RHAPSODY
- Federating clinical data for biomedical research in type 2 diabetes -
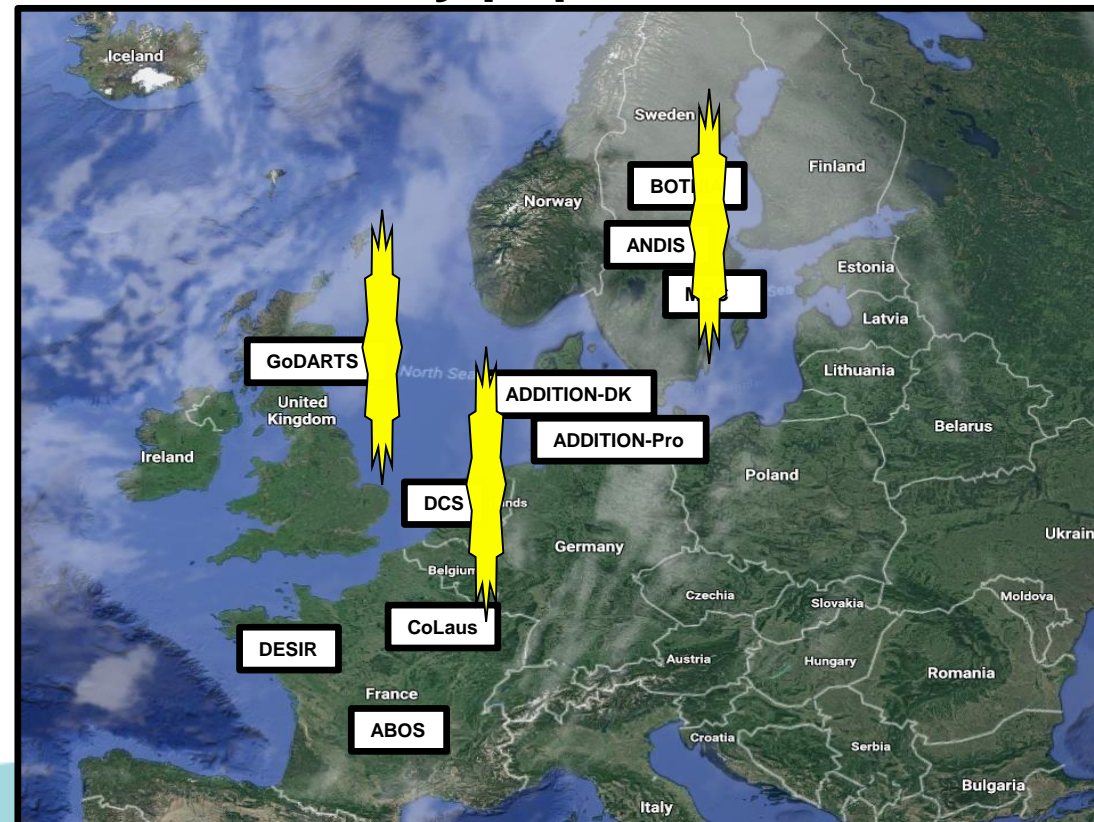
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Rhapsody

*- Gain insight into the biology of diabetes progression*

- Improve prediction of type 2 diabetes and its progression
  - Multi-omics platforms
- Support patient segmentation
  - Define subsets of type 2 diabetes
  - Define fast and slow progressors

- -

1) Deploy a server
2) Harmonize the clinical data (CDISC)
3) Upload clinical data to the server
4) Upload multi omics data to the server
   a) SomaLogic
   b) Metabolomics
   c) Lipidomics
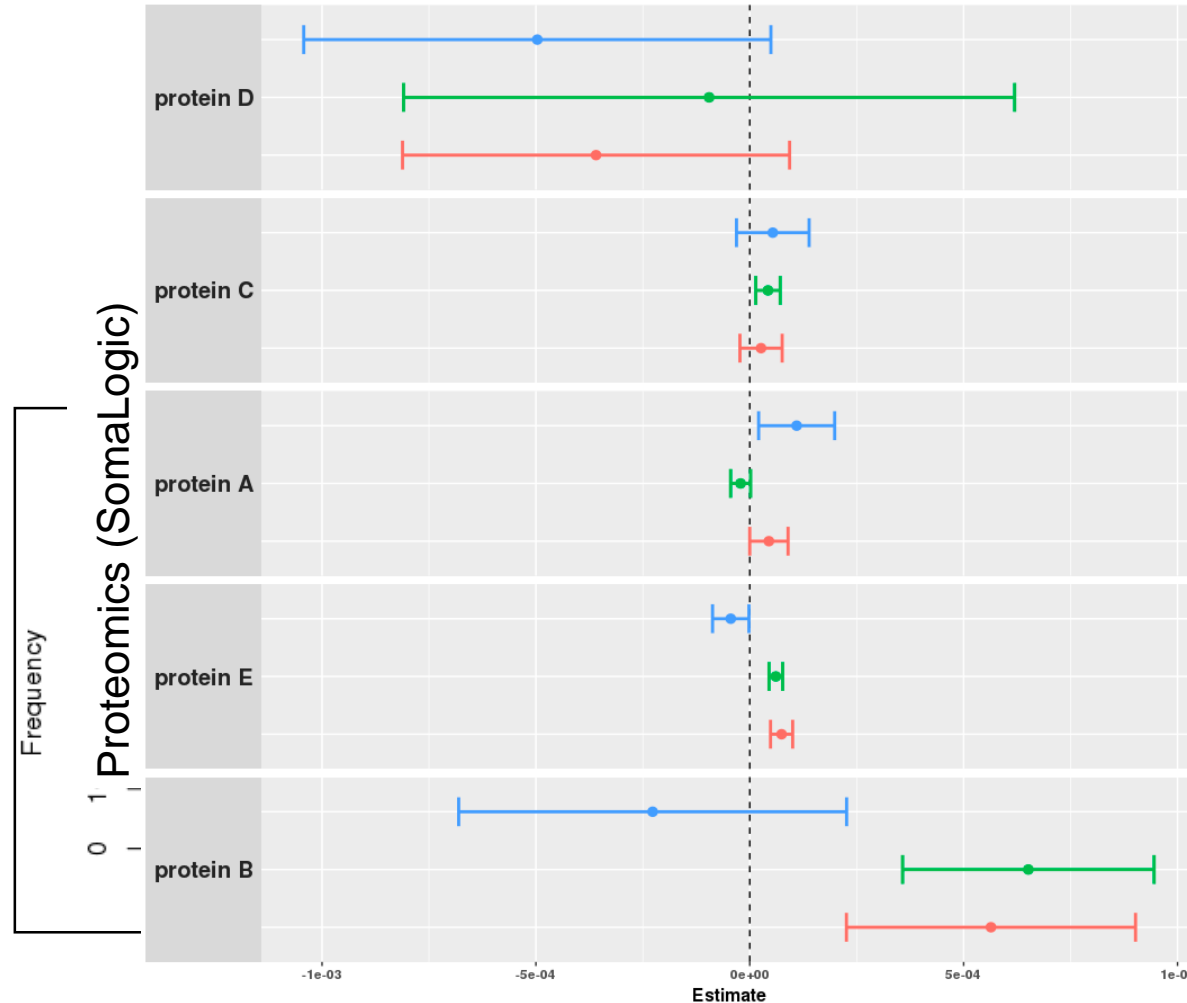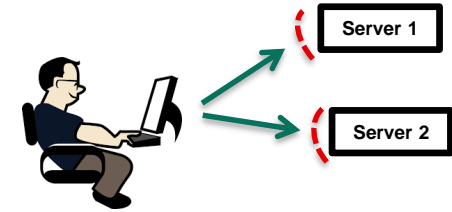   d) MicroRNA

Study populations

The federated database system
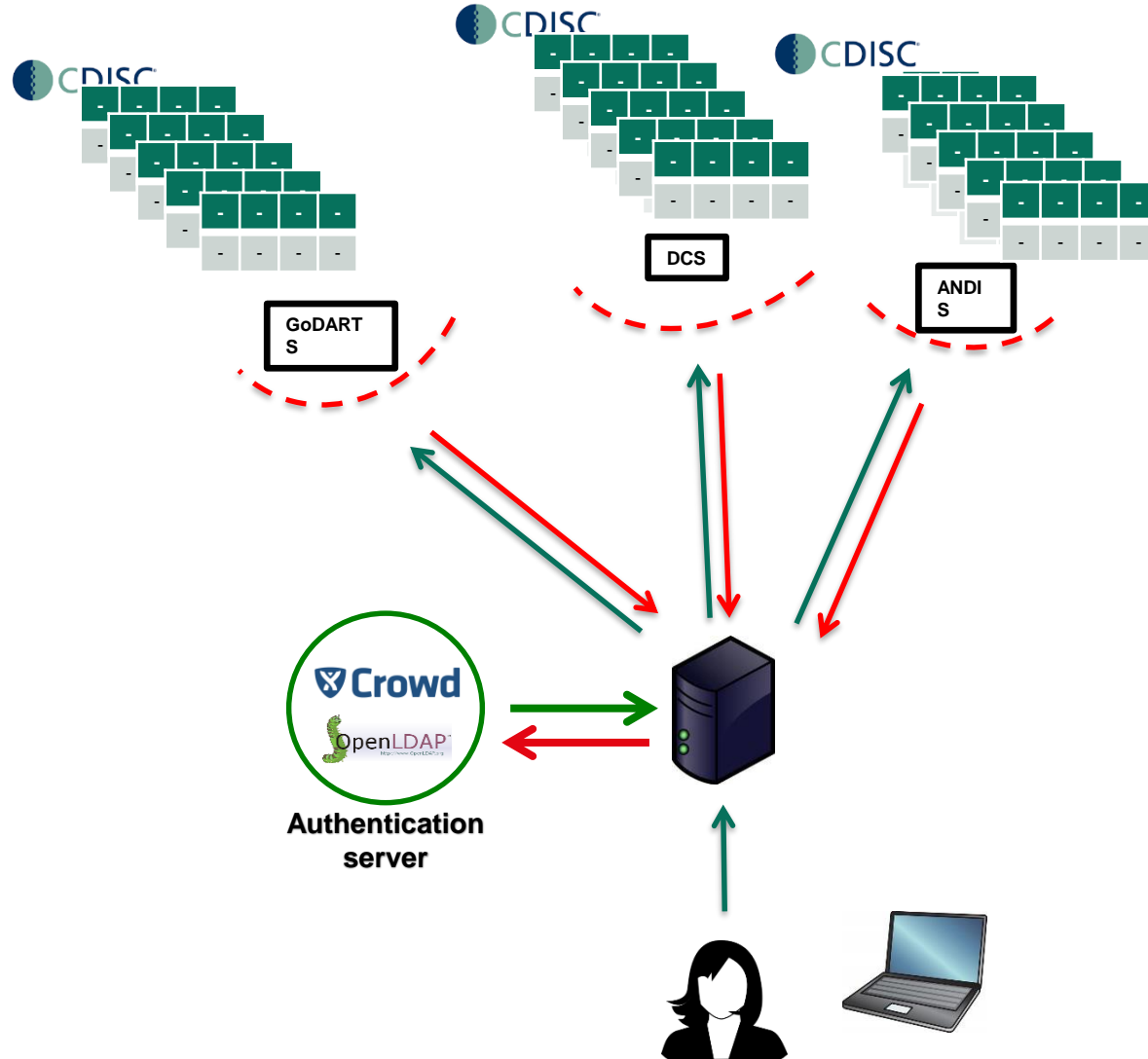
- Login: username + password
- Load tables
- Filtering and subsetting of tables
- Powerful federated analysis
  - Meta data is returned

Real data analyses in Rhapsody

- Through the federated data system

Effects on the long-term blood glucose level (HbA1c)

Concluding remarks

- The federated data system is "live" and working in Rhapsody
  - Enables standardised analysis across multiple observational cohorts in Rhapsody
    - Reproducible results
    - High flexibility

- Identify robust biomarkers for assessing disease risk and progression in type 2 diabetes
    - Correlation of multi-omics data with clinical relevant traits
    - Patient segmentation: Cluster diabetes study population in subsets of diabetes