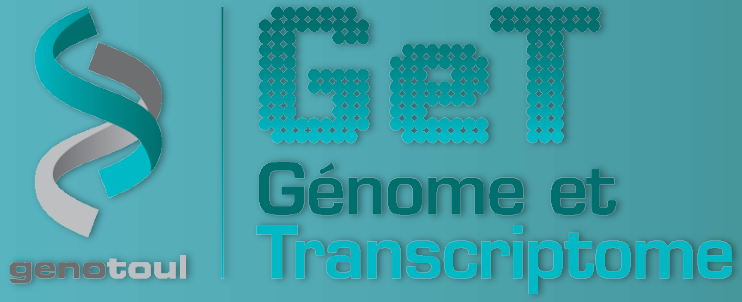


GeT

Denis Milan & Cécile Donnadieu

http://get.genotoul.fr

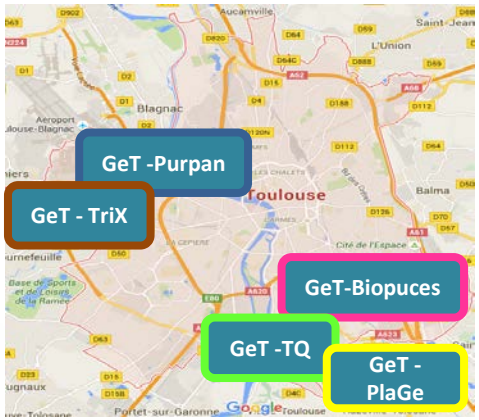
@GeT_Genotoul

Who are we?

- Genomics and Transcriptomics (GeT) core facility of Genotoul located on 5 sites
- Regional node of National Infrastructure within the « France Génomique » PIA program
- Labels :
  - IBISA Label
  - INRA strategic core-facility
- Quality Certification :
  - ISO9001 (GeT-PlaGe, GeT-Biopuces)
  - NFX 50 900 (GeT-PlaGe)

Team and Expertise

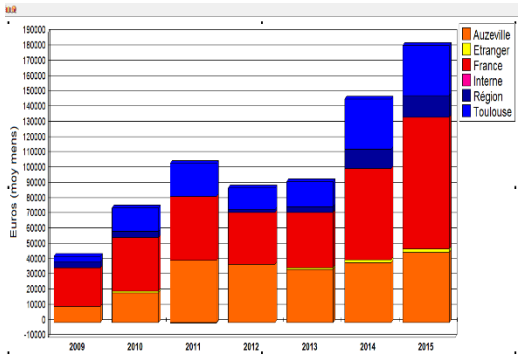
- **A team of 30 people with:**
  - **Technological Specialty and Scientific community by site**
  - **Experts in Agronomy, Environment, Microbiology, Health**
  - **Competence in biology, bioinformatics, biostatistics**



- **Partnership with Genotoul Bioinformatic core-facility (NG6) for:**
  - **Data storage and management**
  - **Data Quality analysis**

Activity

- **15 R&D projects**
  - Mate paired, chipseq, metylation, GBS, 3G NGS, capture, long fragments, HIC…
- **More than 100 laboratories** (INRA, CNRS, INSA, INSERM, CHU, CIRAD …)
  - More than 160 research teams
  - More than 250 projects
  - 2M€ of activity



- **17 Research projects** (ANR, INCA, H2020 …)
- **46 Publications as co-author** since 2012

WHAT IS NEW ?

Organization : The new GeT

- NEW : From “a network of platforms” to

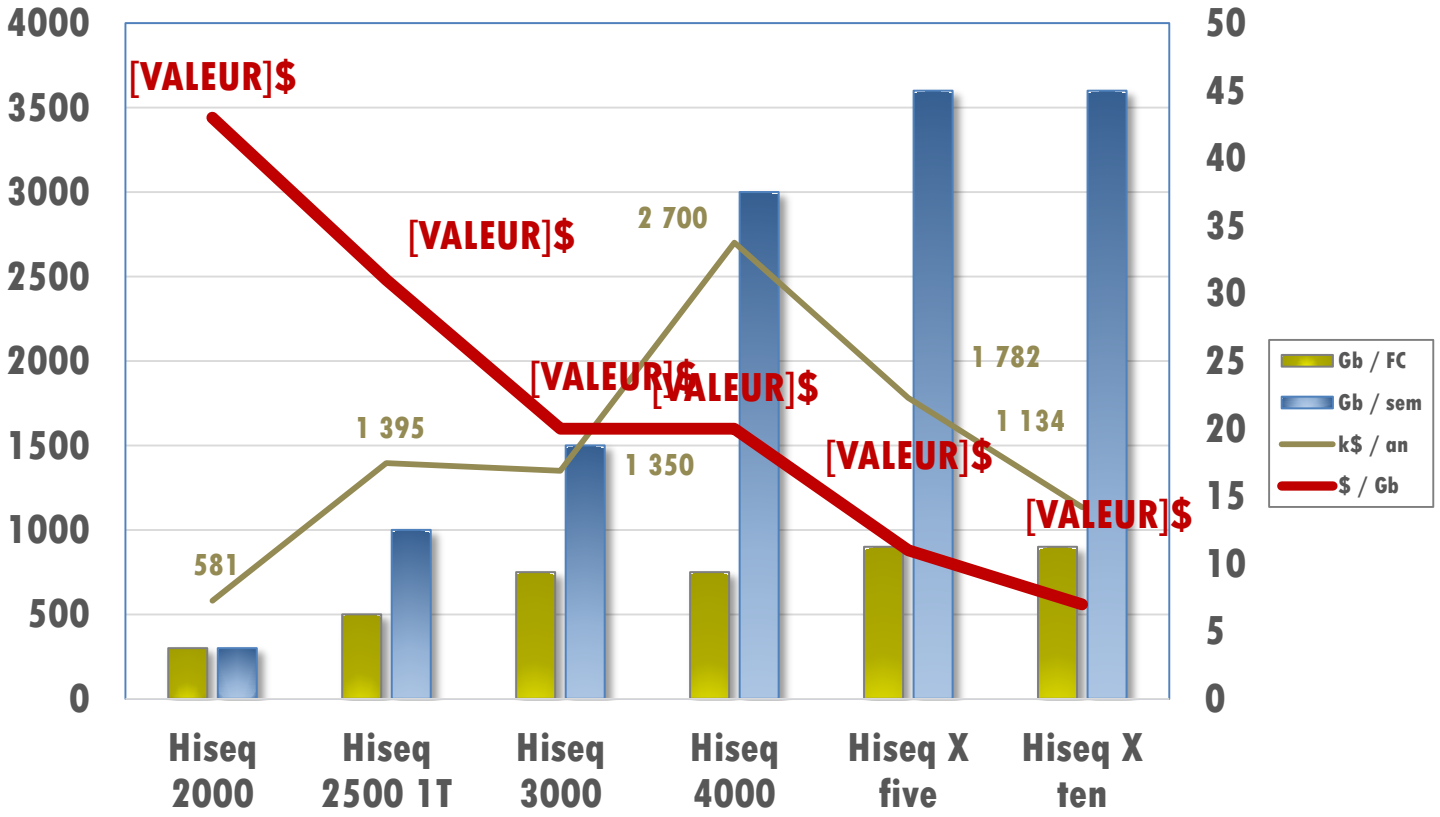
  “a **ONE** multi-sites more integrated core facility”

- A **closer** management

- GeT **Ambassadors** in the different scientific communities

- GeT **Engineers** can work on different sites if needed

Evolution of Hiseq sequencers family

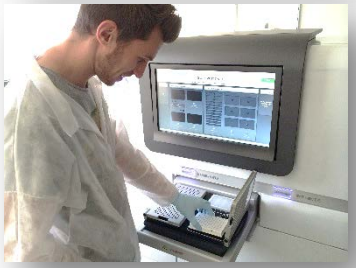


October 2015 : Non human DNA can be sequenced on Hiseq X (at 30x) (sold by 5 or more)

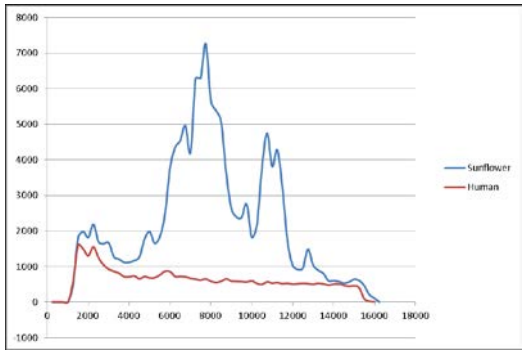
Evolution of Long Fragments sequencers

- **January 2015 :**
  - **P6/C4 chemistry of PacBio permits sequencing of longer fragments (at the same error rate)**
  - **Oxford Nanopore is ever in development**

- **Investment in a PacBio RSII with Region MP/FEDER funding, at firs omes**



Sunflower : 30 % of repeated sequences (LTR)
Human : 8.8 % of repeated sequences



SUNRISE
UNE CULTURE POUR LE FUTUR

libragen

From NGS short reads to long reads

- **First PACBIO installed in France**

- **SUNRISE project to acquire expertise**
  - To validate quality of DNA
  - To improve library preparation
  - To increase the number of reads
  - To increase the length of reads

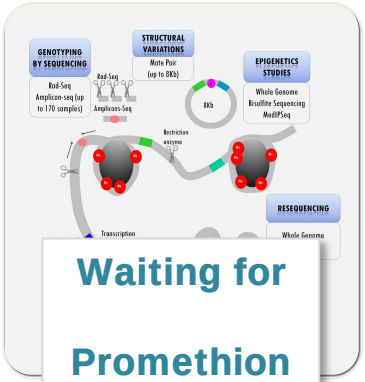
- **More projects to develop new applications :**
  - Whole genome sequencing on different species
  - Targeted sequencing
  - Complex population
  - RNA sequencing
  - Epigenetic

GeT Génome et Transcriptome

A complete portfolio of sequencers at GeT

400 pb
1Gb

200 pb
13 Gb



Waiting for

Promethion
Sequel

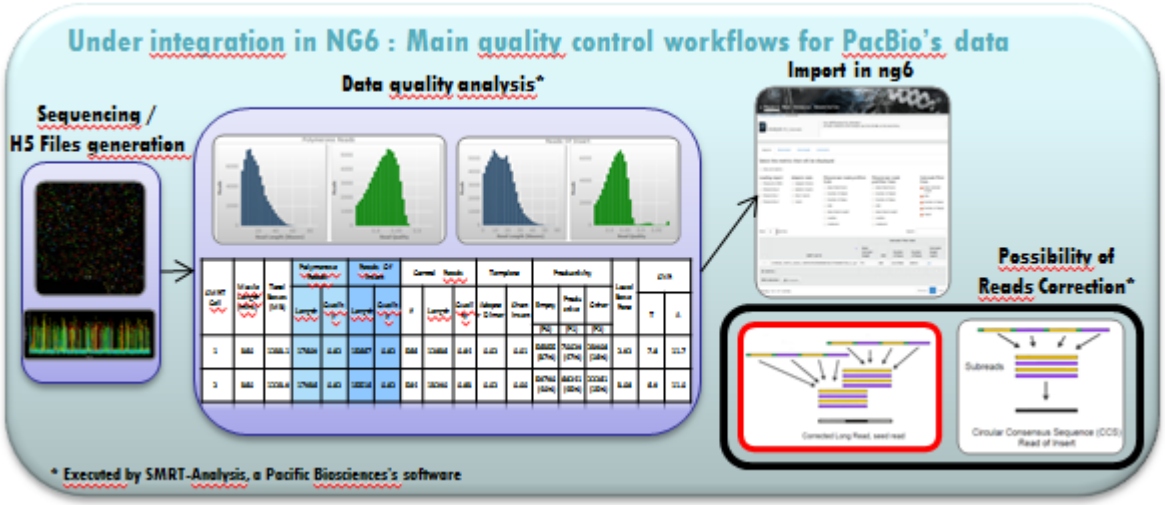
15 000 pb
1.2 Gb (6h)

2x 300 pb
15 Gb

2x150 pb
700 Gb

LIMS development

- **Current integration in NG6 : Main quality control workflows for PacBio's data**



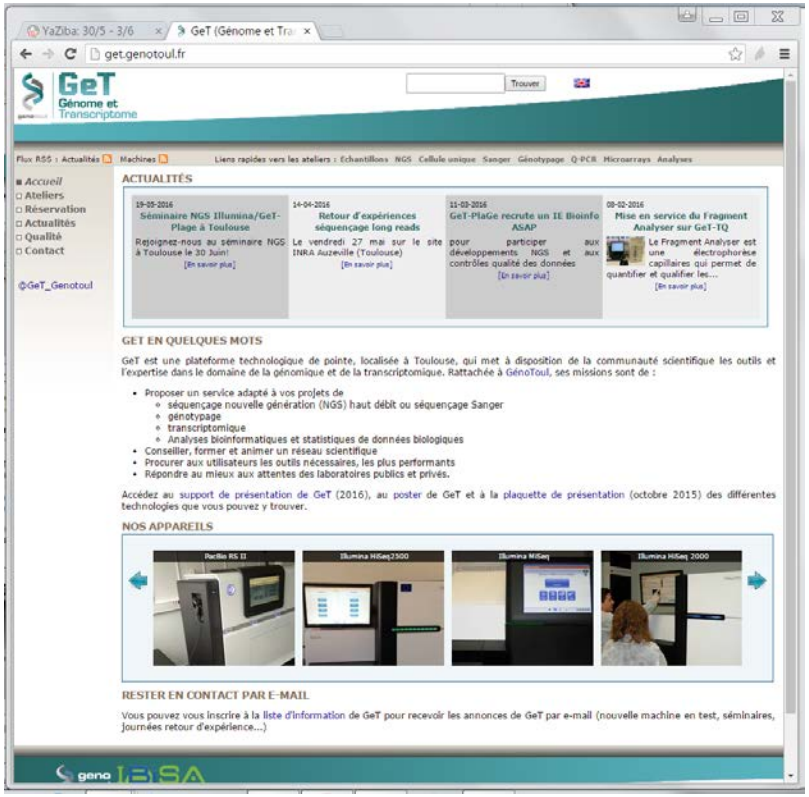
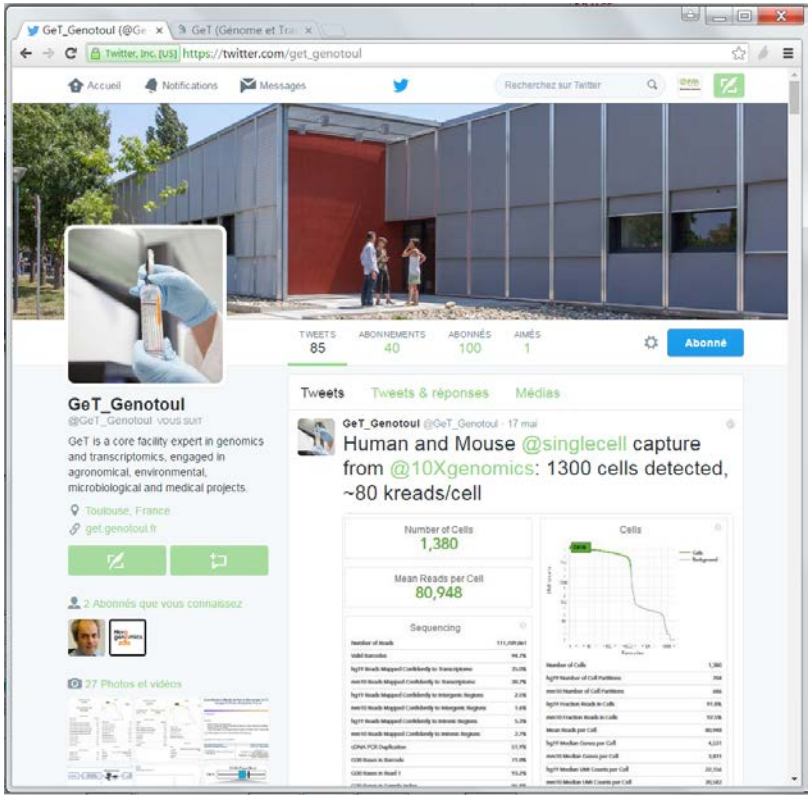
- **Upcoming : A new LIMS for NGS samples, sequencing and analysis tracking**

Centre National de Séquençage GENOSCOPE

GeT Génome et Transcriptome

Communication

- **Website**



- **Twitter account : @GeT_Genotoul**