 2004 by Mr Dominique Mottier as the evolution of a pre-existing dynamic thrombosis study group “Groupe d’Etude de la Thrombose de Bretagne Occidentale – GETBO” (1992-2004). Under the patronage of the ‘Université de Bretagne Occidentale’, the directors of the unit were successively Mr Dominique Mottier (2004-2009), Mr Grégoire Le Gal (2010-2015) and Mr Francis Couturaud (2016-2020). The GETBO is located at the Brest Medicine Faculty and the Brest University Hospital “La Cavale Blanche”.

RESEARCH ECOSYSTEM

GETBO conducts a cutting-edge translational and innovative research program on venous thromboembolism (VTE) that is supported by the ‘Université de Bretagne Occidentale’, the Brest Faculty of Medicine, the Brest University Hospital (CHRU) and the ‘Région Bretagne’. In 2018, this positive research environment has not only allowed an allocation of a campus research space in the Faculty of Medicine, but has also facilitated the integration of a researcher as CR INSERM (2019). Recently, the creation of the RIMBO federation (Groupeement Coopératif Recherche Innovation Médicale en Bretagne Occidentale) has also facilitated the recruitment in clinical trials. The unit is indeed leading large national and international studies and several members are clearly visible according to the fact that some of them are active members of key scientific committees in the field (F-FCRIN INNOVTE and INVENT network). The GETBO director is currently leading the French Network on venous thromboembolism (FCRIN “INNOVTE” network). The strategic impact of this ecosystem on the regional, national and international levels is reinforced by the development of new oral anticoagulants and their increasing use in routine practice.

HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

The translational research program developed by the GETBO unit is devoted to the cellular and molecular mechanisms underlying venous thromboembolism (VTE) and recurrent VTE.

SVE5: SVE5_1; SVE5_3; SVE5_2

MANAGEMENT TEAM

Since 2019, the unit is and will be led by Mr. Francis Couturaud (professor of pneumology). Clinical research is coordinated by Mr F. Couturaud and the basic research team by Ms Catherine Lemarié (CR INSERM) who is also deputy head of the unit.

UNIT WORKFORCE

<table>
<thead>
<tr>
<th>Active staff</th>
<th>Number 06/01/2020</th>
<th>Number 01/01/2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full professors and similar positions</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Assistant professors and similar positions</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Full time research directors (Directeurs de recherche) and similar positions</td>
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<tr>
<td>Full time research associates (Chargés de recherche) and similar positions</td>
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<tr>
<td>Other scientists (“Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.”)</td>
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<td>19</td>
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<tr>
<td>High school teachers</td>
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<td>0</td>
</tr>
<tr>
<td>Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)</td>
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<td>20</td>
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<tr>
<td>Permanent staff</td>
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<td>59</td>
</tr>
<tr>
<td>Non-permanent professors and associate professors, including emeritus</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Non-permanent full time scientists, including emeritus, post-docs (except PhD students)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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GLOBAL ASSESSMENT OF THE UNIT

GETBO conducts a translational, innovative, multi-disciplinary and cutting-edge research program on venous thromboembolism (VTE), combining basic and clinical research devoted to the cellular and molecular mechanisms underlying VTE and recurrent VTE as well as to epidemiology, genetics, pathophysiology, diagnostic, preventive and curative treatments of this disease, in particular with the development of new oral anticoagulants and their increasing use in routine practice.

Their impressive output has significant impact on the VTE field and has contributed to patients’s welfare with about 200 original articles in leading position (New England Journal of Medicine, JAMA, Annals of Internal Medicine, Lancet Oncology, Lancet Diabetes, …) on these aspects with important discoveries on genetic predisposition of VTE, search for pulmonary embolism in patients with chronic obstructive pulmonary disease (COPD) (JAMA, 2020) and artificial intelligence helping diagnostic of VTE. GETBO members obtained numerous competitive grants at the national and international level (Australia and Canada) and their European leading position is undisputable as illustrated by their numerous academic collaborations with Canada, the United Kingdom, Spain, the Netherlands and the United States, their commitment in more than 200 national and international clinical trials, the lead of the French Network on venous thromboembolism (FCRIN “INNOVTE” network), the strong involvement in the management committee of INVENT, the international consortium on VTE. However, this would deserve a European competitive grant as leader such as ERC or others.

Impressively, 51 industrial trials were conducted for innovation in patient stratification, management, prevention and treatment and five industrial and R&D contracts (from BMS, Bayer, Siemens, Canon and MSD) and one CIFRE (from SIEMENS) fellowship were obtained. However, considering the strong interactions with non-academic partners and the societal impact of their research, the number of patents in partnership could be increased.

GETBO has efficiently trained eighteen Masters and eighteen PhD students over the period (for 17 HDR) considering that defended PhD have an average of 4.5 publications per student, and 4.1 as first author per PhD in excellent journals with a mean PhD duration of 36 months.

GETBO organization and management are well balanced and adapted to the clinical and basic research conducted.

Future directions and objectives are logical progressions of ongoing research within GETBO that should yield further scientific, clinical and therapeutic breakthroughs in VTE field. The ambitious GETBO projects require prioritization in order to focus interest on the themes considered to be the most promising, for example the identification of rare variants in genes associated with VTE. Particular attention should be paid to the balance between human resources available for basic science and research topics undertaken.
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