DeepOmics, a Digital Environnemental Engineering Platform for Omics data

Véronique Jamilloux, Ariane Bize, Cédric Midoux, Aurélie Gramusset, Cédric Gil, Emilie Fernandez, Guilhem Heinrich, Aurore Chapelle

Ariane Bize[1]
Aurélie Gramusset[2]
Cédric Gil[2]
Nicolas Raidelet[2]
Cédric Midoux[1,4]
Emilie Fernandez[5]
Guilhem Heinrich[6]
Aurore Chapelle[7]
Véronique Jamilloux[1]

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Context: DeepOmics is an Information System (IS) that meets the needs for 1) storing and querying data from environmental biotechnology processes (such as anaerobic digestion, activated sludge etc...) at the scale of laboratory reactors, pilots or full-scale plants, 2) comparing and cross-referencing these operational data (or metadata) with data characterizing the microbial communities involved and their dynamics, to produce knowledge and 3) promoting the production of FAIR data and the interoperability with EnviBIS (ENVIronmental Biorefinery Information System).

DeepOmics users:
All French academics & their parners upon request

From prototype to today

FAIR Upload project metadata from **EnviBIS** to integrate all metaomics data in the repository EnviBIS

FAIR Visualize and analyze metagenomics data with **easy16S**

In progress

Additional process categories, such as **bioelectrochemical processes**

Documentation, user guide and use cases

FAIR Inter-operability through an open API rest & "semantization" of Symfony entities

Some figures:
28 projects,
45 experiments,
7 mesurement campains,
446 fastq files,
686 Biosample results

In the future

SOON: Uploading project metadata and fastq sequence files in **ENA** with associated DOI (an IFB collaboration)

Intra- and inter-project **data query module,** to adress biological questions

The system's underlying tech.:

AngularJS Symfony PostgreSQL GitLab docker

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Centre
Jouy-en-Josas - ANTONY

ariane.bize@inrae.fr
veronique.jamilloux@inrae.fr

[1] Université Paris-Saclay, INRAE, PROSE 92760 Antony France
[2] INRAE, DSI-Solutions Applicatives, 69625 Villeurbanne, France
[3] SMILE, Lyon, France
[4] Université Paris-Saclay, INRAE, MaIAGE, 78350, Jouy-en-Josas, France
[5] Université de Montpellier, INRAE, LBE 11100 Narbonne, France
[6] ID2L, Montpellier, France
[7] auto-entreprise Aurore Chapelle, 34070 Montpellier

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https://3bcar.fr/projets/memos/