ECM Aging Atlas:
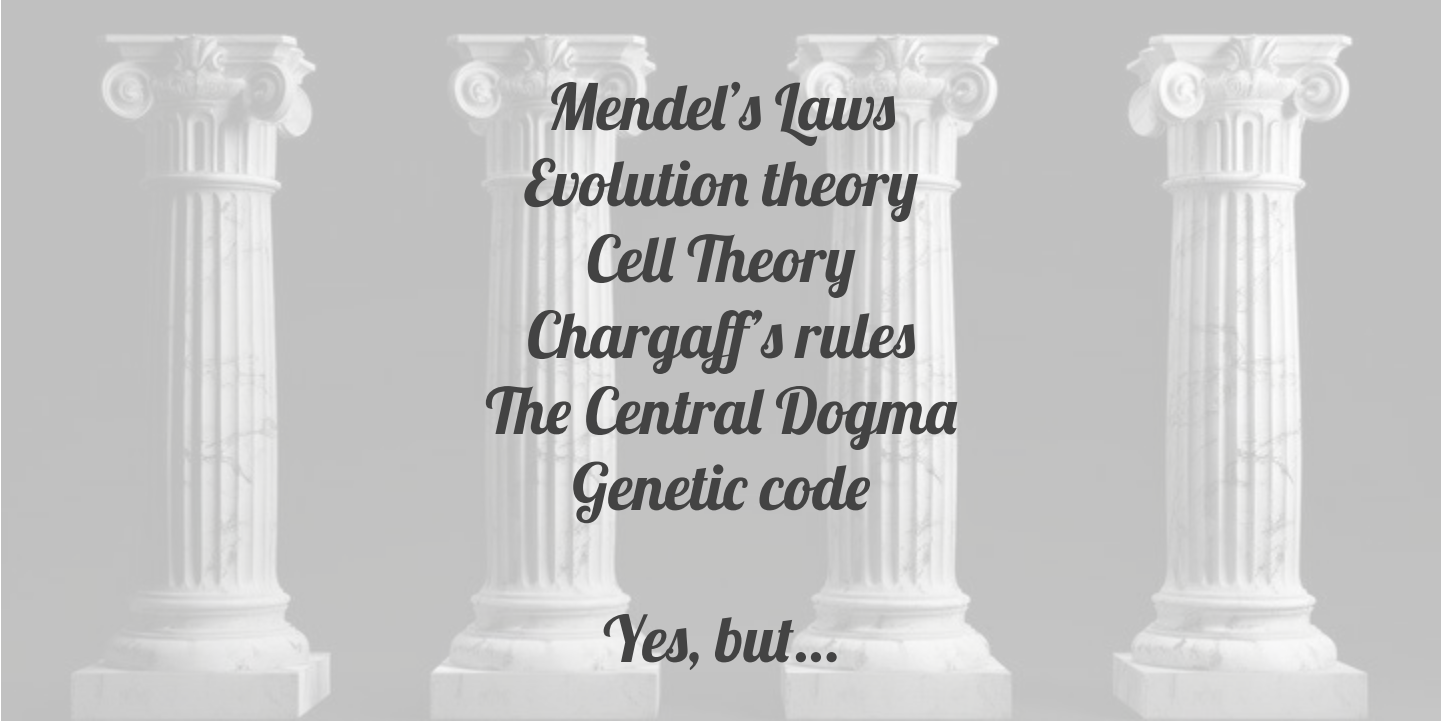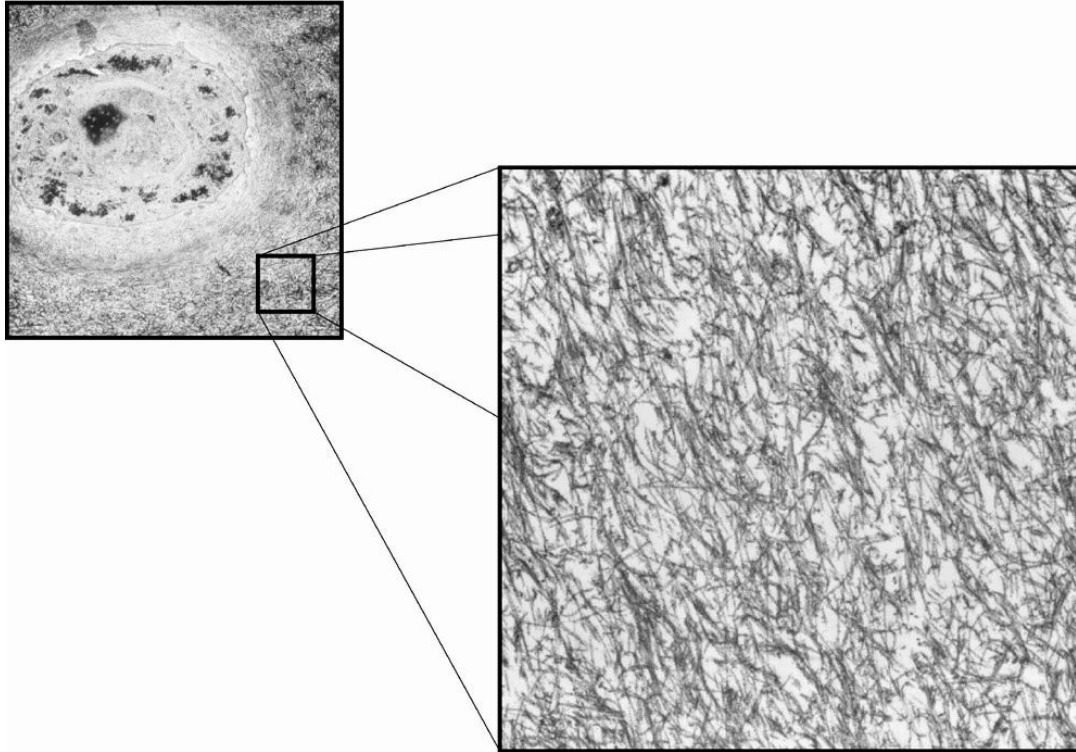## a database of time-resolved proteomic signatures

Biological first principles

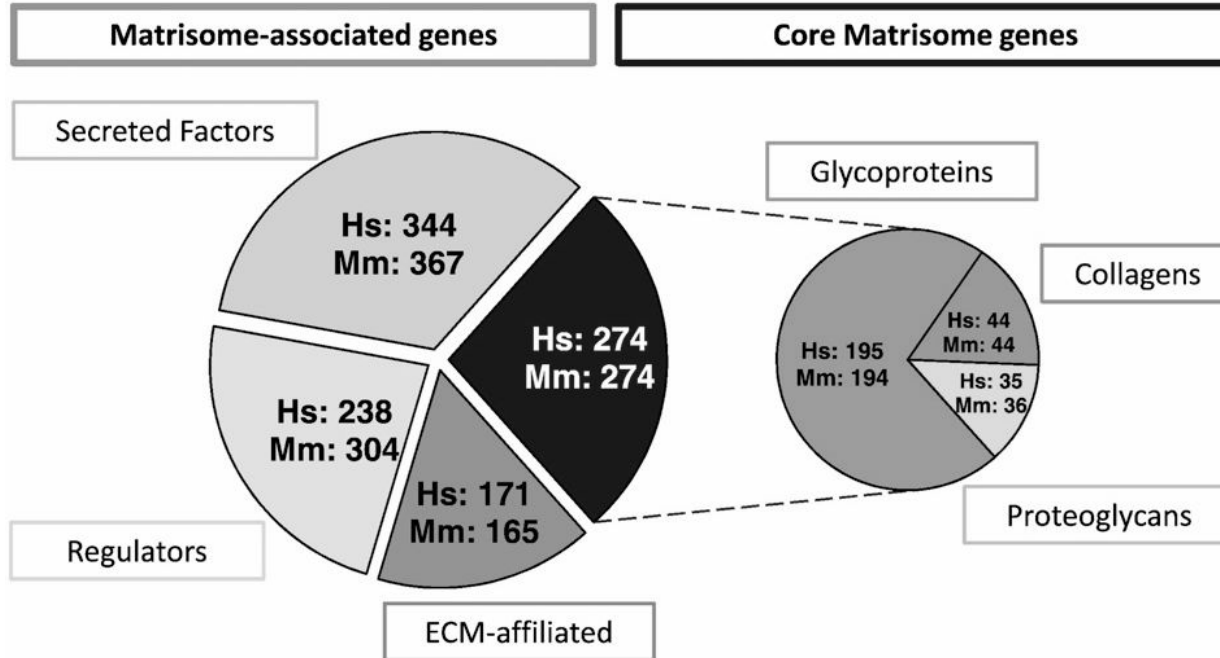Mendel's Laws
Evolution theory
Cell Theory
Chargaff's rules
The Central Dogma
Genetic code

Yes, but...

Ground substance

Arthritis Research

Extracellular matrix

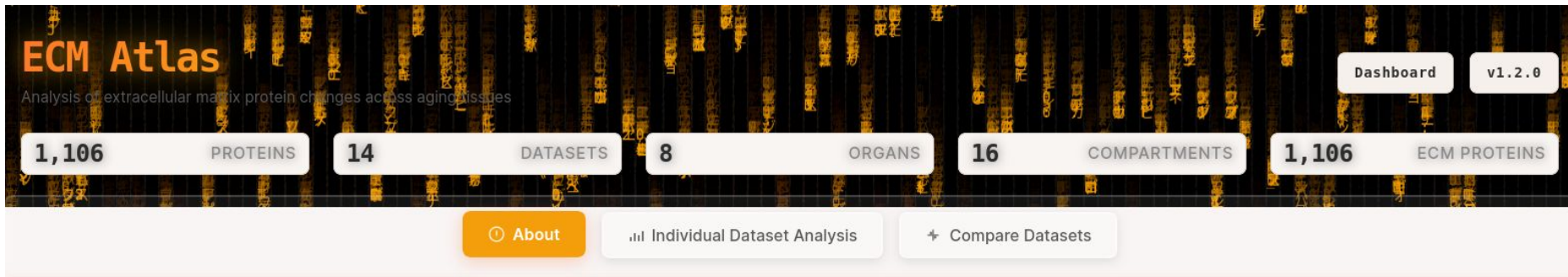# Problem and solution

Problem: proteomics data are non-uniform!
- different sample preparation workflows
- different quantification methodologies (label-free vs. labeled)
- different instruments (Orbitrap, time-of-flight, etc.)
- different data analysis pipelines and output dataset formats
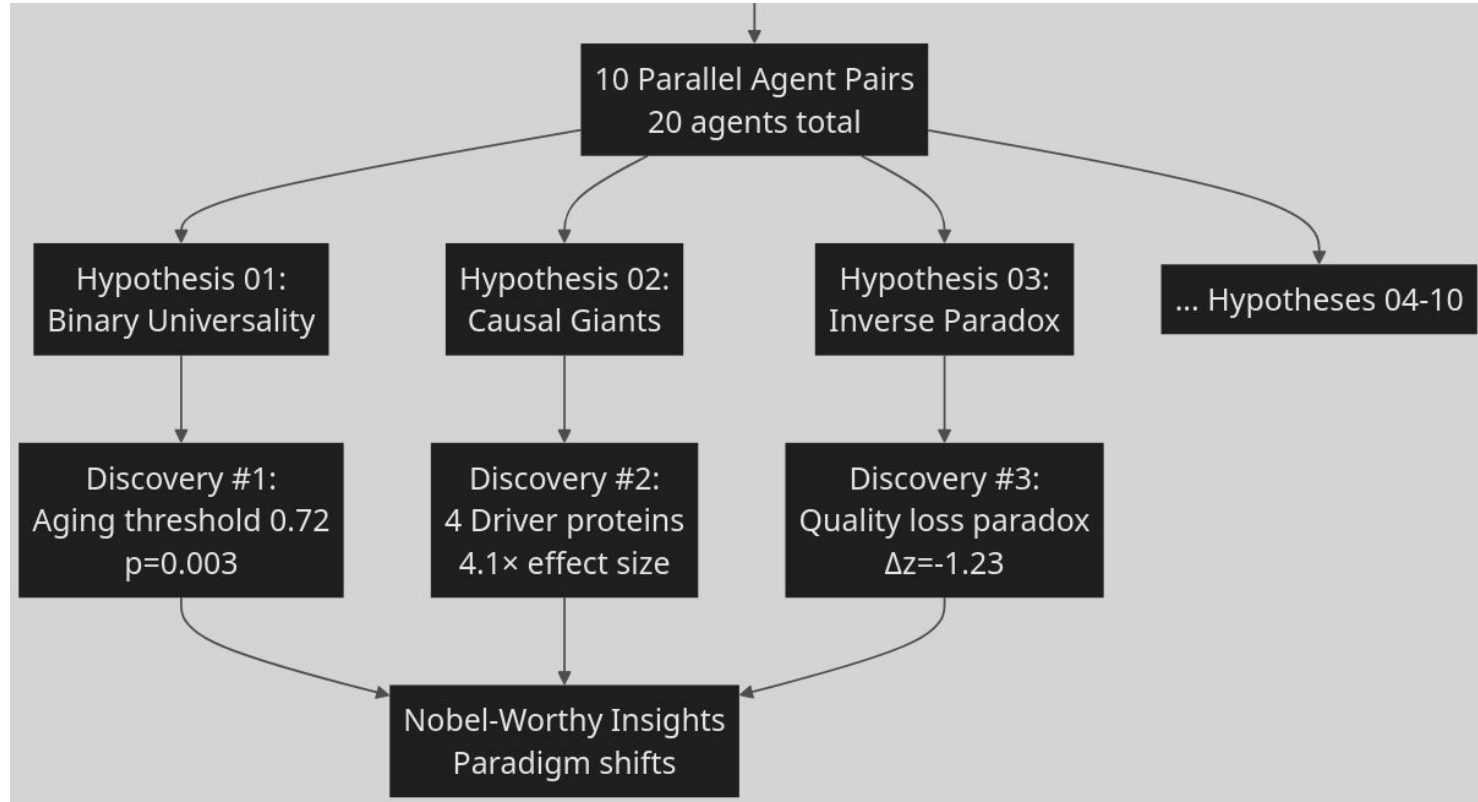
Hard to compare studies directly.

Solution:
- data ingestion agent (data wrangling, normalization, batch correction)
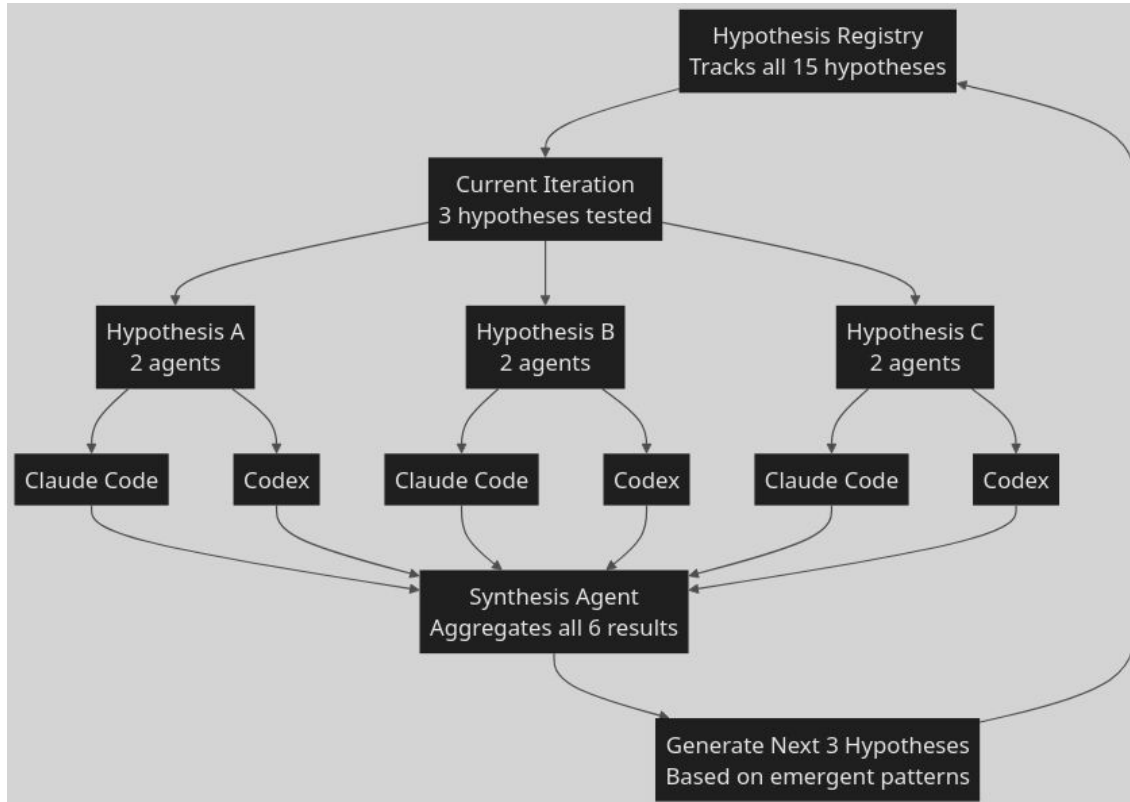- a database for unbiased comparison between studies and compartments

ECM Aging Atlas

Live dashboard: https://ecm-atlas.fly.dev/dashboard.html

Hypothesis generation

Hypothesis validation

Team

Bob Walsh, data analyst, mathematician
Daniel Kravtsov, developer, entrepreneur
Rakhan Aimbetov, biologist

"Truly, what is stiff and hard is a companion of death; what is soft and weak is a companion of life."

-- Tao Teh Ching, 76.