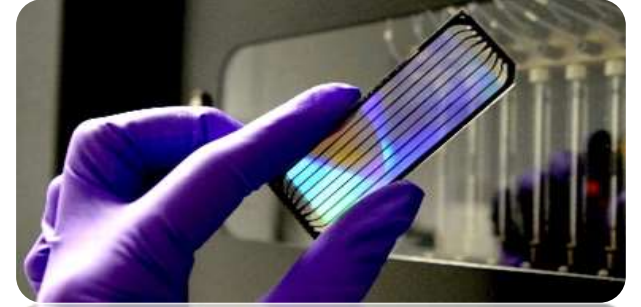
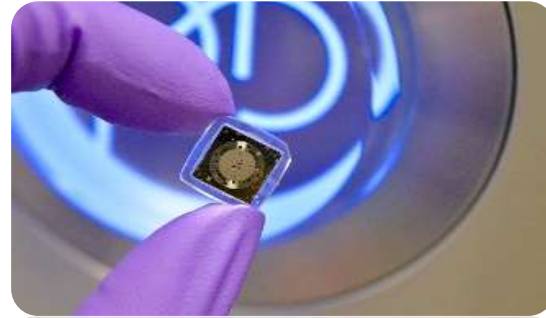




Business Unit



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

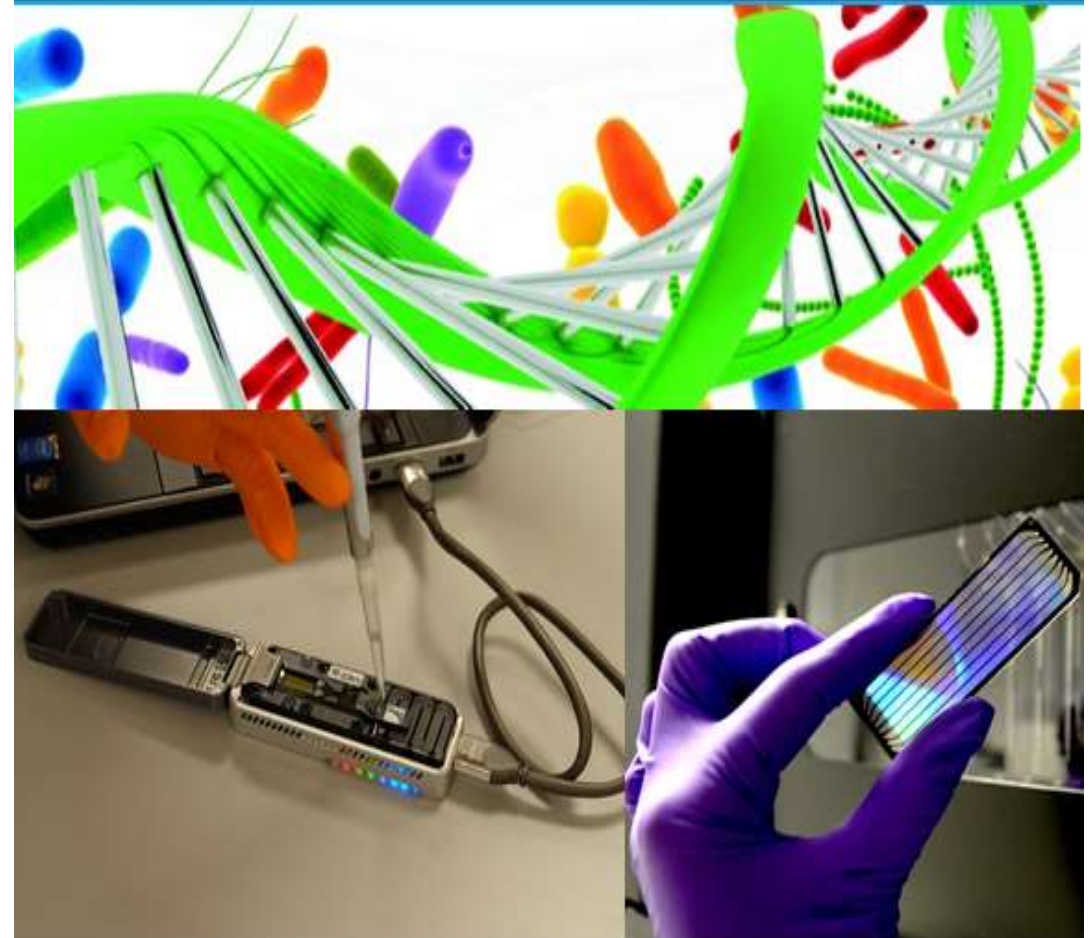


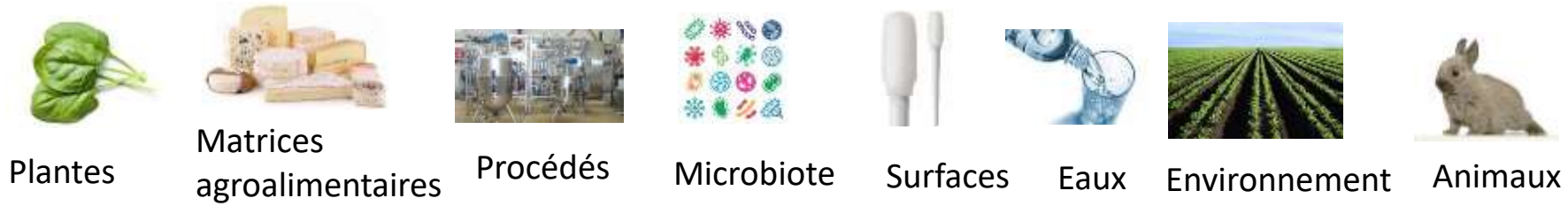
CATALOGUE ET TARIFS 2017

ANALYSES DE GENOMIQUE ET TRANSCRIPTOMIQUE

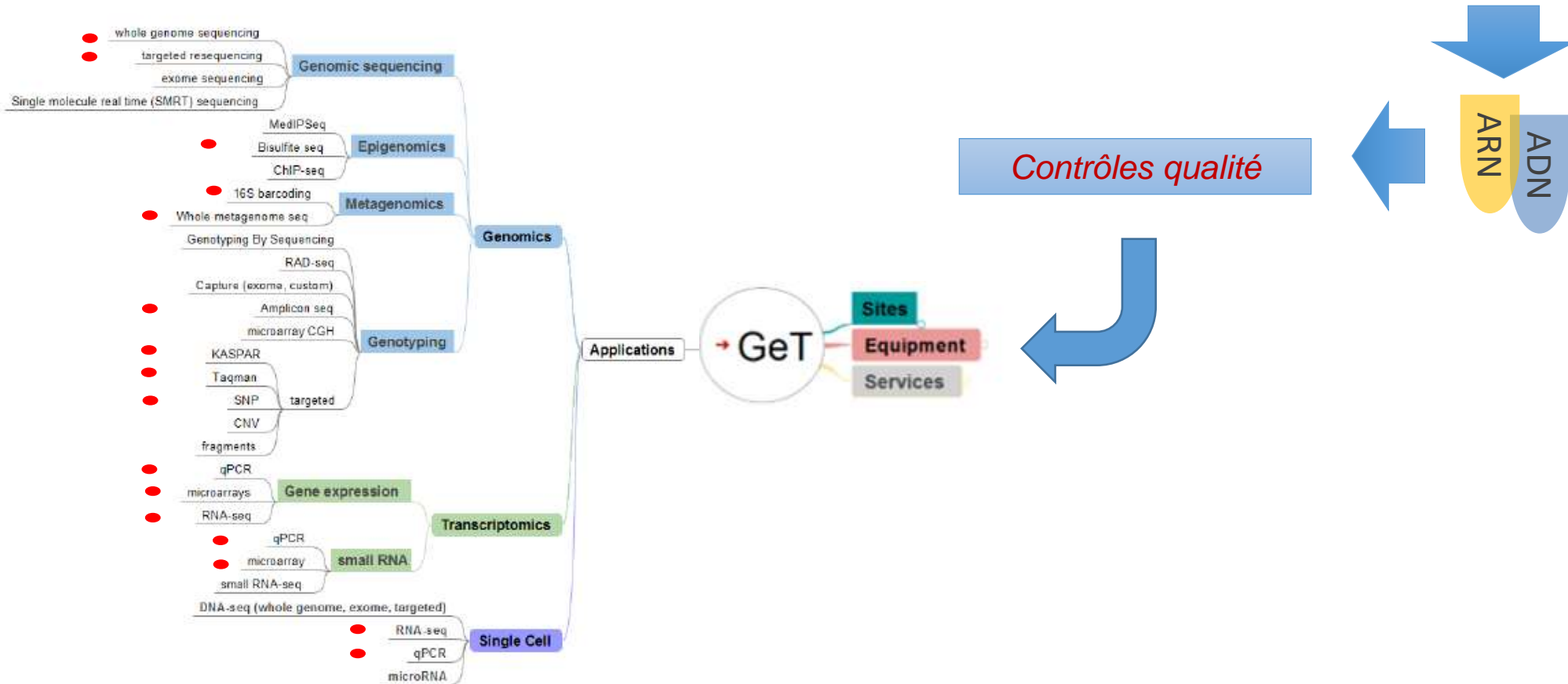
Eaux, Air, Biofilms, Matériaux, Bioprocédés, Agroalimentaire, Cosmétique, Santé

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





Préparation des échantillons



Du Sanger à la 3^{ème} 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

Nombre de séquences : 10 milliards

Cout séquence : €

Productivité : 

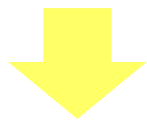
2x HiSeq 3000



3 x MiSeq

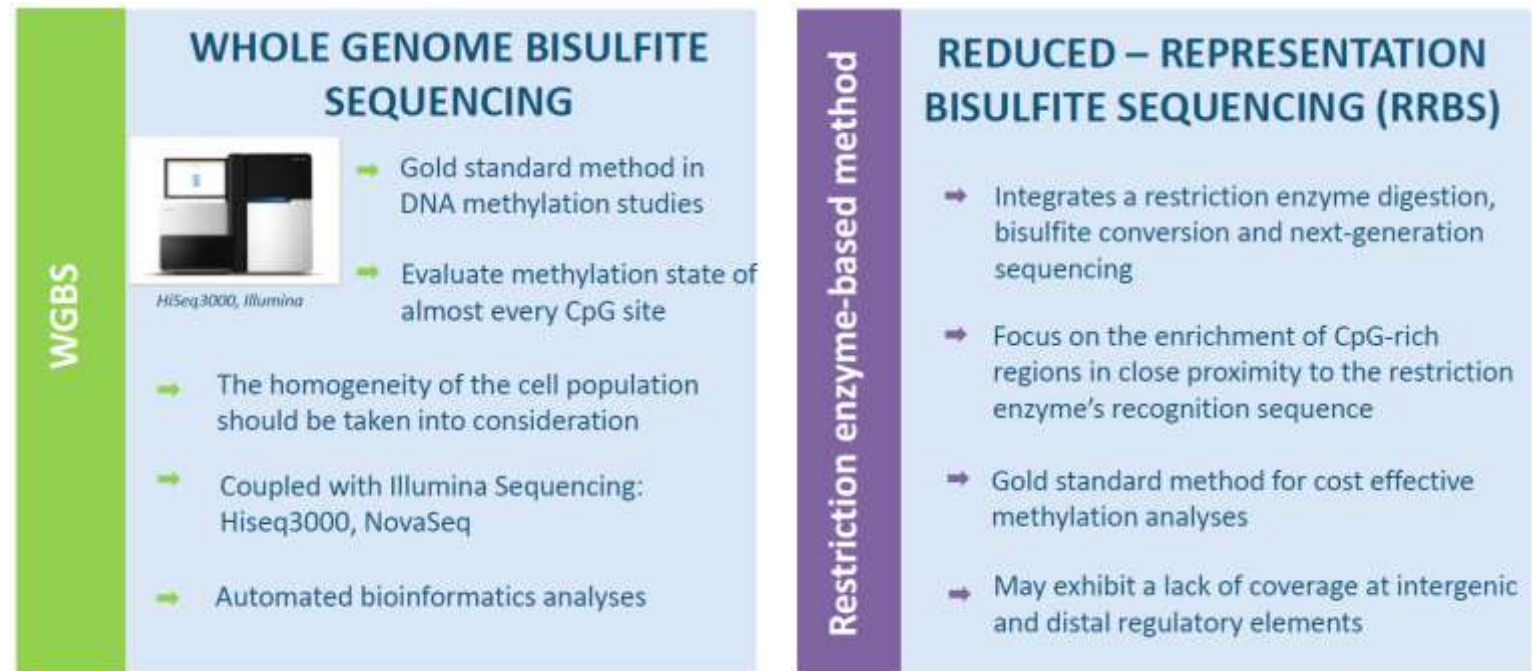


NovaSeq 6000



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 :



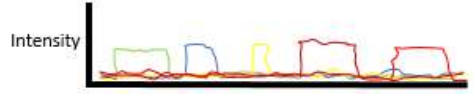
Lecture d'une molécule en temps réel

**PacBio
SMRT seq**

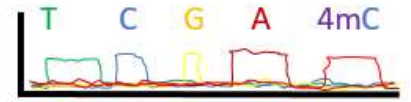
DNA passes thru polymerase in an illuminated volume



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

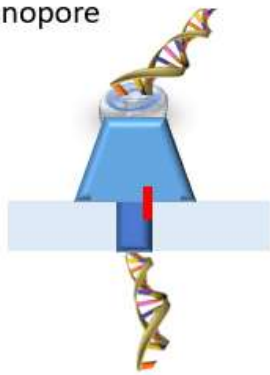


A,C,T,G have known pulse durations, which are used to infer methylated nucleotides

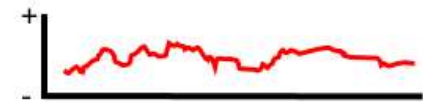


**Oxford
Nanopore**

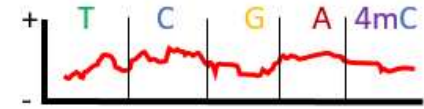
DNA passes thru nanopore



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

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