

A set of tools to perform meta-analysis, discover subtle methylation regions, unbiased enrichment analyses, and to analyse lupus omics datasets and integrate Covid19 and environmental data.

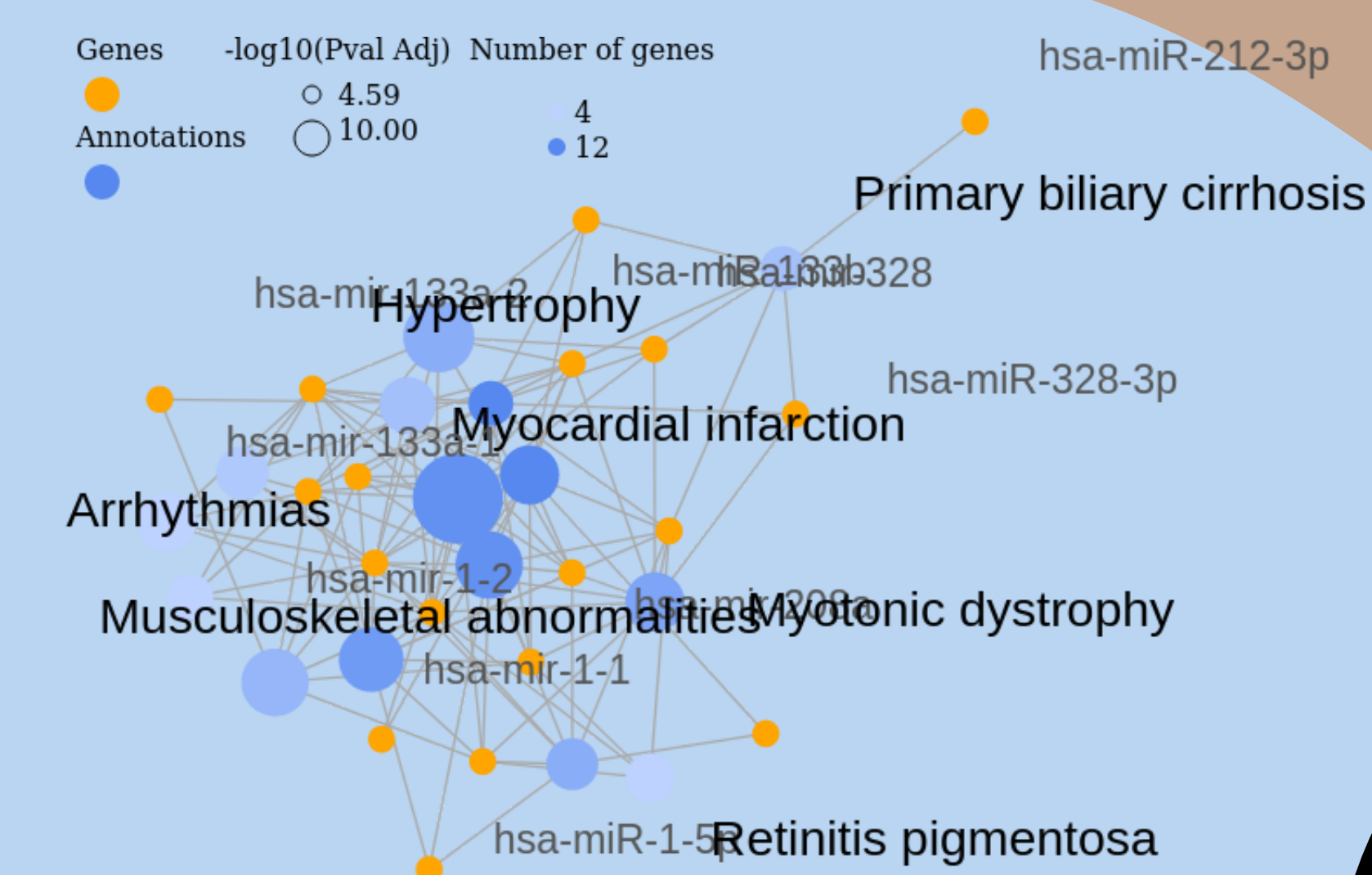


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| Study | Experimental Events | Control Events | Odds Ratio |
|--|---------------------|----------------|------------|
| Bo | 180 | 416 | 148 |
| Canedo | 275 | 666 | 627 |
| Crusius | 209 | 472 | 1074 |
| de Oliveira | 192 | 414 | 224 |
| Felipe | 88 | 208 | 189 |
| García-Gonzalez | 79 | 156 | 153 |
| Kamali-Sarvestani | 24 | 38 | 118 |
| Kamangar | 84 | 224 | 159 |
| Fixed effect model | 2594 | 6014 | |
| Random effects model | | | |
| Heterogeneity: $I^2 = 65\%$, $\tau^2 = 0.0379$, $p < 0.01$ | | | |

Focused on **genetic association studies**. Finds robust associations between genotypes and phenotypes: bioinfo.genyo.es/metagenyo

MetaGenyo

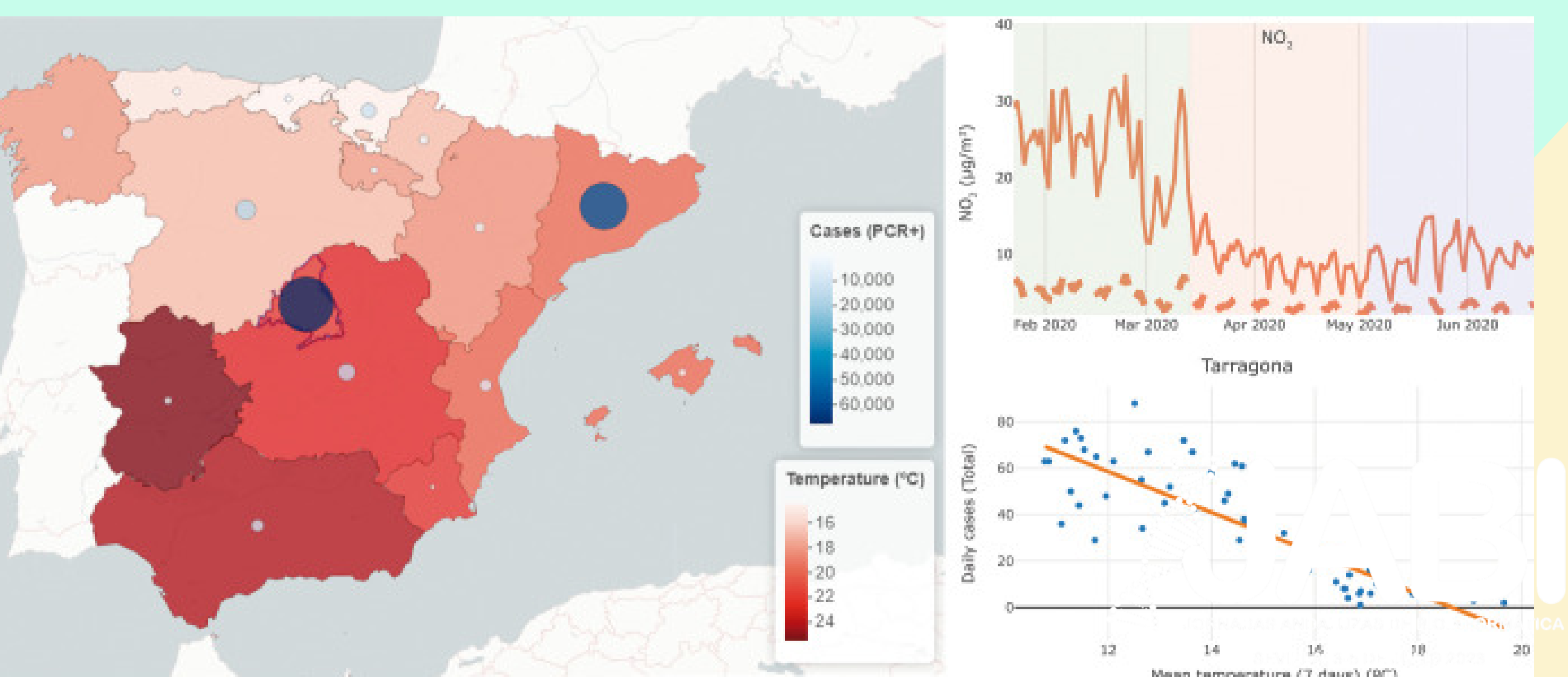


GeneCodis4

API tool of **singular and modular enrichment analysis** of genes, proteins, CpG sites, miRNAs and TFs. **Unbiased approaches for regulatory elements**. genecodis.genyo.es

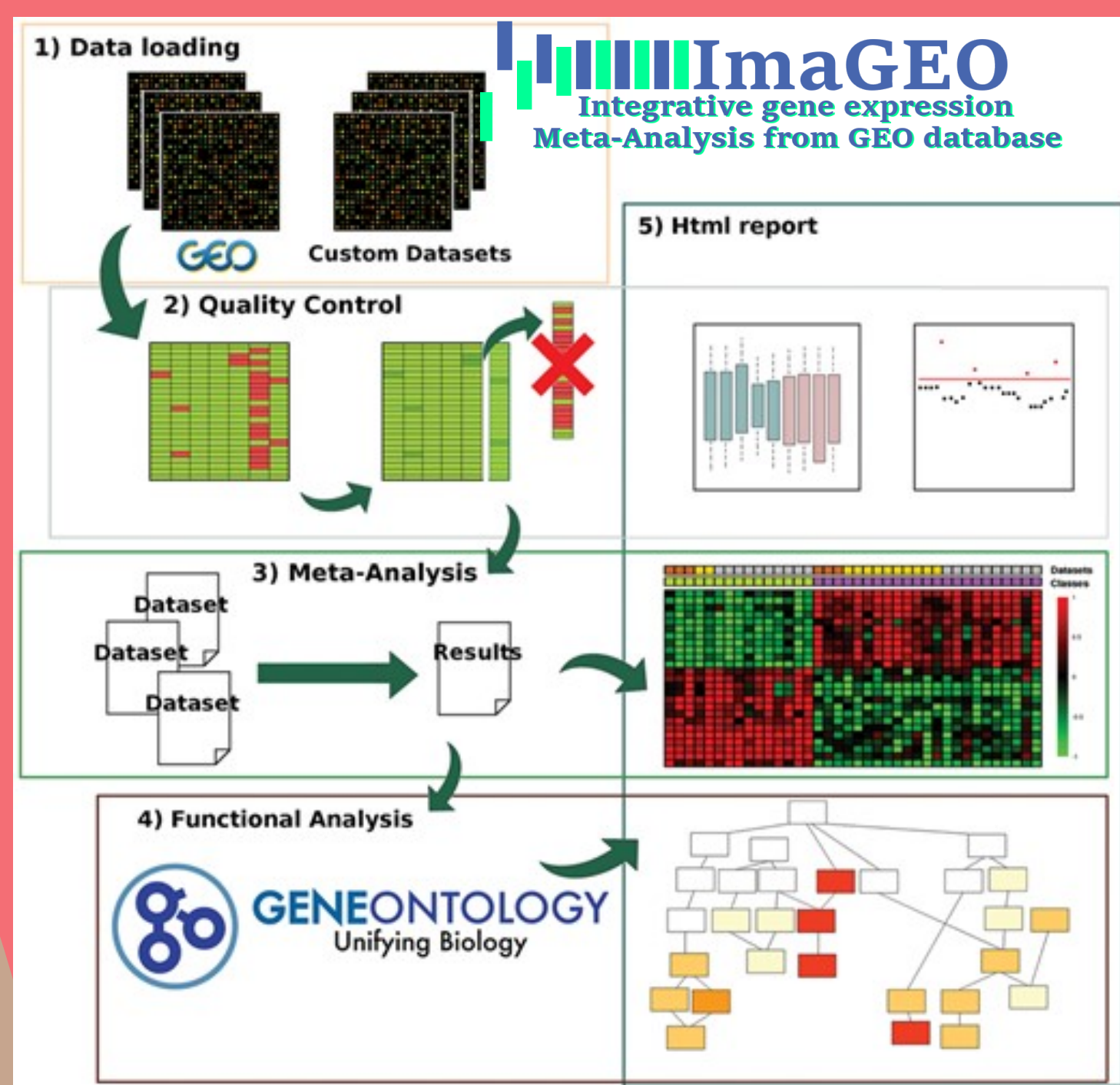


DataAC

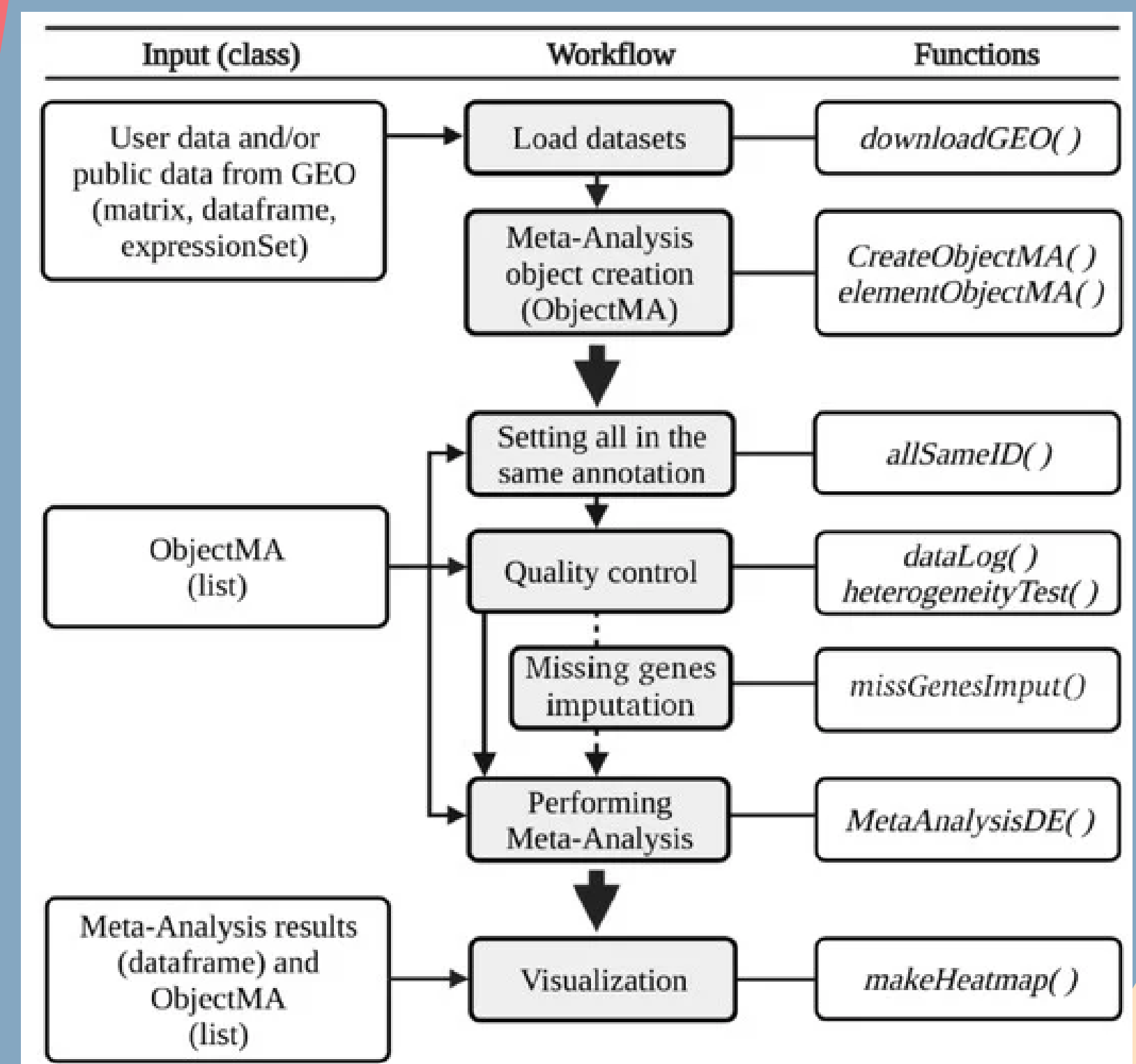


Integrates **meteorological and air quality** variables with **COVID-19** data in **Spain**. Powerful statistical capabilities to explore individual trends. covid19.genyo.es

Integrates **GEO expression datasets** to discover and validate potential biomarkers: bioinfo.genyo.es/imageo

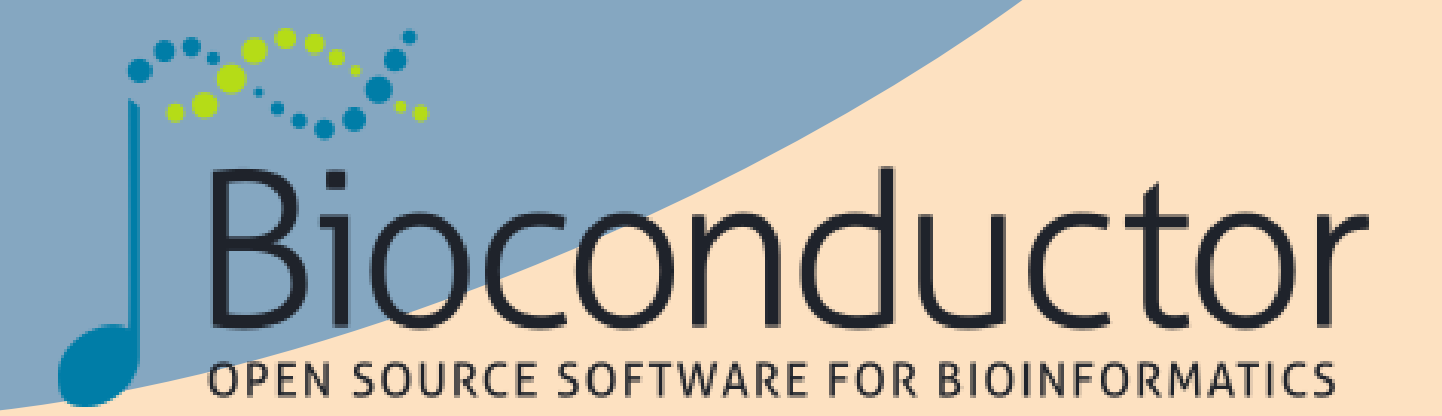


ImaGEO



DEXma

R's package for analysing **gene expression** with specific functions to **control** the number of **missing genes**.



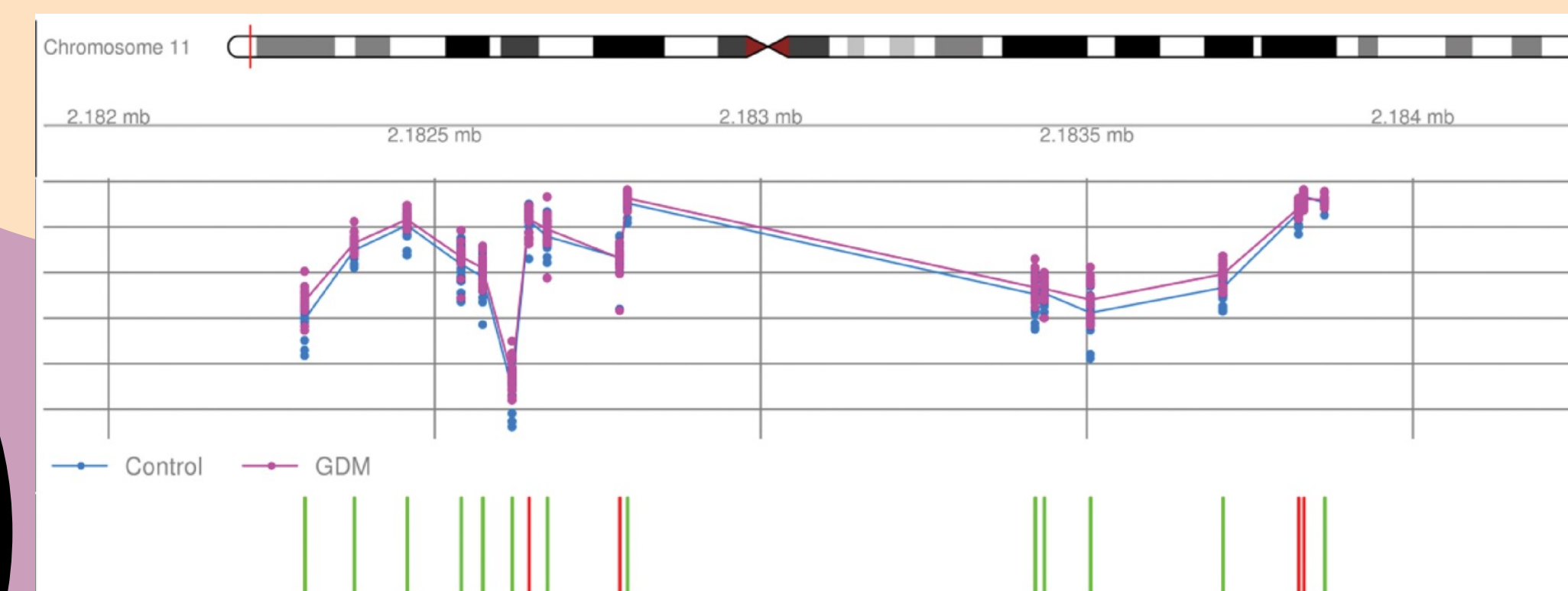
Meta-analysis

Regulators enrichment analysis

Methylation

mCSEA

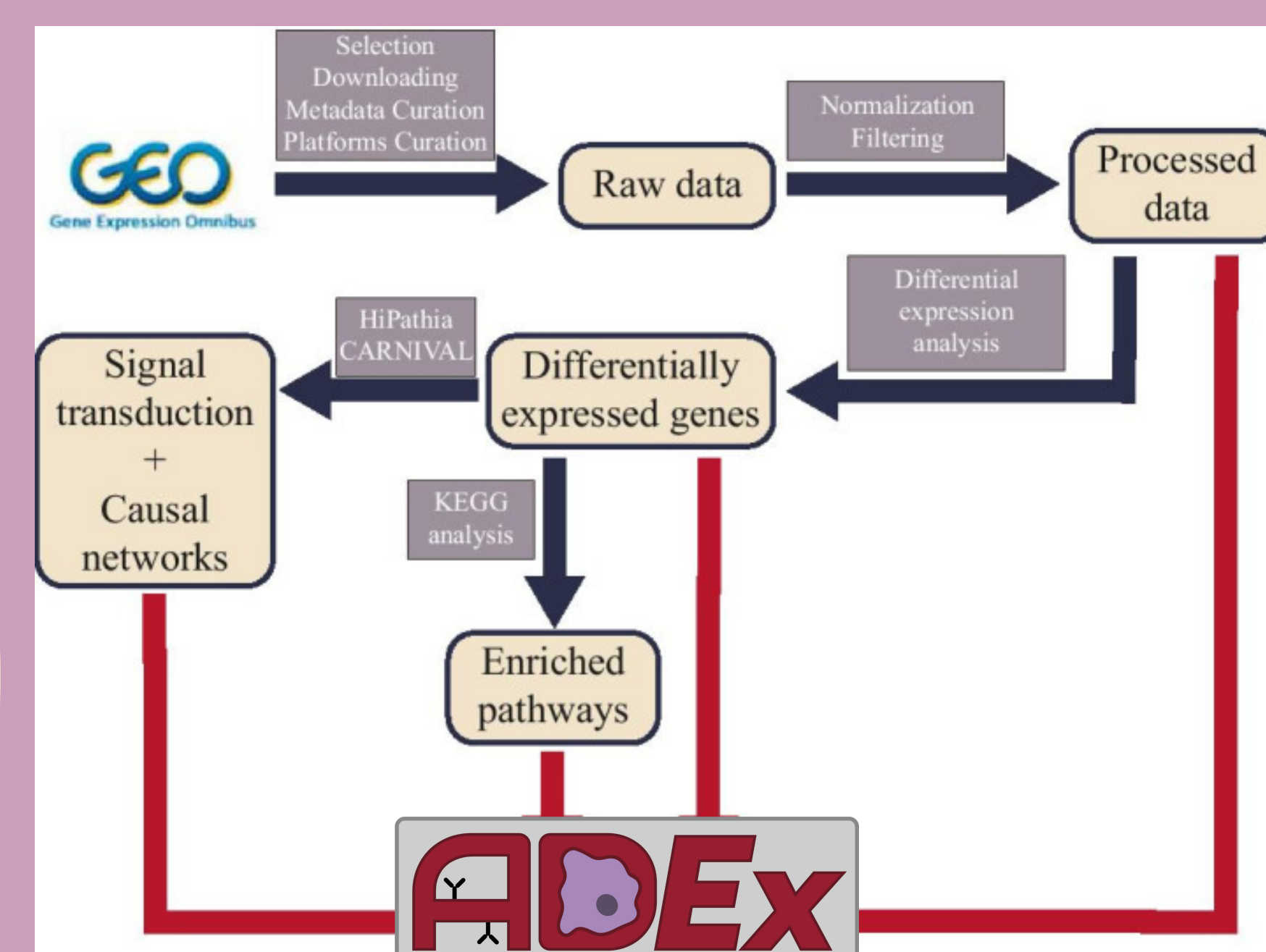
R's package based on Gene Set Enrichment Analysis method to **identify, subtle, but consistent, differentially methylated regions** from Illumina450K and EPIC array data.



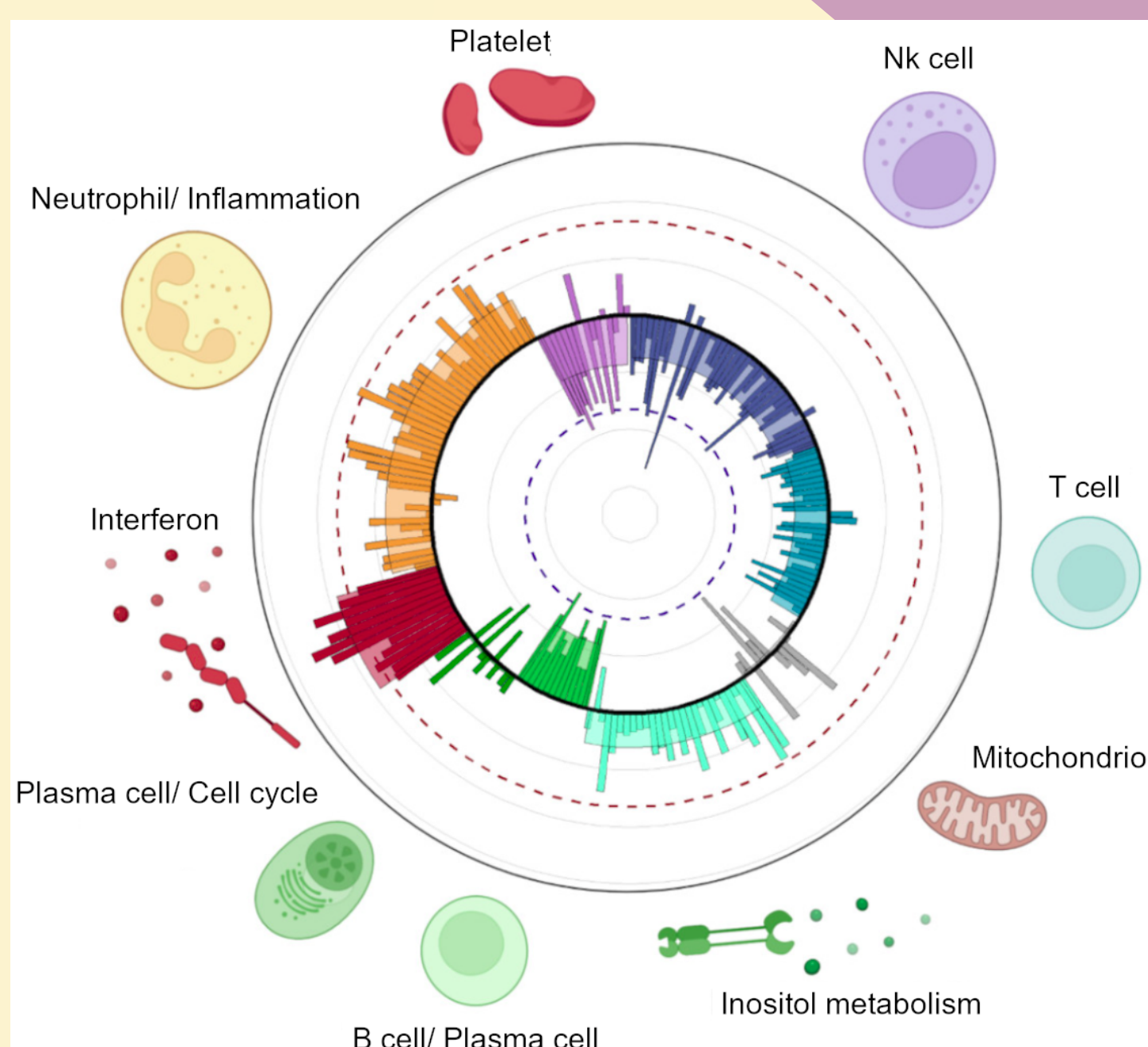
Autoimmune diseases

ADEX

Data portal and analysis platform of curated **transcriptomics** and **methylation** studies for some of the **most common autoimmune diseases**: systemic lupus erythematosus, rheumatoid arthritis, Sjögren's syndrome, systemic sclerosis and type 1 diabetes. adex.genyo.es



MyPROSLE



Measures the **molecular portrait of individual Systemic Lupus Erythematosus patients**, in 206 gene-modules, clustered into nine main lupus signatures: myprosle.genyo.es

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