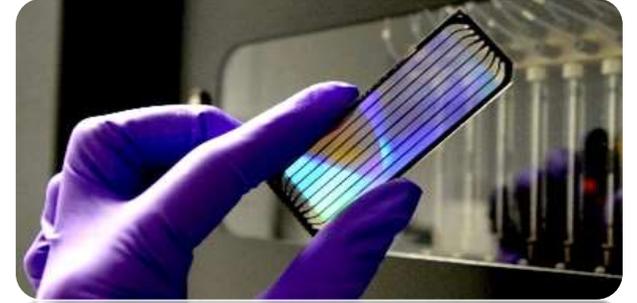
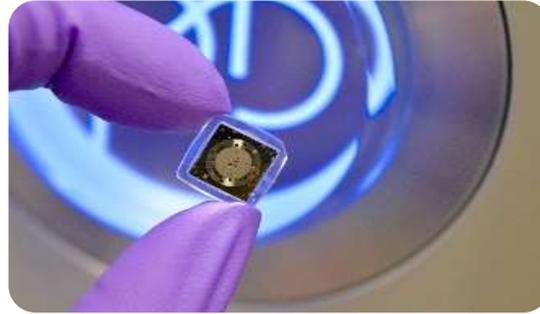




Business Unit



# An Overview of Epigenetic Tools available and in progress at the sequencing core facility of Toulouse



Mars 2018

Clemence.genthon@inra.fr

## GeTIT

⇒ savoir-faire INRA Plateformes GeT et LBE

**Business Unit Microbiologie, Génomique et Transcriptomique**  
Plateformes INRA



**Plateforme GeT PlaGe (INRA Toulouse)**  
Clémence Genthon  
Marie Vidal



**Plateforme Bio2E (LBE INRA Narbonne)**  
Marina Moletta-Denat  
Stéphanie Deville  
Doris Brockmann  
Sandrine Maraval

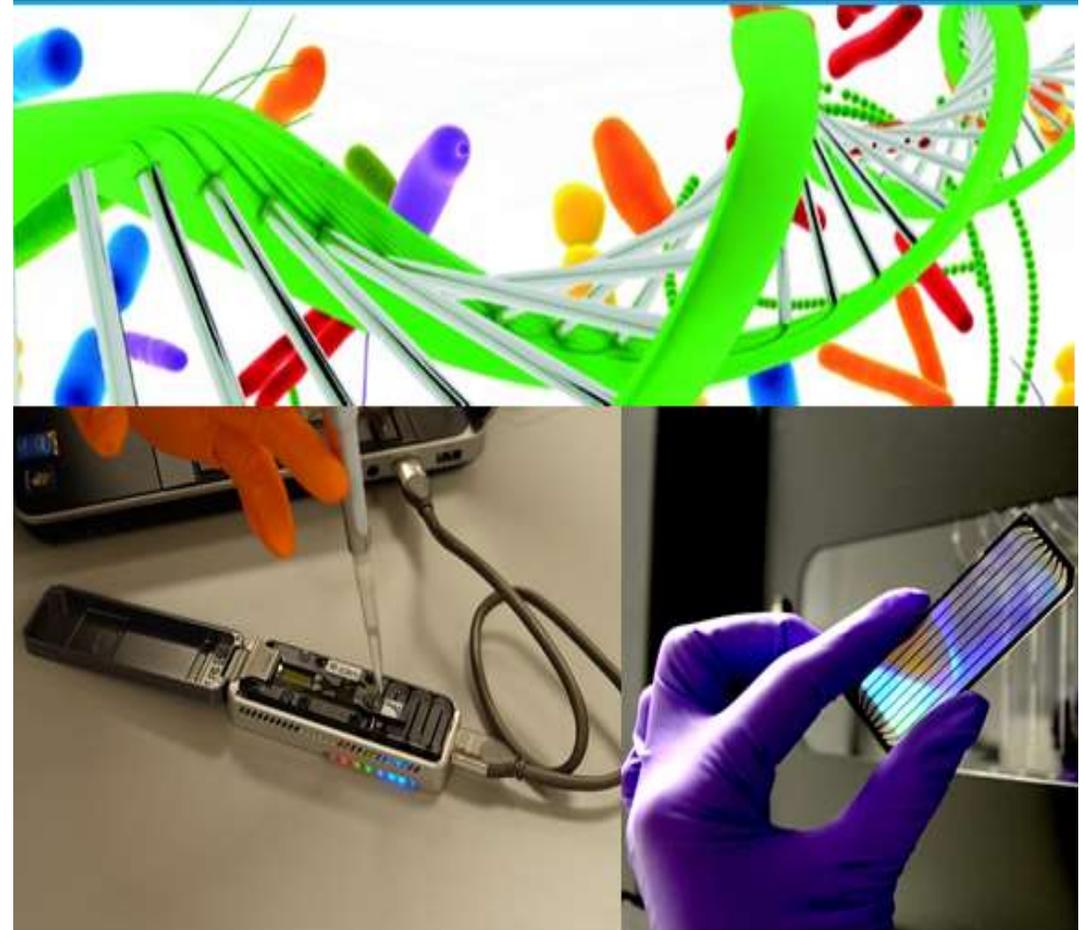


CATALOGUE ET TARIFS 2017

### ANALYSES DE GENOMIQUE ET TRANSCRIPTOMIQUE

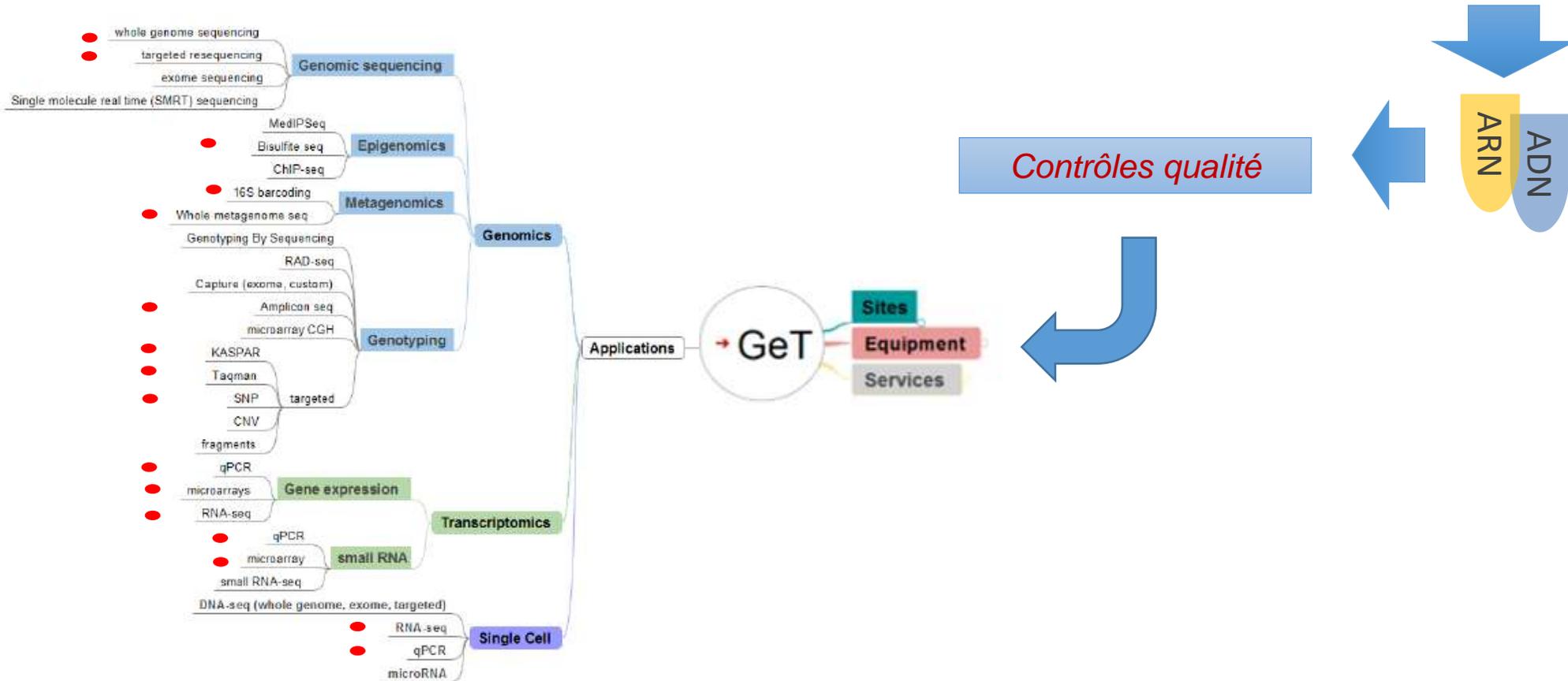
Eaux, Air, Biofilms, Matériaux, Bioprocédés, Agroalimentaire, Cosmétique, Santé

Liste des prix applicables  
du 01/01/2017 au 31/12/2017





## Préparation des échantillons



## Du Sanger à la 3<sup>ème</sup> Génération

Séquence unique

Séquençage « NGS »

### Sanger



Nombre de séquences : 96

Coût séquence : €€€

Productivité : 🐌

### NGS – « short reads »

*Illumina*

Nombre de séquences : 10 milliards

Coût séquence : €

Productivité : 🚀🚀🚀

2x HiSeq 3000



3 x MiSeq



NovaSeq 6000



### NGS – « long reads »

*PacBio / Oxford Nanopore*



RSII



MinION  
GridION

Coût séquence : €€

Productivité : 🚀

## NGS – « short reads »

*Illumina*

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2x HiSeq 3000



3 x MiSeq

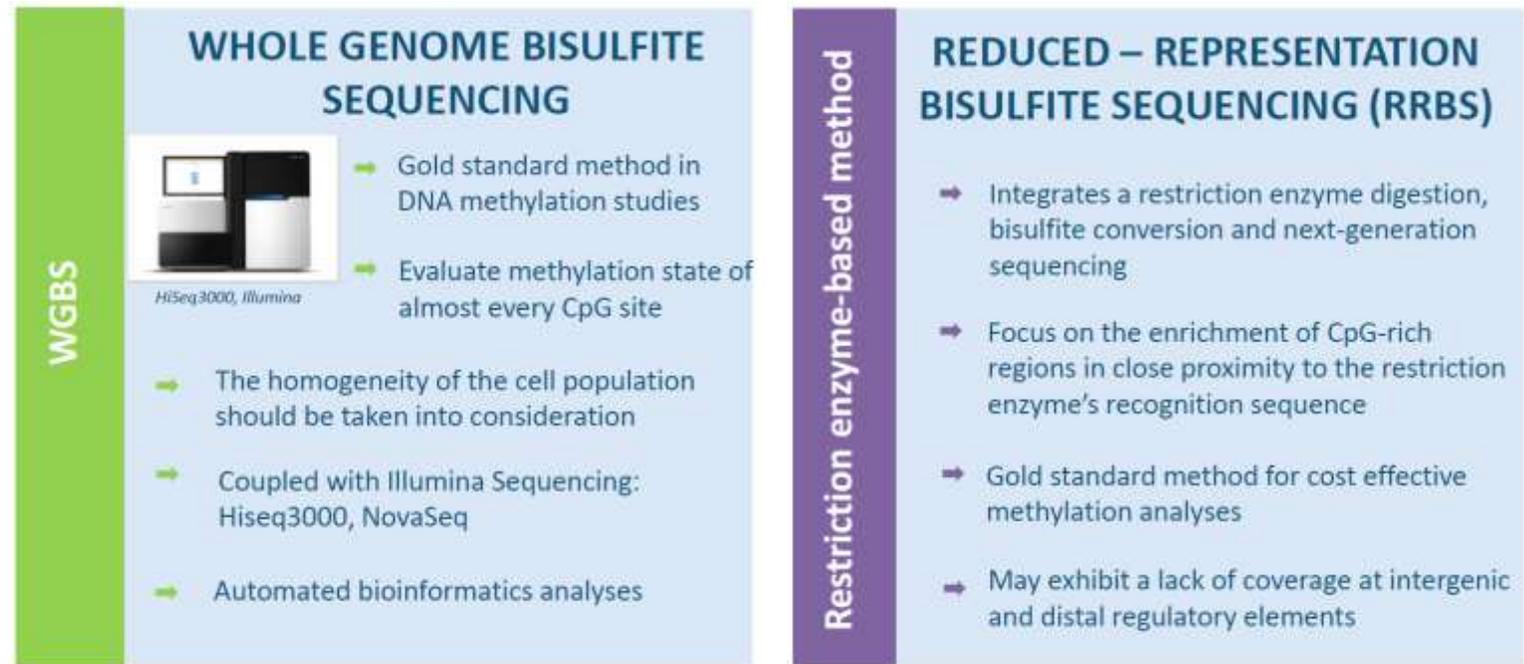


NovaSeq 6000



**Etape d'amplification obligatoire**

## Méthodologies associées à cette technologie



Disponible en prestation

Disponible en collaboration

**NGS – « long reads »**  
*PacBio / Oxford Nanopore*

**RSII**                      **MinION  
GridION**

Cout séquence : € €  
Productivité :



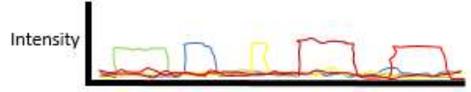
**Lecture d'une molécule en temps réel**

**PacBio  
SMRT seq**

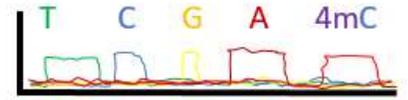
DNA passes thru polymerase in an illuminated volume



Raw output is fluorescent signal of the nucleotide incorporation, specific to each nucleotide

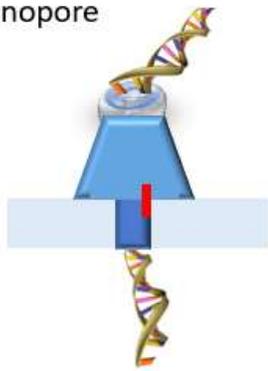


A,C,T,G have known pulse durations, which are used to infer methylated nucleotides



**Oxford  
Nanopore**

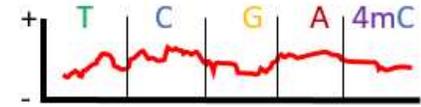
DNA passes thru nanopore



Raw output is electrical signal caused by nucleotide blocking ion flow in nanopore



Each nucleotide has a specific electric "signature"



Source : Wikiwand

- Protocoles non testés actuellement
- Gros projet d'investissement sur GeT Toulouse 2019-2024 pour développer ces approches innovantes

Merci de votre attention

## Contact

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 +33 4 68 46 64 33 | +33 5 61 28 55 91

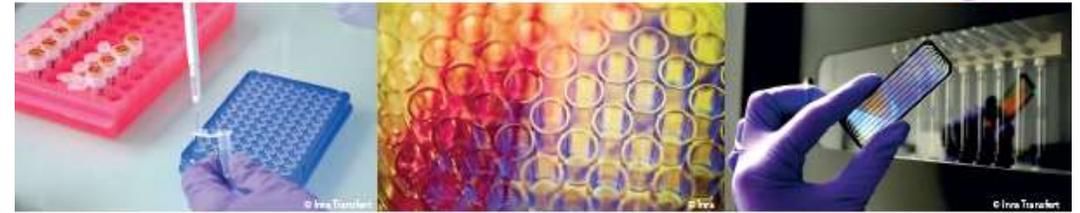
<http://get.genotoul.fr/>

## Genomics & transcriptomics NEW SERVICES

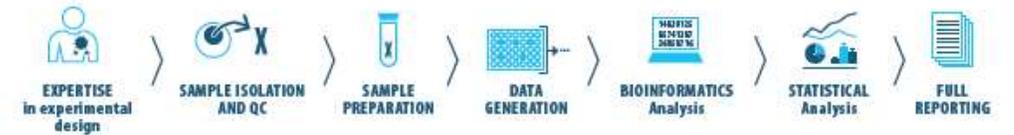
Expertise for your genomics analysis needs



MICROBIOLOGY AGRONOMY ENVIRONMENT DIAGNOSTIC HEALTH



### COMPLETE WORKFLOW from samples to data analysis



### HIGH-THROUGHPUT APPLICATIONS available

		NGS		HT-QPCR	MICROARRAYS
		SHORT READS	LONG READS		
 <b>GENOMICS</b>	GENOMIC SEQUENCING	Whole genome sequencing	✓	✓	
		Targeted resequencing	✓		
		Exome sequencing	✓		
		Single molecule sequencing		✓	
 <b>EPIGENOMICS</b>		Bisulfite-seq	✓		
		Direct methylation analysis		✓	
		MicroRNA analysis			
 <b>METAGENOMICS</b>		Targeted bar coding (16S, ITS...)	✓	✓	
		Whole metagenomes seq.	✓	✓	
 <b>GENOTYPING</b>		By digesting the genome	✓		
		Targeted genotyping	✓		
 <b>TRANSCRIPTOMICS</b>		De novo transcriptomics sequencing	✓	✓	
		Expression profiling	✓		✓
 <b>SINGLE CELL</b>	DNA-SEQ		✓		
	EXPRESSION PROFILING		✓	✓	