



Research evaluation

EVALUATION REPORT OF THE UNIT
PIBO - Pathologies, imagerie et biothérapies oro-
faciales

UNDER THE SUPERVISION OF THE
FOLLOWING ESTABLISHMENTS AND
ORGANISMS:
Université Paris Cité - UP Cité

EVALUATION CAMPAIGN 2023-2024
GROUP D

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High Council for evaluation of research and higher education



In the name of the expert committee :

Frédéric Michon, chairman

For the Hcéres :

Stéphane Le Bouler, acting president

Pursuant to Articles R. 114-15 and R. 114-10 of the Research Code, the evaluation reports drawn up by the expert committees are signed by the chairs of these committees and countersigned by the president of Hcéres.

To make the document easier to read, the names used in this report to designate functions, professions or responsibilities (expert, researcher, teacher-researcher, professor, lecturer, engineer, technician, director, doctoral student, etc.) are used in a generic sense and have a neutral value.

This report is the result of the unit's evaluation by the expert committee, the composition of which is specified below. The appreciations it contains are the expression of the independent and collegial deliberation of this committee. The numbers in this report are the certified exact data extracted from the deposited files by the supervising body on behalf of the unit.

MEMBERS OF THE EXPERT COMMITTEE

Chairperson:

Mr Frédéric Michon Inserm, Montpellier

Experts:

Mr Vincent Blasco-Baque Université Toulouse 3 - Paul Sabatier - UPS
Mrs Agnès Bloch-Zupan Université de Strasbourg (representative of CNU)
Mr Guillaume Falgayrac Université de Lille
Mrs Lydia Guennec Inserm, Marseille
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Mrs Marlène Wiart

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mrs Marion Jenk, UPCité
Mrs Anne-Paule Roqueplo, UPCité
Mr Michel Vidal, UPCité

CHARACTERISATION OF THE UNIT

- Name: Biomedical Research in Odontology
- Acronym: BRIO
- Label and number: URP 2496
- Composition of the executive team: Catherine Chaussin (Director), Claire Bardet (Deputy-Director), Lotfi Slimani (Deputy-Director)

SCIENTIFIC PANELS OF THE UNIT

SVE Sciences du vivant et environnement
SVE7 Prévention, diagnostic et traitement des maladies humaines

THEMES OF THE UNIT

The theme of the unit focuses on the pathophysiology of orofacial tissues. Its key focus is the study of rare genetic diseases, including X-linked hypophosphatemia and amelogenesis imperfecta, ranging from cellular mechanisms to the development of new treatments. The clinical, preclinical, and fundamental themes are organized into two main axes: on the one hand, the study of orofacial tissues in contexts of chronic pathologies and genetic diseases (including X-linked hypophosphatemia and amelogenesis imperfecta) and on the other hand, the exploration of biotherapy approaches aimed at promoting the regeneration of damaged orofacial tissues through the use of pulpal stromal cells.

HISTORIC AND GEOGRAPHICAL LOCATION OF THE UNIT

The unit was formed in 2010 from the merger of two laboratories: 'Bone Physiology' led by Mr. Jean Louis Saffar and 'Dental Regeneration' led by Mr. Michel Goldberg, around the theme of 'biomineralization and its mechanisms in normal and pathological conditions'. This unit has since been directed by Mrs. Catherine Chaussain.

In 2019, the University Paris Cité (UPCité) was created from the merger of Paris Descartes University and Paris Diderot University, and the two dental schools merged into one. Finally, the unit was stabilized thanks to an index obtained in 2022 by UPCité, which benefited the unit (Emergence program, visiting professors, core facilities grant).

Currently entitled 'Biomedical Research in Odontology', the BRIO unit is located at the Faculty of Dental Surgery in Montrouge.

RESEARCH ENVIRONMENT OF THE UNIT

The BRIO unit is a leading laboratory of the DDS-ParisNet Translational Research, which is composed of four laboratories, two core facilities, six clinical services and a doctoral school. Furthermore, the active collaboration with the AP-HP makes the unit a spearhead for dental research in France.

UNIT WORKFORCE: in physical persons at 31/12/2022

| Catégories de personnel | Effectifs |
|--|-----------|
| Professeurs et assimilés | 11 |
| Maîtres de conférences et assimilés | 11 |
| Directeurs de recherche et assimilés | 1 |
| Chargés de recherche et assimilés | 0 |
| Personnels d'appui à la recherche | 8 |
| Sous-total personnels permanents en activité | 31 |
| Enseignants-chercheurs et chercheurs non permanents et assimilés | 8 |
| Personnels d'appui non permanents | 0 |
| Post-doctorants | 2 |
| Doctorants | 8 |

| | |
|---|-----------|
| Sous-total personnels non permanents en activité | 18 |
| Total personnels | 49 |

DISTRIBUTION OF THE UNIT'S PERMANENTS BY EMPLOYER: in physical persons at 31/12/2022. Non-tutorship employers are grouped under the heading "others".

| Nom de l'employeur | EC | C | PAR |
|---------------------------|-----------|----------|------------|
| UNIVERSITÉ PARIS-CITÉ | 21 | 0 | 8 |
| AUTRES | 1 | 1 | 0 |
| Total personnels | 22 | 1 | 8 |

GLOBAL ASSESSMENT

The BRIO unit reached strong academic achievements during the mandate (as detailed below), despite a complex context (merging of Descartes and Diderot universities into Paris-Cité University, merging of the dental schools, and Covid-19 pandemic lockdowns).

During the 2017-2022 period, the BRIO unit succeeded in gathering 2,524 kEuros from local (Île-de-France), national (ANR, FHU, RHU) and European (H2020, Horizon) funding bodies and programs. Among these fundings, the BRIO unit obtained significant fundings for large equipments (idex funding for a confocal microscope, Région Ile de France (66%) and Fondation des Gueules Cassées (34%) for a new micro-CT).

The BRIO unit displayed a remarkable publication activity, with 198 peer-reviewed international articles, among which publications in top-tier journals (The Lancet, Nat Rev Immunol, Nat Rev Endocrinol, Biomaterials). The BRIO unit further developed their excellent relationships with patient associations and national foundations, especially through the national network of rare bone diseases "Filière OSCAR". Moreover, the visibility of the unit was strengthened through communication in non-scientific media (ARTE, Le Figaro, France Television, The Economist). Noticeably, the BRIO unit established robust connections with companies in their field (Kyowa Kirin, Bone 3D), and took part in several clinical trials (Periocard RHUivasc), Periostroke, Coloemail). Taken together, these elements reflect the leading position of the BRIO unit in the oro-dental research field.

The BRIO unit is organized as one team composed of two research axes. Each axis has demonstrated a strong development and advanced knowledge on their field. All research themes managed to establish fundamental research and foster translational approaches. The successful inclusion of the "Exposome" group, in 2022, brought a fresh dynamic in the unit, and new strong skills and expertise.

Defining a clear scientific objective, uniting all research groups, should be a priority to insure the cohesion and success of the future unit.

DETAILED EVALUATION OF THE UNIT

A - CONSIDERATION OF THE RECOMMENDATIONS IN THE PREVIOUS REPORT

During the previous evaluation, specific recommendations were made to strengthen the unit.

A – Recommendations concerning research products and activities

Three recommendations were highlighted.

The first one focused on the risk of having too many external collaborations, reflecting a possible lack of forefront thinking. Since then, the scientists of the unit have obtained 17 major grants as coordinators (H2020, ANR, Fondation des Gueules Cassées) and they have signed 198 peer-reviewed documents, among which 43 (21%) original scientific publications as last authors, reflecting a strong dedication in assuming scientific leading role. The 70 (35%) collaborative original scientific publications strengthened the visibility of the BRIO unit, as recommended.

The second recommendation focused on the number of students with a scientific background. The previous evaluation urged the unit to train more PhD students with a scientific background, as they made up to 20% of all the PhD students. During this evaluated period, the proportion of PhD with a scientific background was 25%. It demonstrates that the recommendation was acted upon, although there is still room for improvement.

The last recommendation focused on attracting visiting researchers. Through a dedicated idex program, the BRIO unit established a monthly seminar, in which scientists from all around the world were invited to present their work, showing a solid global attractivity.

B – Recommendations concerning the organization and life of the unit

The main recommendation was directed towards the merger with A. Berdal team. The BRIO unit succeeded in welcoming the "Exposome" research group of S. Babajko.

C – Recommendations concerning the five-year scientific outlook and the project feasibility

The first recommendation made was to ensure that the dimension of the project was met with an adequate manpower. Since last evaluation, the permanent staff went from 25 to 31, while the non-permanent staff decreased from 25 to 18, 22 PhD students during the evaluated period, and 8 PhD students at the date of the report drafting. While the uncertainty of funding for PhD students explains this decrease, the 20% increase in permanent staff shows the commitment of the unit to reach the ideal manpower for such project.

B - EVALUATION AREAS

EVALUATION AREA 1: PROFILE, RESOURCES AND ORGANISATION OF THE UNIT

Assessment on the scientific objectives of the unit

The unit consists of a single team, working on two axes, deciphering the mechanisms underlying oral pathologies, and oro-facial regeneration.

The two axes were recomposed in order to propose a wider spectrum of research. The first axis dedicated to the studies of oro-facial pathologies, is now sub-divided into three aims: inflammation (periodontal and pulp diseases), rare disorders, and exposome. The second axis is focused on the biotherapies (regenerative medicine). This new organization had allowed the development of projects, funded either from industry, academic or clinical research hospital program. For instance, the Axis 1 received funding from idex, ANR, FRM and the RHU iVasc, and the Axis 2, from IFRO, Fondation des Gueules Cassées and MIRES. The variety of funding reflects the strategy of the unit, to propose original research from bench to patient's bed.

This organization has benefited from internal collaborations, allowing a larger impact of the unit on the dental research field.

Assessment on the unit's resources

For the period 2017-2022 period, the BRIO unit obtained 2,709k€ as funding, including the annual endowment by UPCité (6.83% of the total budget). This strong budget, relying mainly on external funding, demonstrates a

solid strategy to obtain grants (606k€ in 2022). The main sources of external funding during this period were the ANR, FRM, associations and industrial partnerships.

During this five years period, the scientists of the unit have coordinated 26 projects (summing up to 971k€), such as IDEX Emergence UPCité (J. Bouchet) RHU2-IVASC-7 (M-L. Colombier), Labex Inflammex (M. Gosset), ANR PRC VASORIN (C. Chaussain), ANR JCJC HYOSKEL (C. Bardet), idex Emergence UPCité (S. Houari), ANR JCJC 3DBioMax and idex 3D-PEEK-Max (C. Gorin), IFRO (T. Boukpepsi Jubien and M. Collignon). The unit has also obtained several PhD allocations funded by the highly competitive FRM (N. Blanc Sylvestre and E. Chatzopoulou who are under the supervision of C. Bardet and C. Chaussain, respectively), or by CIFRE doctoral funding (S. Minic supervised by T. Boukpepsi Jubien).

Assessment on the functioning of the unit

The BRIO unit governance is mainly insured by the unit director and the two deputy-directors. The unit has introduced several actions to disseminate scientific and technical knowledge. Apart of the yearly seminar of the BRIO unit, lab, group and technical staff meetings are organized weekly. While the format seems appropriate for the unit, during the interviews it seemed that the design of this meeting could convey more transparency on budget and strategical decision. Finally, a monthly journal Club takes place with the lab meeting, and a monthly BRIO seminar completes this wide panel of exchanges and discussion moments.

The technical staff is dedicated to specific activities, such as cellular biology and histology. The Micro-CT core facility is run by a research engineer, with a technician. During the interview, the technicians and engineers pointed out their implication in the research projects, and their associations in the publications of the whole team.

1/ The unit has set itself relevant scientific objectives.

Strengths and possibilities linked to the context

The BRIO unit managed to put in place a virtuous cycle composed of high-quality research fueling high level grant applications, which in return supports new high-quality research. Furthermore, clinicians are fully involved in the projects, as reflected in two ongoing ANR projects (JCJC and FHU programs). Projects are taking advantage of the constitution of biological collections (CB-PARO, CB-PARO2, CB-PARO3 and CB-SJO), and clinical trials such as Coloemail. Finally, the funding strategy was crucial in acquiring a new micro-CT machine.

Weaknesses and risks linked to the context

As indicated in the self-assessment of the BRIO unit, the lack of European funding is concerning. However, the scientists of the unit are aware of this weakness, and are already acting upon as four projects have been submitted after sending the self-assessment.

2/ The unit has resources that are suited to its activity profile and research environment and mobilises them.

Strengths and possibilities linked to the context

The space allocated to the BRIO unit seems to be sufficient for the next period, even in the case of integrating new teams. Furthermore, a sufficient space has been planned for the transfer to the St Ouen campus in 5-6 years. Meanwhile, UPCité has secured enough funding (idex) to renovate the current building for the arrival of the new staff by fall 2024. Finally, the integration of an Inserm DR2 (S. Babajko) as leader of a team for the next period reflects the strong support of Inserm for the future of the BRIO unit.

Weaknesses and risks linked to the context

During the interviews, postdoctorants, PhD students and scientists pointed out that the supporting staff is less available from January to June (training period for M1/M2 students).

The unit with new teams will move to St Ouen institute, by the horizon 2029-2030. However, discussions are still ongoing with AP-HP for the localization of biocollections, and associated research facilities.

3/ *The unit's practices comply with the rules and directives laid down by its supervisory bodies in terms of human resources management, safety, environment, ethical protocols and protection of data and scientific heritage.*

Strengths and possibilities linked to the context

The deputy director (L. Slimani) in charge of the technical staff organizes as many meetings as necessary to resolve conflicts and limit individuals suffering. Three staffs in category C will be upgraded to category B: two of them in administrative support and the last one in technical support. All supporting staff acknowledge that they are fully involved with the merging project with others teams. They are also involved in the publications, when their technical skills were required. When necessary, all staff have access to trainings proposed by UPCité. The ethical protocols are elaborated and updated by the qualified scientific and technical staff. The projects dealing with GMO are submitted for approval to the relevant authorities (Ministry for Research and Ministry for Agriculture). New comers in the BRIO unit follow the mandatory trainings in hygiene and safety, and specific training sessions according to their scientific projects. The acquired data are stored on the server located in the dental school of UPCité.

Weaknesses and risks linked to the context

Only one Inserm scientist is involved in the BRIO unit. Attracting new Inserm staff, through recruitments or mobilities, would strengthen the unit. Notably, there is no secure access to the unit. Discussions are ongoing with UPCité on this matter. Finally, one of two technical staffs will not move to St Ouen and replacement will be needed, by an external recruitment or mobility.

EVALUATION AREA 2: ATTRACTIVENESS

Assessment on the attractiveness of the unit

The attractiveness of the BRIO unit is remarkable. Its national and European collaborative network enables the scientists to have a solid visibility (presidency of the PRG and MTG of IADR), and to be involved in large international projects (Dimitra, H2020). Moreover, the Master 2 program developed by the unit increases its local visibility and attracts doctoral students. The success to high profile grants is boosted by a grant writing mentoring by senior PIs for junior ones. Finally, the up-to-date *in vivo* imaging facility attracts external scientists (62% external funding), who can benefit on-site from a rare expertise in the analysis of mineralized oral tissues.

- 1/ *The unit has an attractive scientific reputation and is part of the European research area.*
- 2/ *The unit is attractive because for the quality of its staff support policy.*
- 3/ *The unit is attractive through its success in competitive calls for projects.*
- 4/ *The unit is attractive for the quality of its major equipment and technical skills.*

Strengths and possibilities linked to the context for the four references above

The BRIO unit has demonstrated a robust capacity to obtain national grant like those funded by the ANR. The BRIO unit staff are strongly involved in societies or editorial boards, such as IADR, IFRO, Journal of Dental Research, Clinical Periodontology, Journal of Periodontology, Stem Cells, Tissue engineering. An important achievement is the development and leading

position of the Master 2 program (D.I.R.: Development Inflammation Regeneration), insuring the unit's visibility for the students.

Weaknesses and risks linked to the context for the four references above

A striking issue is the low ratio of EU grant applications and amounts raised per scientist from Europe. The low number of applications sent to the EU programs (only one ERC application) sets the unit on a trajectory of ANR-dependency. More ERC and Horizon applications should be submitted.

EVALUATION AREA 3: SCIENTIFIC PRODUCTION

Assessment on the scientific production of the unit

The scientific production places the BRIO unit among the international leaders in basic science and clinical research in the field of orofacial physiopathology. In the 2017-2022 period, the BRIO unit has published 198 peer-reviewed articles, among which 58% are original publications. Scientists from the BRIO unit have published in very good journals at least once a year. For example, publications are in JDR and Science Advances, and reviews in Nature Reviews Endocrinology and Nature Reviews Nephrology. All staff categories (researchers, post-docs, PAR and PhD students) are well represented in the scientific production.

- 1/ *The scientific production of the unit meets quality criteria.*
- 2/ *The unit's scientific production is proportionate to its research potential and properly shared out between its personnel.*
- 3/ *The scientific production of the unit complies with the principles of research integrity, ethics and open science. It complies with the directives applicable in this field.*

Strengths and possibilities linked to the context for the three references above

The BRIO unit has three strengths based on the scientific production. (i) They published in prestigious journals, (ii) they are in leadership position in the field of oral science, (iii) their authorship is well balanced among the members of the lab (researchers, post-doctorants, PAR, PhD students).

The BRIO unit produces high quality articles regarding the journal rank of the Journal Citation Report. The articles are divided into six groups: original articles (43), original articles collaboration (71), reviews (21) international recommendations (21) and clinical research (42) and pedagogy (9). This scientific production places the BRIO unit among the international leaders in basic science and clinical research of their field of expertise which are "Dentistry, Oral Surgery & Medicine", "Multidisciplinary Sciences" and "Urology And Nephrology".

Researchers published in top-tier journals. Five articles and five reviews were published in Nature, Nature reviews Endocrinology, Nature Reviews Nephrology, Science advance and Metabolism: clinical and experimental. Their contributions are in adequation with their field of expertise: clinical practice, diagnosis and management of rare bone disorders, phosphate metabolism in rare bone disorder. Two articles were published in Periodontology 2000 dealing with the orofacial environment and periodontium.

The different categories of staff (researchers and Post-docs, BIATSS, PhD students) are well represented in the scientific production. Among the 43 original articles, 50% (22) contain at least one PAT as co-author; 40% (17) of publications contain PhD students as co-authors. In the collaborative articles (71), BIATSS and PhD students are less represented, 17% and 14% respectively.

The BRIO unit has a good level of open access publications. During the evaluation period, 127 articles (64%) were published in "open-access" over a total 198 articles which is in the national average.

The BRIO unit scientists are using high standards to insure the solidity of their results. Experiments are done at least in triplicate for *in vitro* approaches. Statistical analyses are systematically double-checked. This strategy improves the quality of the scientific production.

Weaknesses and risks linked to the context for the three references above

No weakness identified

EVALUATION AREA 4: CONTRIBUTION OF RESEARCH ACTIVITIES TO SOCIETY

Assessment on the inclusion of the unit's research in society

The team developed several actions to have a societal impact. First, the BRIO unit staff are heavily involved in actions to raise oral health issue awareness. They regularly give lectures at patient's organization gathering. Furthermore, they developed media supports to reach a larger audience, such as the movie "Le Royaume de LOS ou le conte du roi Phex", and the France culture P. Gingivalis podcast. Moreover, the BRIO unit is well-connected to patients' associations and reference centers for rare diseases. Regarding the interaction with the clinicians, the BRIO unit scientists were involved in writing general guidelines, such as diminishing radiation doses during pediatric clinical examinations. Finally, they take part in clinical trials to strengthen the translational aspect of their research.

Notably, the BRIO unit established strong connections with French and international companies in diverse domains, such as Septodont. These collaborations did not lead to any patent submissions yet.

- 1/ The unit stands out for the quality and the amount of its interactions with the non-academic world.*
- 2/ The unit develops products for the cultural, economic and social world.*
- 3/ The unit shares its knowledge with the general public and takes part in debates in society.*

Strengths and possibilities linked to the context for the three references above

The BRIO unit developed strong links with the general public, patient's associations, and with industrial partners. Furthermore, the BRIO unit staff has made tremendous efforts to increase their media visibility, and several scientists appeared on radio (RFI, France culture), television (ARTE, France television), magazines / newspapers (The Economist, le Monde), and internet (Youtube).

Weaknesses and risks linked to the context for the three references above

While the BRIO unit developed industrial collaborations, for instance via CIFRE PhD funding, there is a lack of patents, which could be resolved by developing a strong relationship with valorization bodies such as Inserm-transfert.

ANALYSIS OF THE UNIT'S TRAJECTORY

From 1st January 2025, following the merger of Paris two dental schools in 2021 within Paris Cité University created in 2019, all the researchers from previous BRIO-URP2496= Catherine Chaussain; URB2i-URP4462 = Jean Pierre ATTAL, 2 units from Montrouge campus; LabNOF= orofacial neurobiology= Yves Boucher and MOP (Molecular Oral Pathophysiology)= Ariane Berdal, Sylvie Babajko, Benjamin Fournier; will be gathered in a one unit dedicated to oral health **UMRS Oral Health**.

The unit will be governed by Catherine Chaussain (Director, PUPH UPCité, DDS), Sylvie Babajko (Deputy Director, DR INSERM) and Jean-Pierre Attal (Deputy Director, MCU-PH-HDR UPCité, DDS) and organized in 2 teams composed in total of 85 members (47.51 FTE) who will join their efforts to advance oral health research.

TEAM 1) ORO-FACIAL PATHOPHYSIOLOGY AND TISSUE ENGINEERING (C Chaussain and S Babajko) affiliated to ITMO Physiopathologie, métabolisme, nutrition and the CSS3 Inserm.

Team 1 (47.18 FTE, including 39 permanent researchers for a total of 15.27 FTE, with 23 HDR) = BRIO+MOP+LabNOF

With 2 themes and 5 subthemes:

1) Oral “Chronic inflammatory diseases, pain and repair”

- Inflammation and chronic oral diseases (caries, periodontitis) will be led by Jérôme Bouchet (MCF- HDR) and Marjolaine Gosset (PUPH-DDS)
- Orofacial neuroscience including trigeminal pain, mastication and taste will be led by Yves Boucher (PUPH-DDS) and Nathan Moreau (MCUPH-HDR DDS).
- Orofacial Healing/ regeneration, Tissue Engineering will be led by Benjamin Fournier (PUPH, PhD, DDS) working in the « Centre de Recherche des Cordeliers » before joining the Unit in 2024.

2) “Environmental and genetic oral disorders”

- Exposome and oral diseases will be led by Sylvie Babajko (DR INSERM) and Jean-Marc Ricort (PR, ENS)
- Orofacial rare diseases will be led by Claire Bardet (PR, BRIO) and Martin Biosse Duplan (PUPH-DDS)

TEAM 2) “BIOMATERIALS, ENGINEERING AND NEW TECHNOLOGIES FOR ORAL HEALTH” (Jean-Pierre Attal, Laurent Tapie) affiliated to ITMO Technologies pour la Santé, CSS7 Inserm (12.94 FTE, including 18 permanent researchers for a total of 8.45 FTE, with 12 HDR)

1) Development and applications of digital technologies for a modern dentistry

- Mechanical design of medical device
- Medical device manufacturing
- Clinical use of medical device

2) Development and application of biomaterials for new dental therapeutics

- Adhesion
- Biocompatibility and absence of toxicity
- Handling in clinics.

These teams will be supported by a technical department composed of the existing 1) micro-CT core facility; 2) a platform dedicated to biomaterial and medical device characterization that will be created by Team 2; 3) a multi-scale characterization platform for mineralized tissues.

The design of the new unit results from a process that has been initiated in 2019, with the obtention of the FHU label, enabling the creation of constructive smooth relationships between the different leaders and members of the groups. It then became obvious that academic dentistry research of UPCité was ready to create the largest unit in France entirely dedicated to Oral Health. The structure was then approved by UPCité, Sorbonne Paris Nord University and Inserm. A multidisciplinary scientific advisory board was then appointed by the future director and her deputy directors and the project was auditioned in November 2022. This SAB was presided by Alain Tedgui and formed by Laurence Vico, Joelle Amédée, Jean Christophe Farges, Serge Perrot, and Xavier Coumoul. The SAB provided several recommendations, which were presented during a second seminar in February 2023 to the future members of the unit and the supervisory authority representatives from UPCité and Inserm.

During the visit, the committee had a thorough discussion with the representatives of the “tutelles”: for UPCité, Anne Paule Roqueplo, (vice-president for research), Matthieu Resche Rigond (dean of the health faculty), Christine Guillard (director for research at the health faculty), Michel Vidal (deputy director for research at the health faculty), Sibylle Vital (deputy director for pedagogy, and representing the dean of the odontology faculty), Marion Jenck (administrative director); for Sorbonne University, Pascale Molinier (vice-president for research); for Inserm, Raymond Bazin (ITMO physiopathology). This discussion highlighted the strong support from all institutions for the new unit. Furthermore, obtaining the Inserm label was strongly supported and encouraged by the university, the faculties and the ITMO.

The future unit will be on the track to become a spearhead of fundamental and clinical research in oral science.

RECOMMENDATIONS TO THE UNIT

Recommendations regarding the Evaluation Area 1: Profile, Resources and Organisation of the Unit

While the BRIO unit demonstrated its solid capacities to adapt to drastic changes, the committee would like to stress few points to be taken into account. The scientists should diversify their source of funding towards European funding. The unit managed to nurture successful candidates for the ANR JCJC program: these candidates (and future ones) should be supported and encouraged to apply to the ERC Starting Grant program. Obtaining more funding from EU programs will help raising the profile of the unit.

The committee acknowledges the efforts in creating sufficient governing bodies for the future unit (governance, enlarged governance, unit council, general assembly, referent sub-groups), however, unit council and general assembly could meet more often than twice and once a year respectively. More frequent meetings and assemblies would help in increasing the internal democracy and transparency of the decision-making process. Finally, the committee wants to stress the choice of the general secretary. An administrative profile, having knowledge of UPCit  and/or Inserm, would be of huge help for the future of the unit.

Finally, recruiting new Inserm staff would strengthen the link between the unit and the institution.

Recommendations regarding the Evaluation Area 2: Attractiveness

During the last period, the BRIO unit succeeded in attracting new scientists, technicians and students. This effort was crucial for stabilizing the unit. For the future, developing/attracting junior teams, stemming from within the unit, or from outside, should be encouraged. These teams could bring new ideas and methodologies benefiting to the whole unit.

Recommendations regarding Evaluation Area 3: Scientific Production

The BRIO unit has thrived during the last period. The scientific production is robust (198 publications). The committee strongly encourage the unit to maintain this high level of scientific production, which reflects the importance of the BRIO unit in their field.

The committee would like the M1/M2 student training period to be a point of vigilance for the scientists. The number of students should be carefully planned to not overwhelm the support staff and disrupt the ongoing work.

Recommendations regarding Evaluation Area 4: Contribution of Research Activities to Society

During the last period, the BRIO unit has made tremendous efforts to have connections with the general public (TV, radio, magazines). The committee congratulates the unit for this commitment, and encourage the BRIO scientists to maintain these efforts. Moreover, the panel encourages the PIs involved in translational research to seek efficient help to submit patents.

CONDUCT OF THE INTERVIEWS

Date(s)

Start: 15 décembre 2023 à 09h00

End: 15 décembre 2023 à 15h00

Interview conducted: on-site or online

INTERVIEW SCHEDULE

8h00-8h30 Accueil avec café

8h30-9h00 Réunion à huis-clos du comité d'évaluation

9h00-9h15 Présentation du processus d'évaluation et des membres du comité aux membres de l'Unité

9h15-9h45 Présentation du bilan global de l'Unité par la directrice et ses adjoints (15 minutes + 10 minutes de discussion)

9h45-10h45 Bilan groupe par groupe

9h45-10h00 **Axe 1.1 Inflammation et maladies orales chroniques.** Marjolaine Gosset et Jérôme Bouchet (10 minutes + 5 minutes de discussion)

10h00-10h15 **Axe 1.2 Maladies rares oro-faciales.** Claire Bardet (10 minutes + 5 minutes de discussion)

10h15-10h30 **Axe 1.3 Hypominéralisation de la dent et environnement.** Sylvie Babajko (10 minutes + 5 minutes de discussion)

10h30 -10h45 **Axe 2 Régénération Orale, Ingénierie tissulaire.** Caroline Gorin et Anne-Margaux Collignon (10 minutes + 5 minutes de discussion)

10h45-11h00 Pause-Café

11h00-11h30 Présentation de la Trajectoire de l'unité en présence des futurs directeurs d'équipes et d'axes (Catherine Chaussain et Sylvie Babajko)

11h30-12h15 Déjeuner (45 min)

12h15-13h30 Discussions avec les membres de l'Unité

12h15-12h40 Discussion à huis-clos du Comité avec les doctorants et post-doctorants

12h40-13h05 Discussion à huis-clos du Comité avec les ingénieurs, techniciens et administratifs

13h05-13h30 Discussion à huis-clos du Comité avec les chercheurs et enseignants-chercheurs

13h30-14h00 Huis clos du comité HCERES – entretien avec les responsables institutionnels

14h00-14h30 Huis-clos du comité HCERES - entretien avec la directrice et porteuse du projet

14h30-15h00 Huis clos du comité HCERES – finalisation du rapport

GENERAL OBSERVATIONS OF THE SUPERVISORS

Le Président

Paris, le 5 Avril 2024

HCERES
2 rue Albert Einstein
75013 Paris

Objet : Rapport d'évaluation de l'unité DER-PUR250024193 - PIBO - Pathologies, imagerie et biothérapies oro-faciales.

Madame, Monsieur,

L'université Paris Cité (UPCité) a pris connaissance du rapport d'évaluation de l'unité PIBO - Pathologies, imagerie et biothérapies oro-faciales. Ce rapport a été lu avec attention par la direction de l'unité, qui signale des erreurs factuelles à corriger dans le courrier joint, par le vice-doyen Recherche et le doyen de la Faculté de Santé d'UPCité, par la vice-présidente Recherche d'UPCité et par moi-même. L'ensemble des acteurs UPCité remercie le comité pour son travail d'évaluation.

Présidence

Référence

Pr/DGDRIVE/2023

Affaire suivie par
Christine Debydeal -
DGDRIVE

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Le doyen de la Faculté de Santé et moi même souhaitons souligner que l'unité PIBO (Pathologies, imagerie et biothérapies oro-faciales) est une unité de recherche propre d'UPCité qui a pour thématique la physiopathologie des tissus oraux faciaux, en ciblant plus particulièrement les maladies génétiques rares et certaines pathologies chroniques. La recherche effectuée au sein de cette unité est totalement translationnelle et va du fondamental à la clinique en passant par des modèles animaux. Suite à la fusion des deux UFR d'odontologie, il a été proposé une restructuration de la recherche au sein de la nouvelle UFR avec la création d'une seule unité dénommée BRIO (Biomedical research in Odontology) qui demande une labellisation INSERM pour le prochain quinquennal. Cette restructuration, accompagnée par l'ensemble des partenaires, s'inscrit dans la politique incitative de la Faculté de Santé et d'UPCité de l'évolution des URP en UMR. La future unité, qui sera constituée de deux équipes, regroupera l'ensemble des forces de l'université en odontologie et augmentera nettement la visibilité nationale et internationale de la recherche dans cette thématique en créant un pôle unique en France.

Je vous prie d'agréer, Madame, Monsieur, l'expression de ma considération distinguée.

Édouard Kaminski



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