





# TULIP

# 1. Noteworthy productions

### 1.1. Outstanding progress regarding research

Progress on research is already very significant, both in areas where the group was already strong as in new areas where they hire senior researchers to fill existing gaps, creating a brand new Centre for Biodiversity Theory and Modeling This progress report is very science driven and clearly highlights how this LabEx project capitalizes on expertise already available in the region and consortium with international visibility. The TULIP themes of research are complementary, logically organized and clearly build on one another to enable a comprehensive study of agro sciences and environmental sciences.

## 1.2 Striking progress in other "Labex" fields

#### a. Formation

Application of new teaching approaches focused on problem solving rather than lecture -driven more conventional methods.

### b. Valorization

The Program continues to support long existing collaborations with private/industrial sector, supported a startup and, to better interface with private partners TULIP is to create a Innovation Committee which will soon hold its first meeting.

c. International (outreach, attraction, networking...)

The summer school program provides opportunity for both recruiting future students but also increase visibility of the TULIP project with international researchers that participate in its curriculum teaching. The summer school provides an ideal framework for problem solving teaching approach.

TULIP has undertook a multi pronged strategy to secure international visibility and recognition with international scientific advisory board, visiting scientists opportunities, prestige seminars, summer schools and high profile recruiting.

## 2. Added-value resulting from labelling and funding as a "Laboratoire d'Excellence"

The TULIP programs builds on the expertise of a well established group of researchers. The initial scientific approach is focused leveraging the scientific strengths of that group. The LabEx award allowed this group of researchers to facilitate innovation through the support of undertaking or support of more high risk/innovative projects ("innovative project calls/New frontiers"). The innovation awards allow for the generation of preliminary data necessary for the development of competitive proposals to funding agencies (new ANR awards- LCOS and social heredity soc-h2).

To complement missing or weaknesses in their expertise, the TULIP program has successfully recruited key investigator to fill gap (MTR5) or augment expertise on specific field (MTR4). Notably the hiring of senior expert in theoretical and dynamics modeling (professor Michel Loreau, MTR5) and younger investigators in interactions within populations dynamic (MRT4) increased the international appeal and recognition of the group.

### 3. Main weaknesses

3.1. Main weaknesses that might require corrective actions regarding the research performed in the "Labex"

Though no major weakness was identified by this Jury, members of the panel commented that the TULIP project seemed to be operating within its established comfort zone and need to invest more effort into its new areas of investigation (MTR4 and MTR5). The jury understands that these are just beginning and look forward to follow new initiatives and outputs and outcomes in these areas.

## 3.2 Main weaknesses that might require corrective actions regarding other fields of the "Labex"

### a. Formation

None detected	
b. Valorization	
None detected	

# 4. "Labex" contribution to structuring the gathered scientific strengths (governance, synergy, common scientific programming, visibility...)

see comments in section 2. Members of the TULIP project had already established a significant visibility on their own. The addition of new poles , theoretical modeling and dynamics and "interactions within populations and dynamics", is expected to contribute to further increase this visibility.

# 5. Beyond scientific results specifically obtained by the "Labex", give an assessment on its contribution to the development, outreach and overall visibility of the concerned institutions and of the corresponding site.

The TULIP project has enabled the development of new infrastructure such as imaging and phenotyping. Operating as a fee for service these infrastructure are available to other researchers in the regions thus beneficiating other groups' research whether from academic or private sector.

# 6. Overall opinion and recommendations

This Labex is an excellent group of complementary laboratories that are working together to further advance a field where they lead, but also to increase interdisciplinary research. The initial scientific approach has been focused in areas where the groups were already very strong. The LabEx award has allowed this group of researchers to facilitate innovation through the support of more high risk/innovative projects ("innovative project calls/New frontiers"). The innovation awards allowed for the generation of preliminary data necessary for the development of successful competitive proposals to funding agencies. One main strategic decision taken by TULIP was to hire key senior and junior researchers to complement missing or weaknesses in their expertise. The hiring of senior expert in theoretical and dynamics modeling (professor Michel Loreau, MTR5) and younger investigators in interactions within populations dynamic (MRT4) increased the international appeal and recognition of the group.