ADLIN Science

Your partner in Life Science innovation
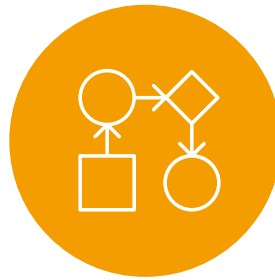
ADLIN Science is a **scientific company**
providing services for your needs
in **bioinformatics**, **data** and **technological expertise**
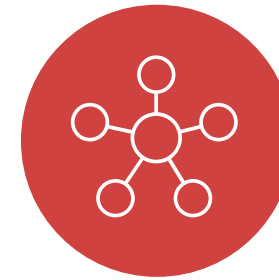to boost your research

BIOINFORMATICS SERVICES

EPIGENETICS   TRANSCRIPTOMICS
GENOMICS   SINGLE-CELL
METAGENOMICS   PROTEOMICS

DATA SOLUTIONS SERVICES

DATA STRUCTURATION
DATA EXPLORATION
MODEL TRAINING & FURTHER ANALYSIS

TECHNOLOGICAL SERVICES

ACADEMIC RESEARCHERS SOURCING
TECHNOLOGICAL PLATFORMS SOURCING
CONTRACTUALIZATION

ADLIN

Access to state-of-the-art academic resources   *facilitated by*   LINKINNOV

Acquired by ADLIN

Partners who have already trusted us

State-of-the-art technological overview for an agrotech in animal health

Needs

Improve understanding on the best technological methodology and analytical pipeline for metagenomics

Solutions

State-of-the-art metagenomics report providing the best practices, technologies and tools

Concrete recommendations adapted to the needs of the agrotech

- **2 MONTHS FULL-TIME JOB SAVING**
- **SKILLS TRANSFER & RAMP-UP**

Resources access & bioinformatics analyses for a biotech in immuno-oncology

Needs

Access to state-of-the-art scRNA-seq and VDJ sequencing platform and analysis to better understand the immune response of their vaccine candidate

Solutions

Fast-track and pain-free access to the technological platform in Institut Imagine (4 weeks from need expression to signed contract)

Sequencing and analysis adapted to their question and needs

- **6 MONTHS PROJECT ACCELERATION**
- **-30% EXPERTISE COSTS**

Data solutions deployement for a cell bioproduction biotech

Needs

Difficulties to explore, transform & visualize large data bases containing continuous and heterogeneous stems cells production data from differents sites (20 hospitals)

Solutions

Workshops to identify axis of improvement for management, operations & quality control teams

« No code » application implementation with customizable data analyses & automatic monitoring reports generation

- **BETTER ROI**
- **2 FULL-TIME JOBS SAVING**

Data & platform access & bioinformatics for biotech in drug therapies
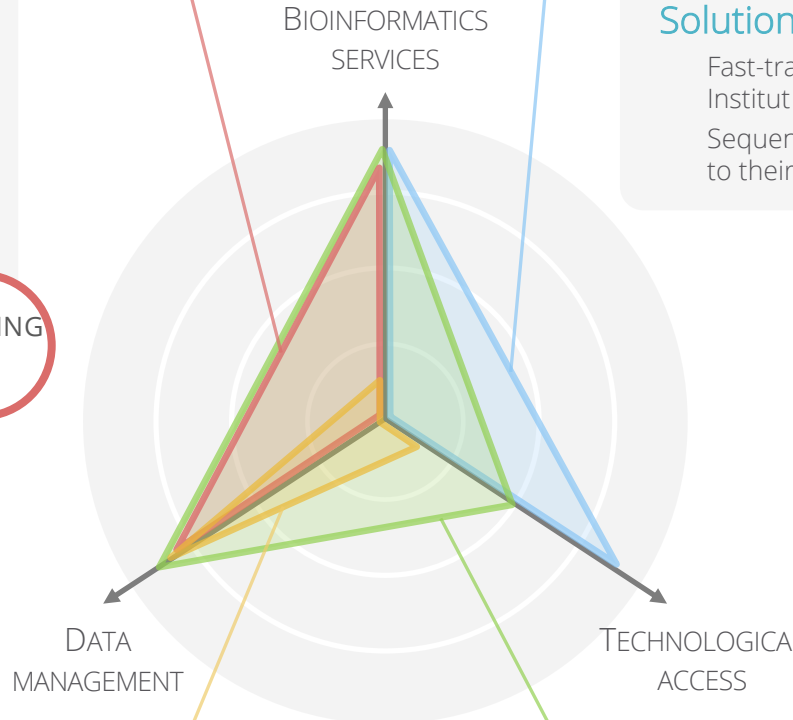
Needs

Improve understanding of the mechanism of action of their products against several types of cancer cells through bioinformatic analyses.

Solutions

Support on experimental design

Technological platform identification for sequencing

Bioinformatic analyses on public & private data
- Data quality assessment
- Reads mapping
- Differential gene expression
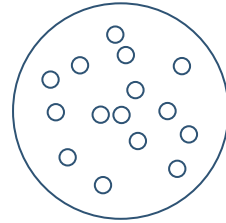- Functional analyses
- Data visualizations
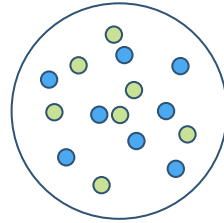
- **2 MONTHS DELAY REDUCING**
- **SKILLS TRANSFER & RAMP-UP**

BIOINFORMATICS SERVICES

DATA MANAGEMENT

TECHNOLOGICAL ACCESS

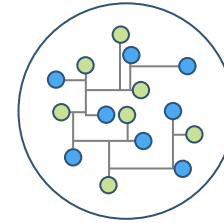# ADLIN Services (bioinformatics & data solutions) through your scientific process
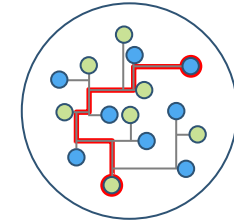
01 SAMPLE TO DATA

02 DATA TO INFORMATION

03 INFORMATION TO KNOWLEDGE

04 KNOWLEDGE TO INSIGHT

SCIENTIFIC QUESTION

Scientific consulting

Multiomics

Proteomics
Transcriptomics
Epigenetics
Genomics

Data consulting

We transform the raw data into **processed data ready to use**

We design a **database** allowing you to **capture relevant metadata**

We audit your data:
- **Quality** Control
- Data **Cleaning**

We select the best **prior knowledge** to **annotate** your **dataset** based on your scientific concerns/community **standards**

We implement the **ontology** and make sure your data is **well harmonized** to continue the analysis

We perform **advanced (multi-)omics analyses** following your scientific questions

We develop **data visualization** to better understand your data

We integrate all knowledge to perform **more advanced analyses**

We consider several **strategies** (networks or ML/AI) to obtain **predictions**

SCIENTIFIC RESULTS & INSIGHTS

ADLIN teams support your R&D activities by a multidisciplinary approach combining bioinformatics & data solutions services. Our actions can address the whole data life cycle or focus on your specific needs.

Bioinformatics services : strengthen your understanding of your omics data

Epigenetics

Exploratory analysis of genomic localization
Peaks or quantified signal differential analysis
Integration with gene expression
Binding proteins & histone modifications : *ChIP-seq*
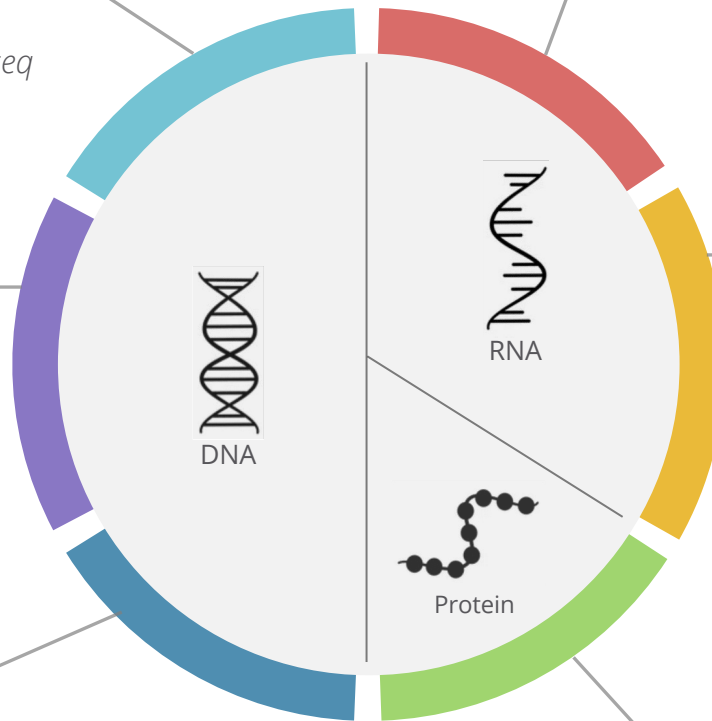Chromatin accessibility : *ATAC-seq*

Transcriptomics

Quantification of gene expression levels
Exploratory gene expression analysis
Differential expression analysis
Molecular pathway analysis
Alternative splicing analysis
Short-reads Illumina RNA-seq
Long-reads RNA-seq (Nanopore or PacBio)

Genomics

Pre-processing of raw sequencing data
Assembly & gene prediction
Variant's call
Structural and functional annotation
Genome characterization
Comparative genome analysis

Single-cell

Quantification of gene expression levels
Exploratory gene expression analysis
Cell annotation
Differential expression analysis
Trajectory inference
Molecular pathway analysis
Single-cell RNA-seq
Single Cell Immune Profiling (VDJ analysis)
Protein immune profiling in single cells (CITE-seq)

Metagenomics

Genomic analysis of the microbiome

- Bacteria & microbial diversity
- Genes of interest or virulence
- Target pathogen search

Functional analyses
Phylogenetic analysis

Proteomics

Protein identification & quantification and/or
post-translational modifications
Exploratory analysis
Differential expression analysis
Molecular pathway analysis

DNA

RNA

Protein

ADLIN

Data solutions services : capture scientific and operational value of your data

Data diagnosis & preparation

Cleaning

Remove duplicate or irrelevant observations
Fix structural errors (typos, incorrect capitalization)
Filter unwanted outliers
Handle missing data

Harmonization

Implementation of standards (e.g. OSIRIS and FHIR)

Manipulation

Sorting & Filtering
Aggregation & Join

Format conversion

xlsx to csv to SQL databases

Data classification & prediction

Classical machine learning models

Random Forest
Support Vector Machine

Deep Learning

Graph neural networks
Feed-forward
Recurrent network
Convolution layers
...

Analyses

Descriptive statistics

Distribution
Tendency (mean, median, mode)
Variability (range, standard deviation, variance)

Exploratory analysis

Statistical inference
Dimension reduction
Correlation
Clustering
Time series

Visualization

Comparisons, proportions, relationships, hierarchies, distributions, ranges, part-of-a-whole, flow, over time, pattern

Customized apps

R shiny

Python Streamlit
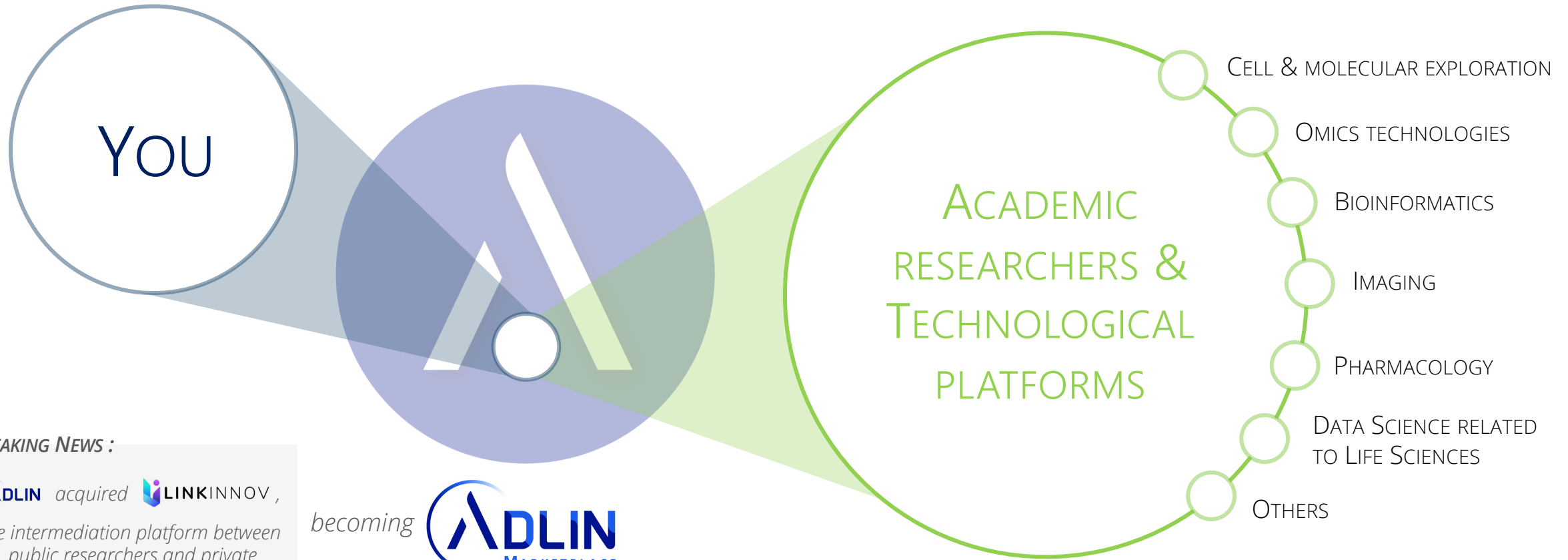
Dataset combination

Multivariate statistics

Unsupervised (MOFA)
Supervised (DIABLO)

Networks

Correlation (Bayesian)
Inference (WGCNA)

01 DATA STRUCTURATION

02 DATA EXPLORATION

03 MODEL TRAINING & FURTHER ANALYSIS

ADLIN

Technological access : academic knowledge brought to you !

YOU

ACADEMIC RESEARCHERS & TECHNOLOGICAL PLATFORMS

- CELL & MOLECULAR EXPLORATION
- OMICS TECHNOLOGIES
- BIOINFORMATICS
- IMAGING
- PHARMACOLOGY
- DATA SCIENCE RELATED TO LIFE SCIENCES
- OTHERS

BREAKING NEWS :

ADLIN *acquired* LINKINNOV, *the intermediation platform between public researchers and private companies*

becoming **ADLIN** Marketplace

ADLIN teams support you :
- in sourcing the right public R&D partners & technological platforms which fits your needs and your timeframe
  - In dealing all the contractualization for you to gain time, efficiency and scientific insights

Contact us to find the right answers to your scientific & digital needs !

ADLIN Science

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