

Euretos AI Platform Overview

Presenters:

Arie Baak



EURETOS

Euretos



Founded In 2012

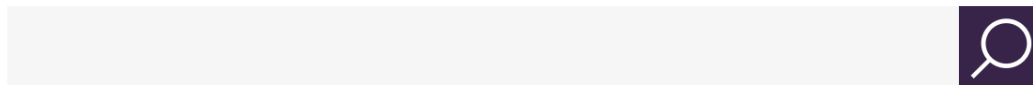
Euretos AI Platform

3 Out Of Top 10 Pharma & Biotech

Strong Academic Partnerships

IN SILICO
TARGET / BIOMARKER
DISCOVERY & VALIDATION

ASK EURETOS



Direct access to 200+ fully integrated life sciences data sources ([click here](#))

Target/Biomarker discovery & validation

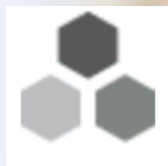
- Novel **target** for certain forms of RA (with renowned RA expert)
- **Biomarker** for Endometriosis (European large pharma)
- Novel **targets** for inflammatory bowel & lung disease (US mid-size pharma)
- **Indication expansion** validation with discovery of new biological mechanism (European mid-size pharma)
- Novel **molecular mechanisms** for Fibrosis (large US Pharma)
- Drug resistance **diagnostics marker** colorectal cancer (Cancer Institute)
- **TCGA tumor expression profile**: What cell surface genes are in the top 2% of expressed genes and differentially expressed (Log2-Fold change > 2) for specific cancers? (European mid size Biotech)
- For a list of potential targets: **rank on differential expression level** across all known experiments for a diseases (European large pharma)
- **Antibody drug conjugates**: targets on the cell surface which are internalized and transported to the lysosome.



Euretos AI Platform



Gene Ontology Consortium



Human
Protein
Atlas



ClinicalTrials.gov



Phenotype \leftrightarrow Pathways \leftrightarrow Proteomics \leftrightarrow Metabolomics \leftrightarrow Genetics

EURETOS



Data Sources (200+)

1. Ontologies & vocabularies

2. Multi-omics Databases

- ✚ **Phenotypes**
- ✚ **Genetics/genomics**: genomic sequences, gene annotations, gene regulation, gene variation
- ✚ **Expression (RNAseq/Protein)**: healthy tissues, differential expression
- ✚ **Proteomics**: protein complexes, interactions and pathways
- ✚ **Metabolomics**
- ✚ **Chemicals & drugs**: side effects, toxicity, chemical - protein interaction , assays

3. Literature & Unstructured data (co-occurrence)

PHENOTYPE

Human Phenotype Ontology, CTD, Pubmed, Clinical Trials

GENE/PROTEIN

UniProt, Entrezgene, Gene Ontology, CTD, DisGeNet
OMIM, Expression Atlas, Human Protein Atlas (including cancer tissue)

VARIANTS

ClinVar, COSMIC (oncology), dbSNP, DECIPHER

GENE REGULATION

Fantom 5, ENCODE

Import

Update

Export



Example - In silico target validation

reSearch

Analytics

AQP4 alzheimer's



phenotypes

metabolites

pathways

genes

small molecu...

diseases

other ↓

44 results

[Review if AQP4 plays a role in alzheimer's disease](#)

[Search with synonyms for AQP4 \(homo sapiens\) AND alzheimer's disease](#)

[Aquaporin 4 in astrocytes is a target for therapy in Alzheimer's disease.](#)

2017 07-01 Current experimental evidence points to the conclusion that aquaporin 4 (AQP4), which is an important water-channel membrane protein found in the brain, could play major roles in v ...

PMID: [28714415](#) Source: Current pharmaceutical design Authors: Lan, Yu-Long (YL); Chen, Jian-Jiao (JJ); Hu, Gang (G)

[Expression of Aquaporin 1 and Aquaporin 4 in the Temporal Neocortex of Patients with Parkinson's Disease.](#)

2017 03-01 The astrocytic water channel proteins aquaporin 1 (AQP1) and aquaporin 4 (AQP4) are known to be altered in brains affected by several neurodegenerative disorders, including Alzheim ...

PMID: [26919570](#) Source: Brain pathology (Zurich, Switzerland) Authors: Hoshi, Akihiko (A); Tsunoda, Avako

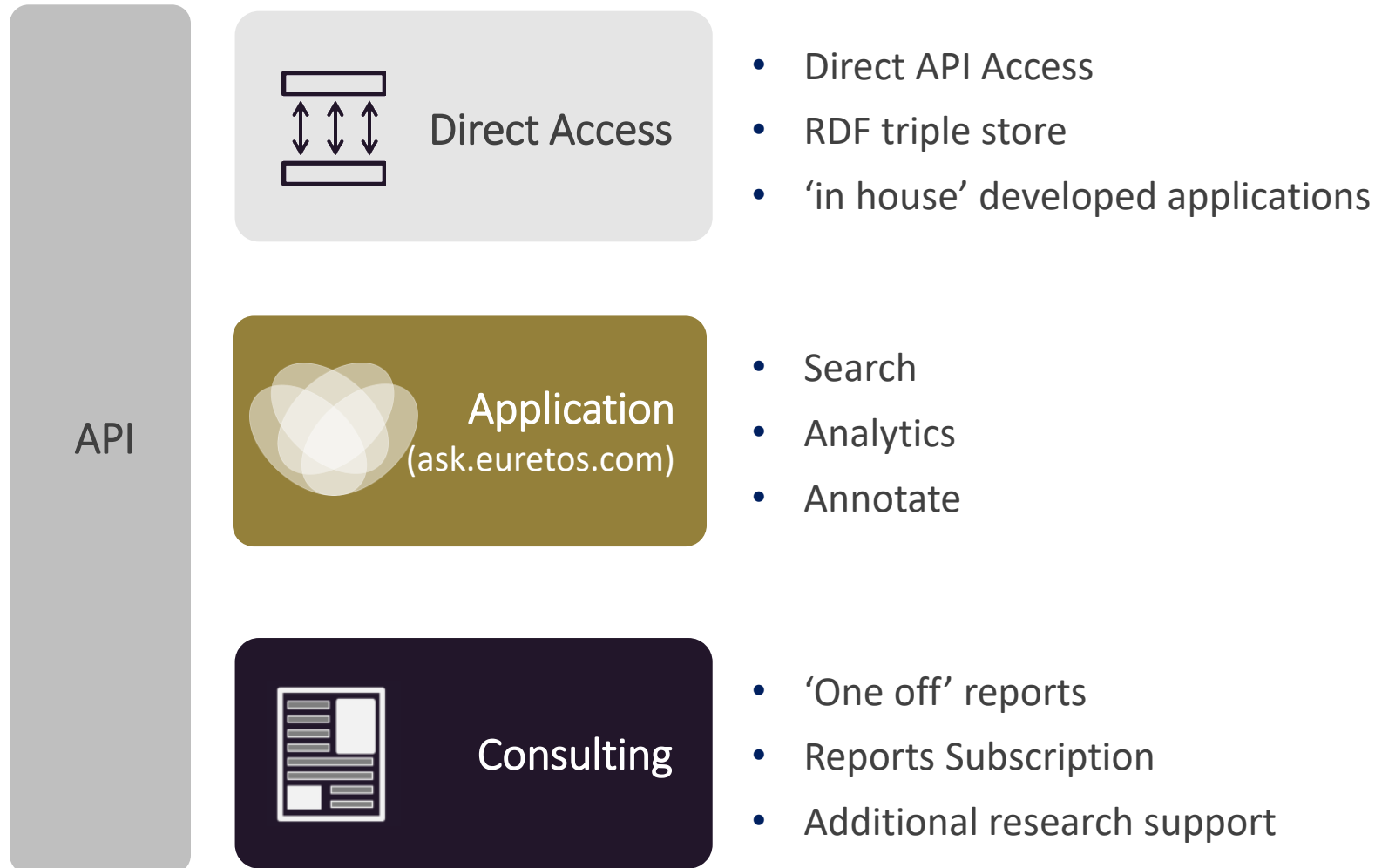
Alzheimer's disease ⓘ

Disorders, Finding, Disease or Syndrome, Mental or Behavioral

[human phenotype ontology] "A disease of the brain characterized by an insidious onset of dementia. Impaired memory, judgment, attention span, problem solving skills are followed by apraxia and a global loss of cognition. The condition primarily occurs in the elderly and is marked pathologically by brain atrophy and the triad of senile plaques, neurofibrillary tangles, and neuronal loss." [HPO:probinson]

Note that this is a bundled term for disease rather than to phenotype

Accessing the Euretos AI platform



Contact us

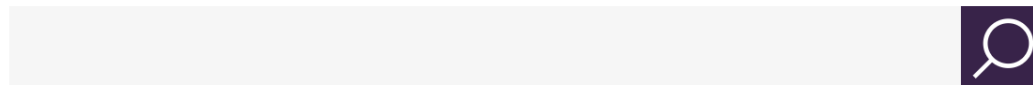


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