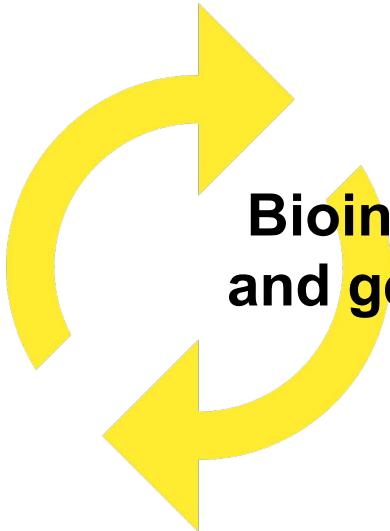




# Session de formation 2019





Bioinformatics platform dedicated to the genetics  
and genomics of tropical and Mediterranean plants  
and their pathogens

comparative genomics  
phylogeny  
GWAS  
population genetics  
polyploidy

genome assembly  
transcriptome assembly  
metagenomics

SNP detection  
structural variation  
differential expression



Rice



Banana



Palm



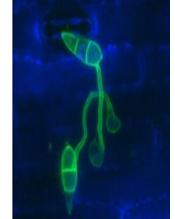
Sorghum



Coffee



Cassava



Magnaporthe

# South Green

bioinformatics platform



Larmande Pierre  
Sabot François  
Tando Ndomassi  
**Tranchant-Dubreuil  
Christine**



Comte Aurore  
Dereeper Alexis



**Orjuela-Bouniol Julie**



Bocs Stephanie  
De Lamotte Fredéric  
**Droc Gaetan**  
Dufayard Jean-François  
Hamelin Chantal  
Martin Guillaume  
Pitollat Bertrand  
**Ruiz Manuel**  
**Sarah Gautier**  
Summo Marilyne



**Rouard Mathieu**  
Guignon Valentin  
Catherine Breton



**Mahé Frédéric**  
**Ravel Sébastien**



Sempere Guilhem



# South Green bioinformatics platform

# Workflow manager

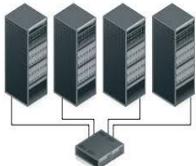
# TOGGLE

Toolbox for generic NGS analyses

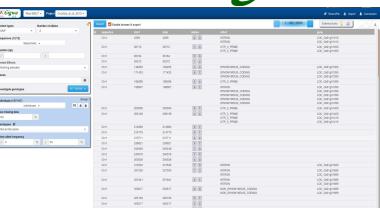


# SNAKEMAKE

# HPC and trainings....



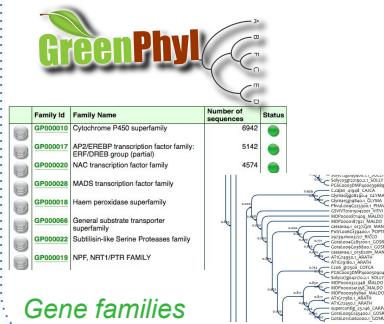
# Genome Hubs & Information System



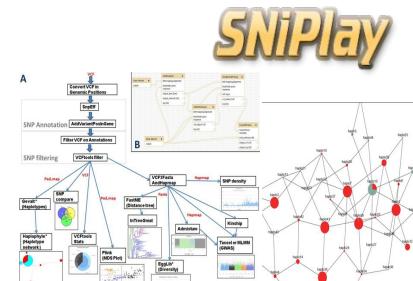
## *SNPs and Indels*



Family ID	Family Name
GP000010	Cytochrome P450 superfamily
GP000017	AP2/EREBP transcription factor ERH/DOREB group (partial)
GP000020	NAC transcription factor family
GP000024	MADS transcription factor family
GP000018	Hæm peroxidase superfamily
GP000066	General substrate transporter superfamily
GP000022	Subtilisin-like Serine Protease superfamily
GP000019	NPF, NRT1/PTR FAMILY



## *Gene families*



<https://github.com/SouthGreenPlatform>



@green\_bioinfo

**The South Green portal: a comprehensive resource for tropical and Mediterranean crop genomics**, Current Plant Biology, 2016



Erwan Corre



Marie Simonin  
Sébastien Cunnac



Etienne Loire  
Julie Reveillaud



Florentin Constancias



Valentin Klein



Valérie Noël



Emmanuelle Beyne



[@ItropBioinfo](https://twitter.com/ItropBioinfo)

And more collaborators !

18-19/03	Guide de survie à Linux - IRD
21/03	Initiation à l'utilisation du cluster CIRAD – CIRAD
22/03	Initiation à l'utilisation du cluster itrop - IRD
15-16/04	Initiation au gestionnaires de workflow SG & Gigwa – IRD
18-19/04	Guide du Jedi en Linux & bash - CIRAD
13-16/05	Python - IRD
17/05	Initiation aux analyses de données transcriptomiques – IRD
21/05	Utilisation avancée du cluster IRD – IRD
23-24/05	Initiation aux analyses de données métagénomiques – IRD
6/06	Manipulation de données et figures sous R – CIRAD
25-27/09	Assemblage et annotation de transcriptomes - IRD



# Modules de formation 2019

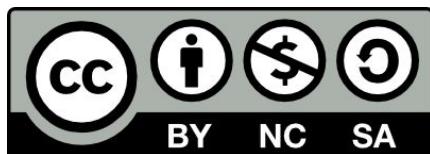
- Toutes nos formations :  
<https://southgreenplatform.github.io/trainings/>
- Topo & TP : [Linux For Dummies](#)
- Environnement de travail : [Logiciels à installer](#)

# Assembling and functionally annotating a de-novo transcriptome from RNA-seq data



[www.southgreen.fr](http://www.southgreen.fr)

<https://southgreenplatform.github.io/trainings>



## Introduction

[survival] Basic commands in SLURM : [see](#)

## Reads quality checking

- Practice 1. Checking Reads Quality [see](#)

## Assembly with Trinity

- Practice 2. Assembling transcriptome from RNA-seq [see](#)
- Practice 3. Assessing transcriptome assembly quality [see](#)

## Annotation with Trinotate

- Practice 5 : Functional annotation [see](#)

## Differential Expression

- Practice 4 : Differential Expression Analysis (DE) [see](#)

## Conclusions



# Practice

1

Aller sur la practice 1 [Checking Reads Quality](#) du github



# Practice

2

Aller sur la practice 2 [Assembling transcriptome from RNA-seq](#) du [github](#)



# Practice

3

Aller sur la practice 3 [Assessing transcriptome assembly quality](#) du [github](#)



# Practice

5

Aller sur la practice 5 [Functional annotation](#) du [github](#).



# Practice

4

Aller sur la practice 4 [Differential Expression Analysis \(DE\)](#) du [github](#)



Erwan Corre 



Julie Orjuela-Bouniol



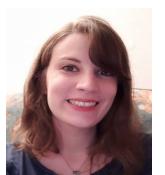
Christine Tranchant-Dubreuil



Stéphanie Bocs-Sidibe 



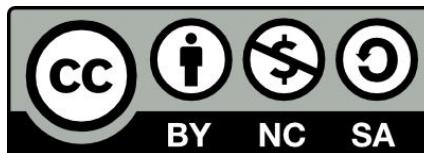
David Lopez 



Aurore Comte 



# Merci pour votre attention !

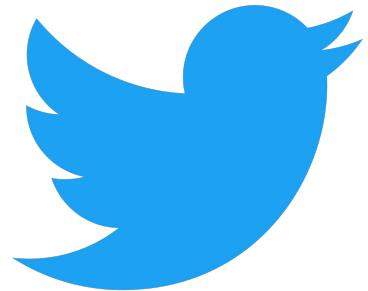


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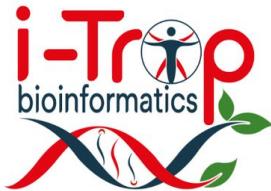
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SUIVEZ NOUS SUR TWITTER !



South Green : [@green\\_bioinfo](https://twitter.com/@green_bioinfo)



i-Trop : [@ItropBioinfo](https://twitter.com/@ItropBioinfo)



## N'oubliez pas de nous citer !

### Comment citer les clusters?

"The authors acknowledge the IRD i-Trop HPC at IRD Montpellier for providing HPC resources that have contributed to the research results reported within this paper. URL: <http://bioinfo.ird.fr/> "

"The authors acknowledge the CIRAD UMR-AGAP HPC (South Green Platform) at CIRAD montpellier for providing HPC resources that have contributed to the research results reported within this paper. URL:  
<http://www.southgreen.fr>"