



LabEx CeMEB

Center for environnement and biodiversity (Montpellier, France)

REGIONAL BIO-BRIDGE INITIATIVE ROUND TABLE, 26-28 February, Minsk



1. CEMEB IN A NUTSHELL : CONTEXT

NATIONAL FRENCH AGENCY FOR RESEARCH

- **PIA / Laboratory of Excellence 2011-2019** (6,3 M€ endowment)
- **170 LabEx at national scale - 15 in biodiversity / ecosystems**
- **Labex : not structures, but projects (CeMEB managed by the University of Montpellier) – very different functioning**

1. CEMEB IN A NUTSHELL : CONTEXT

GENERAL AIMS OF LABEX PROJECTS

- Sustain excellence in research
- Develop international visibility & partnerships
- Develop and transfer answers to environmental issues induced by biodiversity erosion and global change on ecological systems and human societies

2. CEMEB : SCIENTIFIC COMMUNITY



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CEMEB

N = 850
permanent staff
(1500 as a whole)

A long history of collaborations

**High-profile scientific community / 10
research institutes**

12 ERC since 2008

2nd Shanghai ranking



2. CEMEB : SCIENTIFIC COMMUNITY Abroad

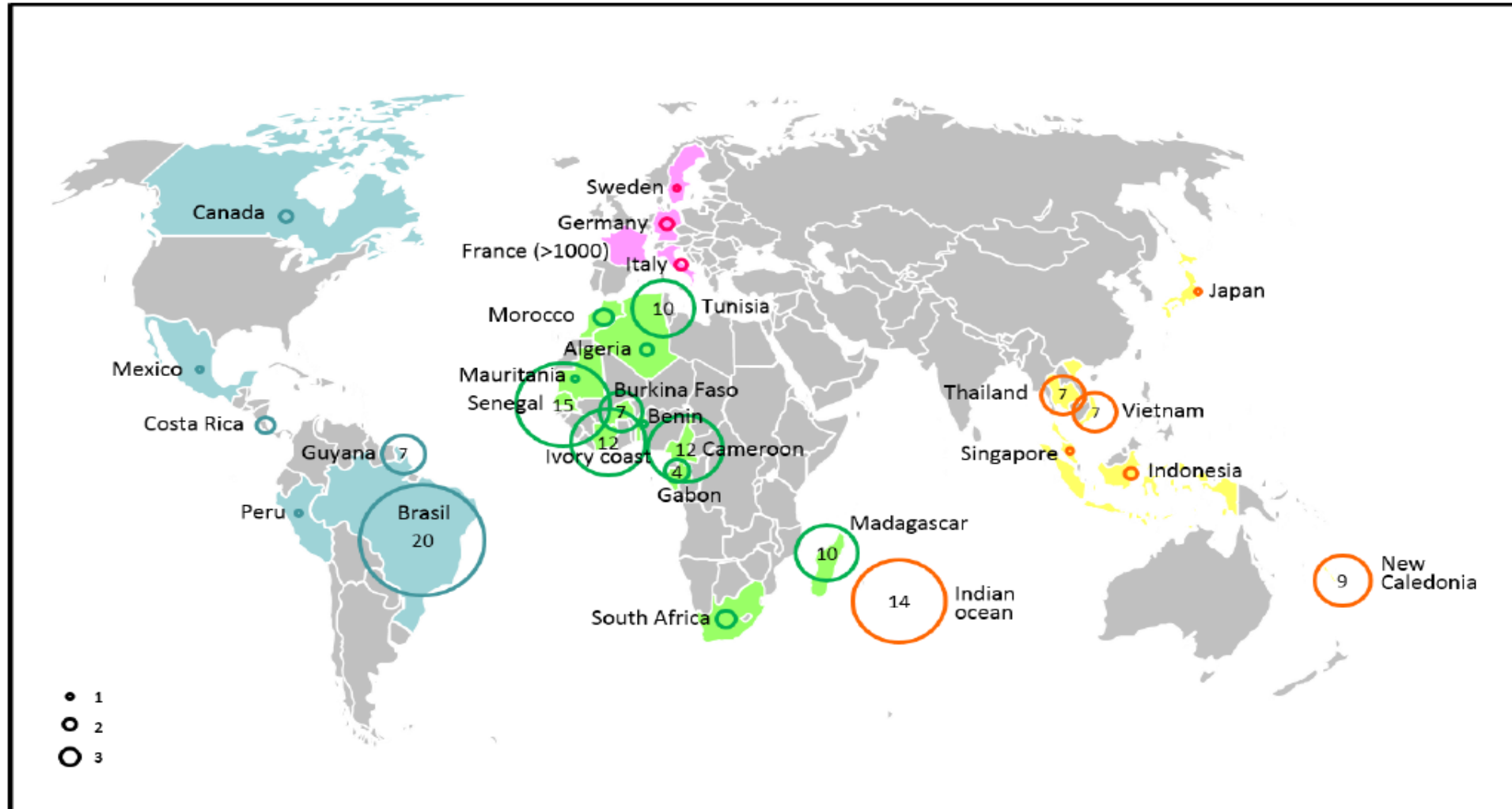
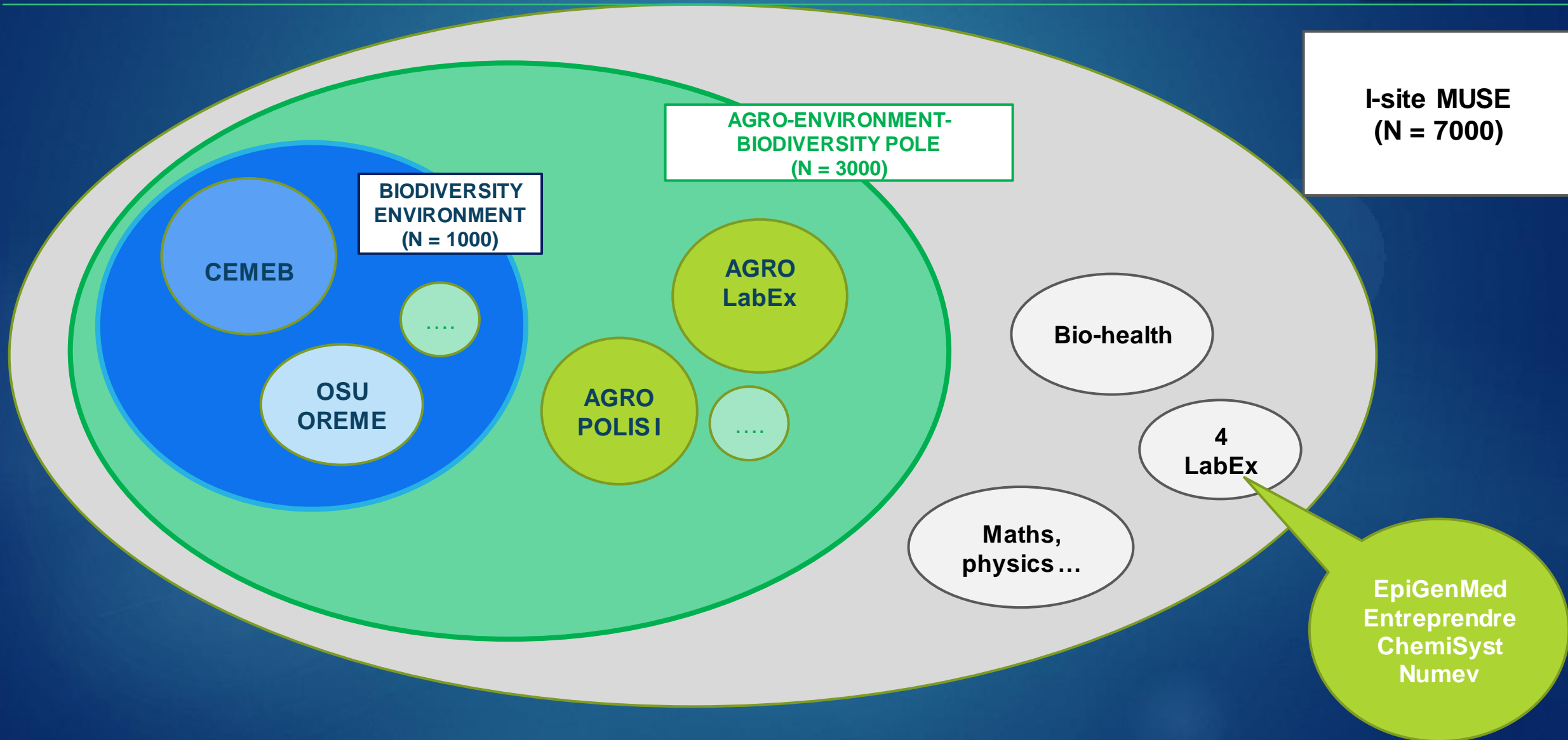


Fig. 3. Geographical distribution of CeMEB staff. The number of scientific staff (including PhD students) is indicated in circles

2. CEMEB : IN THE LOCAL ECOSYSTEM



3. CEMEB : SCIENTIFIC GOALS & SCOPE

A strong support to basic research in global ecology

- Science fronts in ecology and evolution
- International visibility
- An inter/multidisciplinary approach, including social sciences



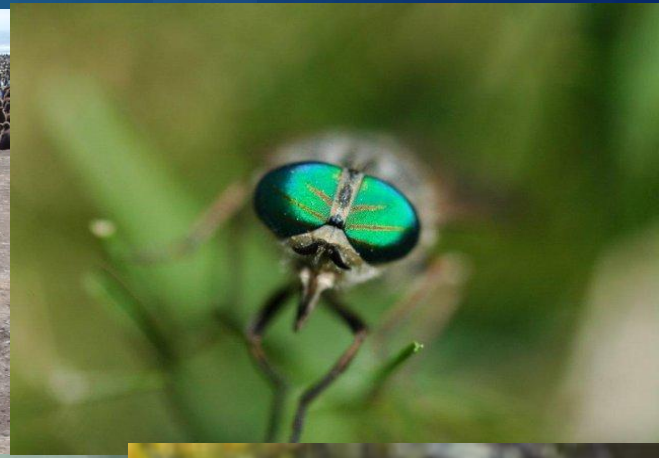
Towards translational ecology

- Take into account environmental issues and propose solutions
- Reinforce visibility for non-academics interested in biodiversity
- Develop partnerships



3. CEMEB : SCIENTIFIC GOALS & SCOPE

VARIOUS BIOLOGICAL MODELS AND ECOSYSTEMS :
From equator to poles, viruses to whales, wild & cultivated species



3. CEMEB : SCIENTIFIC GOALS & SCOPE

GENERAL RESEARCH THEMES

- Understand the origin, dynamics and functioning of biodiversity and ecosystems
- Predict the biological / ecological consequences of global change
- Anticipate its impact on ecological services and human society to develop solutions

MAIN DISCIPLINARIES : Examples

ecology (past / present) - functional ecology – nature conservation – molecular biology & evolution – dynamics of populations – DNA barcoding & sequencing – social & economical aspects - viruses

And research at the interface, for ex. : ecology / health - biologging

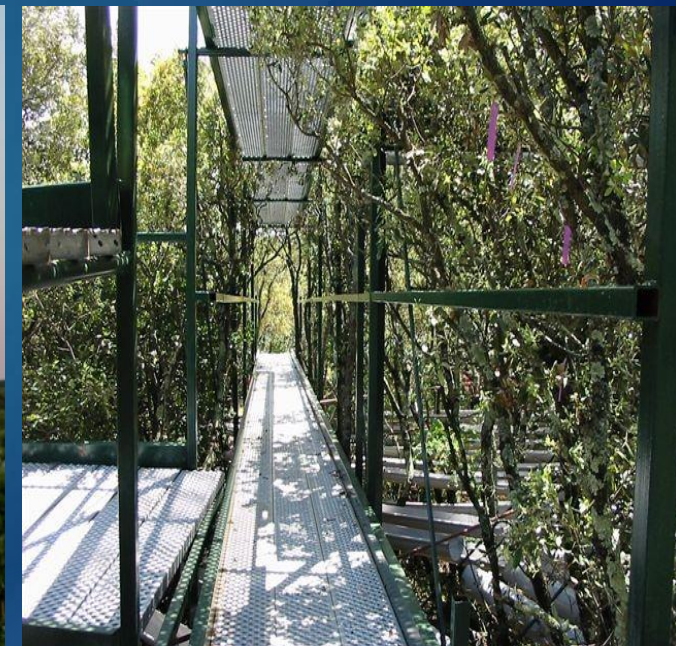
3. CEMEB : SCIENTIFIC GOALS & SCOPE

COMBINING

- 1- Long term observations
2. Experimentations
3. Data management & modeling

EX : Experimental site of Puéchabon

- A tour to measure continuous CO₂ and H₂O exchanges since 1998
- Un système d'exclusion de pluie (30 ou 100%) par toit coulissant
- 300 capteurs automatiques



3. CEMEB : SCIENTIFIC GOALS & SCOPE

COMBINING

1- Long term observations

2. Experimentations

3. Data management & modeling

Ex : European Ecotron of Montpellier (CNRS) : from prototype to reality.

Climate change : macrocosms- microcosms



3. CEMEB : SCIENTIFIC GOALS & SCOPE

COMBINING

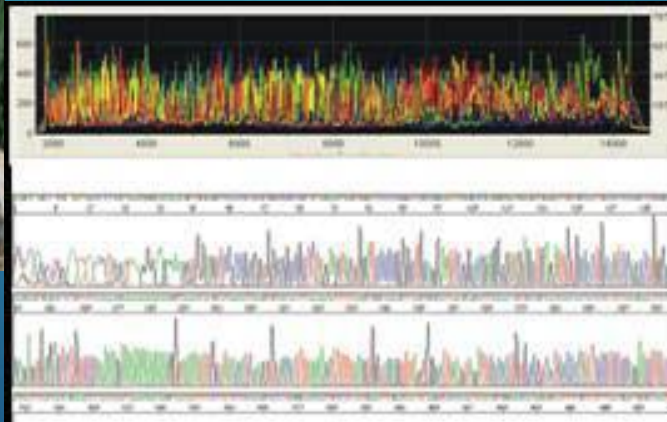
1- Long term observations

2. Experimentations

3. Data management & modeling

Technological platforms :

- Chemical ecology (CEFE)
- Experimental fields and greenhouses (CEFE-Eco&Sols)
- Tomography (ISEM)
- Environmental genomics & Epigenetics (ISEM, CBGP, IHPE)
- Bioinformatics and biodiversity (ISEM)
- Vectopole (MIVEGEC)



4. CEMEB : MAIN WORKING AXES

Research

Scientific animation
Technological platforms
PhD and post-docs
Open calls for funding
research projects

Transfer

Sustaining innovation
Partnership
Working groups

Training

Outgoing mobility
Open call
Participatory science
Salon de l'écologie

**A scientific, political, strategic and structuring
tools serving a community**

4. CEMEB WORKING AXES : BASIC RESEARCH

Scientific animation

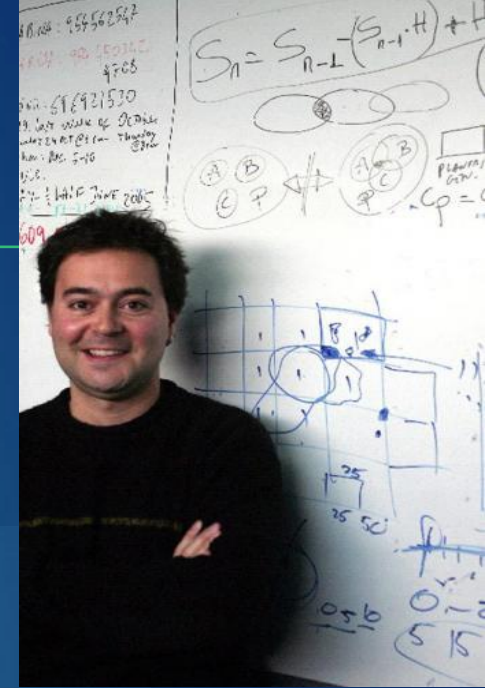
International

- High-profile community attracting a large number of visitors
North and Souths
- Program for hosting scientists from abroad, various backgrounds and disciplines : competitive call – 2 to 3 months / person
- Outgoing mobility for PhD, post-doctorates and technical staff (2 to 4 weeks; « au fil de l'eau »)

4. CEMEB WORKING AXES : RESEARCH

Scientific meetings

- Over 20 meetings supported / year : from financial support to (co)organisation
- Workshops: Epigenetics, biologging, ecological services, theory in ecology (students) ...
- Congress: ATBC and Ecosummit, Evolution 2018
- CRISPR-Cas9, Ecosystem theory, Ecosystems and philosophy, Modelling and numerical simulation of plants
- The Louis Thaler lecture



ROSEMARY & PETER GRANT

IN SEARCH OF THE CAUSES
OF EVOLUTION :
DARWIN'S FINCHES
ON GALAPAGOS

PETER GRANT
EVOLUTIONARY BIOLOGIST,
PRINCETON UNIVERSITY
USA



In Search of the Causes of Evolution

Peter R Grant & B. Rosemary Grant

Princeton University

0:19 / 1:28:22


YouTube

4. CEMEB WORKING AXES : RESEARCH


Sustaining research through human resources


- 12 PhDs and 14 post-docs since 2011
- Basic research at the best level + valorization / carryover (non-academics)
- Interdisciplinary (Agro / MIPS) 7 post-doctoral positions (2017-2019)
- Call for Exploratory projects (600 K€)
- Platforms technology : HR / Equipment / training


MAKING CEMEB VISIBLE





CeMEB
CENTRE MÉDITERRANÉEN
ENVIRONNEMENT
ET BIODIVERSITÉ



[PLATEFORMES](#) 

[UMRs PARTENAIRES](#) 


[AGENDA/ACTUALITES](#) 

[VIDEOTHÈQUE](#) 


[CEMEB](#) [RECHERCHE](#) [FORMATION](#) [VALORISATION / TRANSFERT](#) [APPELS À PROJETS](#) [AGENDA/ACTUALITÉS](#) [RESSOURCES](#)

AGENDA DES SEEM


SÉMINAIRES D'ÉCOLOGIE ET D'ÉVOLUTION DE MONTPELLIER





Ecological and evolutionary insights into the dynamics and control of viruses in bats
24/02/2017
Daniel Streicker




Titre à venir
03/03/2017
Andy Foote



Titre à venir
10/03/2017
Hélène Morlon


[TOUT L'AGENDA SEEM](#)  




ACTUALITÉ

VIE DU LABEX


30 - 31 mars 2017





Colloque EVITER REDUIRE COMPENSER
Le LabEx CeMEB, en partenariat avec la Région Occitanie et la DREAL Occitanie, vous convie au colloque Eviter-Reduire-Compenser les impacts des am



2017 AAP Prix de l'innovation - Conjoint LabEx CeMEB - SATT AxLR
Le LabEx CeMEB et la SATT AxLR ont le plaisir de vous annoncer le lancement de leur Appel à Propositions conjoint « Prix de l'innovation ».



Colloque Inter-LabEx CRISPR-Cas9
Les LabEx Agro, CeMEB et Epigenmed sont heureux de vous annoncer la tenue d'un colloque sur le thème "CRISPR-Cas9: des applications en lab


[TOUTES LES ACTUALITÉS](#)  

An active web site
A distribution list
A video library (MOOC?)

VIDÉOTHÈQUE

5 vidéos correspondent à votre recherche

EPIGENETICS




**T. Day, Departments of Mathematics and Biology
Queen's University, Kingston, Canada**
Epigenetics in Ecology and Evolution: Theories and Models

[Ecologie](#) [Epigenétique](#) [Evolution](#) [Genétique](#)

Publiée le : 04/04/2016

[Voir toutes les vidéos de la conférence](#) [Epigenetics](#)




**E. Gomez-Dias, Doñana Biological Station (EBD-CSIC),
Sevilla, Espagne**
Epigenetics in Ecology and Evolution: empirical approach

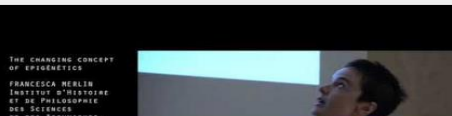
[Adaptation](#) [Ecologie](#) [Epigenétique](#) [Evolution](#) [Genétique](#)

Publiée le : 04/04/2016

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CHRISTOPH GRUNAU
EPIGENETICS
INTERACTIONS-NOTES
PATRIGNON-ENVIRONNEMENT



FRANCESCA HELLIN
INSTITUT D'HISTOIRE
ET DE PHILOSOPHIE
DES SCIENCES
ET DES TECHNIQUES