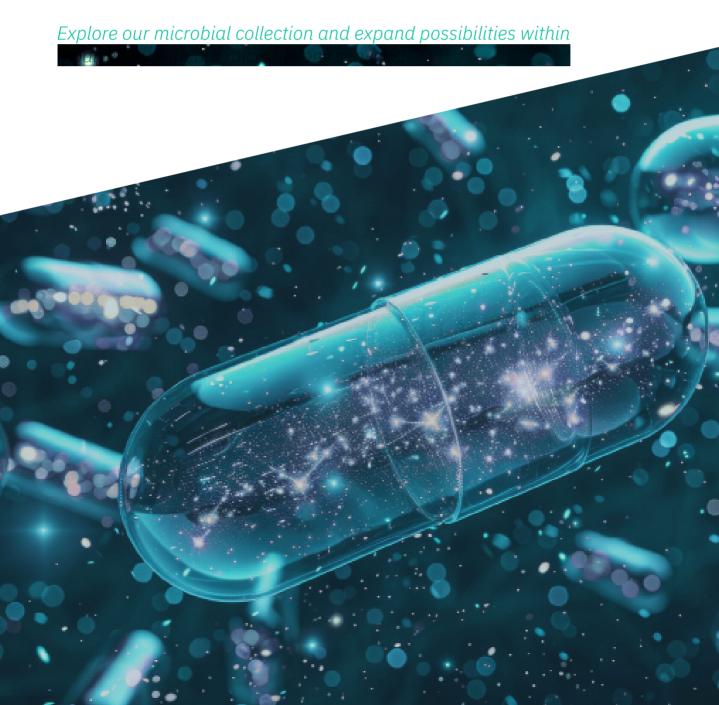


SEQENBIOTICS Nutra

For natural biosolutions identification from exotic ecosystems



MICROORGANISM COLLECTION

Find the next blockbuster microorganisms out of our 3600 (meta)genomic sequences.

Digital metagenomic database screening service for fast and easy in-silico discovery.

ECOSYSTEMS

Deep hydrothermal springs, hypersaline anoxic basins, salt marshes, thermal springs, volcanic environments, cold environments, oil field, industrial and agricultural wastes, wild animal faeces, soils...

(META)GENOMIC DATA

Nagoya Protocol

BIODIVERSITY

- **1,500** genomes
- Metagenomic data incl. 2,100 metagenomes
- **3,500** micro-organisms yet to be sequenced
- Bio-informatic tools & services
- · Access guaranteed to commercial use
- 5000+ natural microorganisms
- Incl. 600+ extremophiles & 600+ microalgae
- Incl. **170+** QPS like strains
- Secure on-site cryopreservation

MICROBIOLOGY EXPERTISE

Limitless potential: isolate and characterize microorganisms from specific ecosystems of interest.



Microbial isolation

- Isolate of (micro)aerobic and anaerobic microorganisms (Bacteria, Archaea, Fungi and microalgae) from any ecosystems
- · Design of selective media
- · Respect of Nagoya protocol



Screening services

- · High Throughput Screening
- Biochemical Assays
- Absorbance, Fluorescence, Luminescence, LC-MS, GC-MS...
- Design of experiments



Microbial identification

- From classic micromorphology to genomic sequencing
- Taxonomic, genomic, metabolic, phenotypic analysis



Analytical services

- Development and validation of analytical methods
- Preparation of extracts
- High Resolution MS, HPLC/UHPLC, GC lab, NMR...



Microbial community analysis

- Identify and determine the relative abundance of microorganisms contained in samples
- Metabarcoding and Metagenomic analysis.



Microbial fermentation

- Experiments in different culture-based approaches to exploit microbial **chemical diversity.**
- Multi-well plates, flasks, bottle, and **Bioreactors of 1L to 300L.**



Microbial metabolic studies

Metabolic profile exploration & assessment



Biotechnological Process Development

- Targeted metabolites production yield enhancement by culture condition optimizations
- **Scale up** from multi-well plates to bioreactor 300L



About Protéus by Segens

Protéus, a wholly subsidiary of Seqens Group, is the French leader in protein engineering technologies and associated industrial biocatalytic processes:

- 5 000+ exclusive and diversified microorganism collection including micro-algae and thousands of bacteria and archaebacteria extremophiles
- +3600 (meta)genomes combined with data mining tools, offering a unique pool of million enzymes
- 650+ enzyme portfolio for tailor-made kits
- Patented protein evolution technologies (EvoSight™ & L-Shuffling™) to optimize enzymes performances
- In silico design of smart libraries & molecular dynamic analysis
- A multidisciplinary skilled team dedicated to **custom bioprocess development and scale-up** for client's applications
- Seqens capabilities enabling in-house implementation of large-scale biotransformation processes



Created in **1998** and within **SEQENS** since 2017



20 Research scientists & experts



Development of tailored enzymes & biocatalytic processes



Fermentation scale-up from Lab to **300L bioreactors**

The only EU-based company offering both **directed evolution** services and **large reaction capabilities**, for fine chemicals & cosmetics ingredients

Seqens, an integrated global leader in pharmaceutical synthesis and specialty ingredients





3,300 people



9 R&D centers



9 Countries



300 scientists, experts and engineers

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