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RDP - Reproduction et développement des plantes

Rapport Hcéres

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HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

HCERES report on research unit:

Laboratoire de Reproduction et Développement des
Plantes

RDP

Under the supervision of
the following institutions
and research bodies:

École Normale Supérieure de Lyon - ENS Lyon

Centre National de la Recherche Scientifique - CNRS

Institut National de la Recherche Agronomique - INRA

Université Claude Bernard Lyon 1 - UCB

HCERES

High Council for the Evaluation of Research
and Higher Education

Research units

In the name of HCERES,¹

Didier HOUSSIN, president

In the name of the experts committee,²

Jane LANGDALE, chairwoman of the
committee

Under the decree No.2014-1365 dated 14 november 2014,

¹ The president of HCERES "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 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:	Laboratoire de Reproduction et Développement des Plantes
Unit acronym:	RDP
Label requested:	Unité Mixte de Recherches ENS/UCBL/INRA/CNRS
Present no.:	UMR 5667
Name of Director (2014-2015):	Mr Jan TRAAS
Name of Project Leader (2016-2020):	Mr Teva VERNOUX

Expert committee members

Chair:	Ms Jane LANGDALE, University of Oxford, UK
Experts:	Ms Julia BUITINK, INRA, Angers (representative of the CSS INRA)
	Mr Liam DOLAN, University of Oxford, UK
	Ms Cristina FERRANDIZ, CSIC, Spain
	Ms Laurence LEJAY, INRA, Montpellier (representative of the CoNRS)
	Mr Richard NAPIER, University of Warwick, UK
	Mr Jerzy PASZKOWSKI, Sainsbury Laboratory, UK
	Mr Bruno TOURAINE, Université de Montpellier (representative of the CNU)

Scientific delegate representing the HCERES:

Mr Steven BALL

Representatives of the unit's supervising institutions and bodies:

Mr Philippe DUGOURD, Université Claude Bernard - Lyon 1

Mr Frédéric GAYMARD, département BAP, INRA

Ms Françoise MONEGER (representative of Doctoral School « Biologie Moléculaire, Intégrative et Cellulaire » - BMIC - ED n°340)

Mr Yanick RICARD, ENS-Lyon

1 • Introduction

History and geographical location of the unit

The RDP (Reproduction et Développement des plantes) laboratory was founded by Mr Christian DUMAS in 1993. It is a joint research unit (UMR), funded by ENSLyon, CNRS, INRA and the UCBL1 (University of Lyon).

As of 2014, RDP was composed of 46 permanent staff (including 23 technicians and 23 professors, assistant professors (with teaching obligations) and research directors and researchers (with no teaching obligations)). This permanent staff is assisted by 17 PhD students and 17 postdocs plus 12 technicians hired on a temporary basis. The RDP has in house molecular and cell biology facilities including imaging and modelling. It is located on the ENS campus at Gerland (Lyon), and occupies presently 1,800 m², including a single 250 m² greenhouse and an expanding number of growth chambers. An additional greenhouse is planned for the near future. Due to lab space constraints, it was decided to limit the team sizes to 13 researchers, students and technicians. In 2013 the RDP's total budget amounted to approximately 5.6 million Euros with 61 % of this amount consisting of permanent position salaries from the funding bodies (CNRS, ENS, INRA, University of Lyon) and a further 17 % comprising temporary staff salaries. RDP belongs to the SFR Biosciences (UMS3444/US8), a research federation effort which aims to coordinate local research policies on Gerland/Charles Mérieux campus. It is also affiliated to the Doctoral School ED 340-: "Biologie Moléculaire, Intégrative et Cellulaire" (BMIC). The main research focus of RDP is the multidisciplinary study of plant reproduction and development.

Management team

Since 2007, the RDP unit has been directed by Dr Jan TRAAS / Dr Teva VERNOUX respectively as director/deputy director with the assistance of the group leaders within the direction team. The general administration and financial services are managed by two permanent INRA and CNRS administrators. The management team is assisted by the laboratory council and the general assembly of all personnel that is held at least once a year. At the end of the current evaluation period, RDP encompassed 7 scientific research teams with a high level of scientific autonomy, each of which was managed by a group leader. For the next period, the same team management structure is proposed with Dr Teva VERNOUX as the elected future director. Dr Teva VERNOUX plans to be assisted by two deputy directors (Ms Gwyneth INGRAM and Mr Arezki BOUDAPOUD) and also by a yet to be appointed Scientific Advisory Board.

HCERES nomenclature

Sous domaine AEE (Agronomie Écologie Environnement)

Sous-domaine secondaire SVE2 LS3 Biologie du Développement Végétal

Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
N1: Permanent professors and similar positions	7	7
N2: Permanent EPST or EPIC researchers and similar positions	15	16
N3: Other permanent staff (without research duties, technical staff)	25	25
N4: Other professors (PREM, ECC, etc.)	1	1
N5: Other researchers (DREM, Postdoctoral students, visitors, PhD, etc.)	29	38
N6: Other contractual staff (without research duties)	12	11
TOTAL N1 to N6	89	98

Team workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	11	
Theses defended	19	
Postdoctoral students having spent at least 12 months in the unit	17	
Number of Research Supervisor Qualifications (HDR) taken	5	
Qualified research supervisors (with an HDR) or similar positions	13	13

2 • Overall assessment of the unit

Global assessment of the unit

The unit has established itself as a centre for excellence and has become one of the primary research institutes for plant developmental biology in Europe. The unit relies strongly on multidisciplinary approaches and has great synergies between research teams. All of the research teams have been highly successful at winning competitive funding, and in many cases the unit's researchers have been setting the research agenda for the field. A number of the scientific outputs over the last five years have been ground-breaking, and innovative approaches have created new tools that are used around the world. The general culture across the unit is outstanding, with members at all levels feeling valued. In addition to its major contribution to research, the unit makes a substantial contribution to undergraduate teaching and provides a truly international training environment for graduate students and postdocs.

Strengths and opportunities in relation to the context

- significant expansion and improvement since last evaluation;

- internationally recognized research;
- excellent record of attracting external funding and potential to secure even more;
- critical mass of rising stars with excellent track records;
- democratic management structure;
- inclusive and dynamic atmosphere across the entire unit that promotes and reinforces synergies;
- substantial scientific achievements provide opportunity to increase international reputation and recruitment.

Weaknesses and threats related to the context

- space constraints (in terms of both laboratory and plant growth facilities);
- inadequate administrative support for finances and human resources;
- complex budgetary structure;
- disruptive IT policies and inadequate IT support from ENS;
- limited bioinformatics support;
- insufficient technical support for plant growth;
- any strategic expansion needs to be managed carefully to retain coherence and synergies of the unit.

Recommendations

Considering the significant responsibilities associated with the role, the new directors should be provided with management training (as soon as possible) so that together they can develop a robust strategy for the next five years. Ongoing mentoring/support should be offered so that they are able to successfully implement the strategy.

If confirmed that the plant biology ENS Professor position would be returned to RDP when the current post holder retires, as implied during the exchanges between the ENS representative and the evaluation committee, RDP should develop a clear strategy for replacement as a matter of urgency, and initiate the ensuing search for candidates as soon as possible.

To ensure independence of the unit, modelling activities should be reinforced through the recruitment of a new group.

More coherent strategies should be developed and implemented for i) industry liaison, ii) intellectual property, iii) outreach, and iv) increasing international recognition/appreciation of the unit.

If the Interdisciplinary Center for Cell and Developmental Biology (ICB) is formed, any operational structure should not compromise the preeminence of RDP.

Discussions should be initiated with ENS and the University to enable teaching loads of academic employees to be redistributed to other researchers in the unit who wish to teach.

The management team should have oversight of grant applications to ensure that the funds requested are adequate to cover administrative and technical support costs.

ENS should ensure minimal disruption to the unit's activities during refurbishment of new space (the ENS representative confirmed this commitment to the evaluation committee).