

AETIONOMY

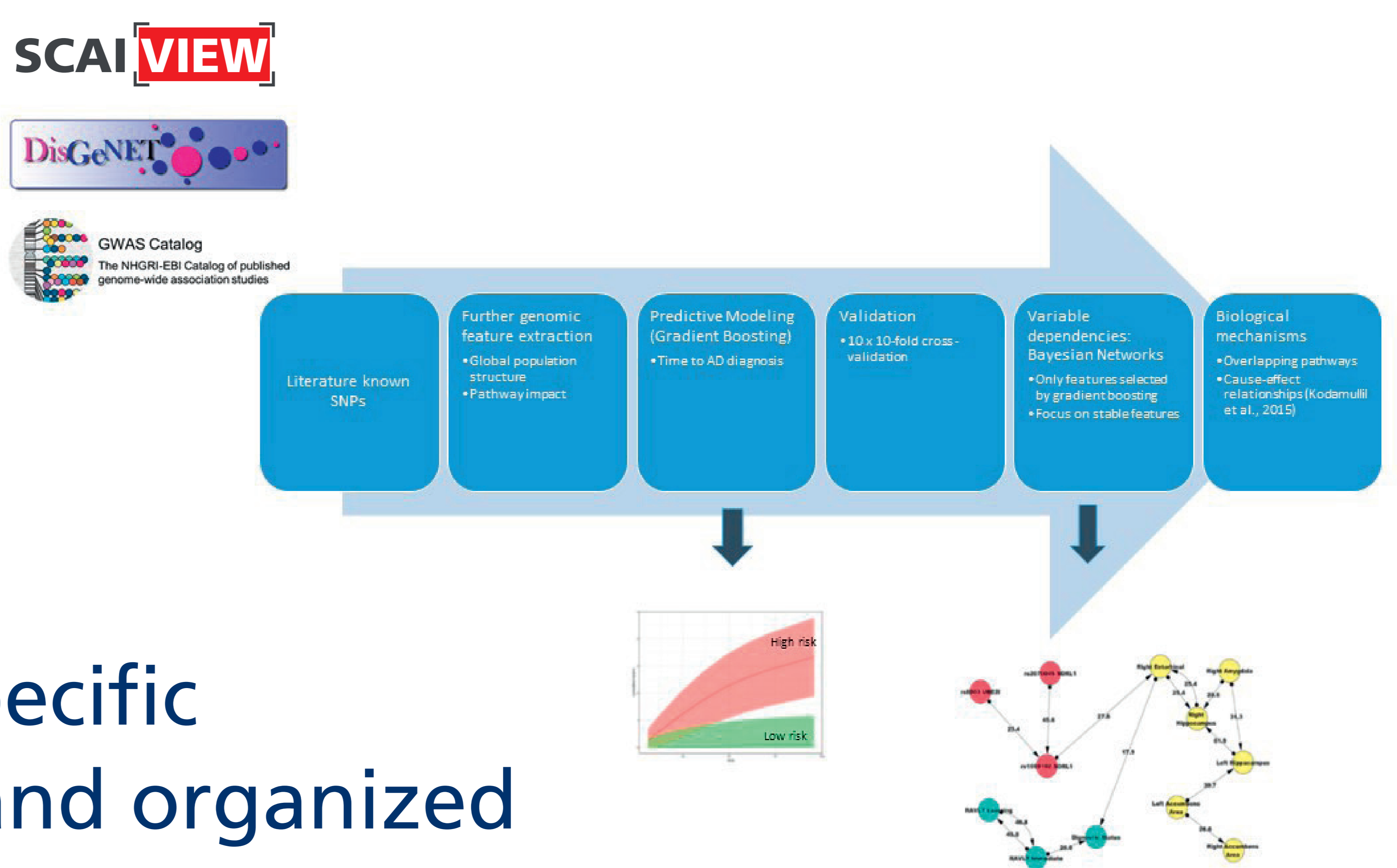
Generating a mechanism-based taxonomy of Alzheimer's and Parkinson's disease and validating in the course of a prospective clinical trial

TRANSFER TO BIOINFORMATICS

New strategies for disease modelling and data mining, hypothesis generation and validation – applying innovative techniques to identify and validate new disease mechanisms

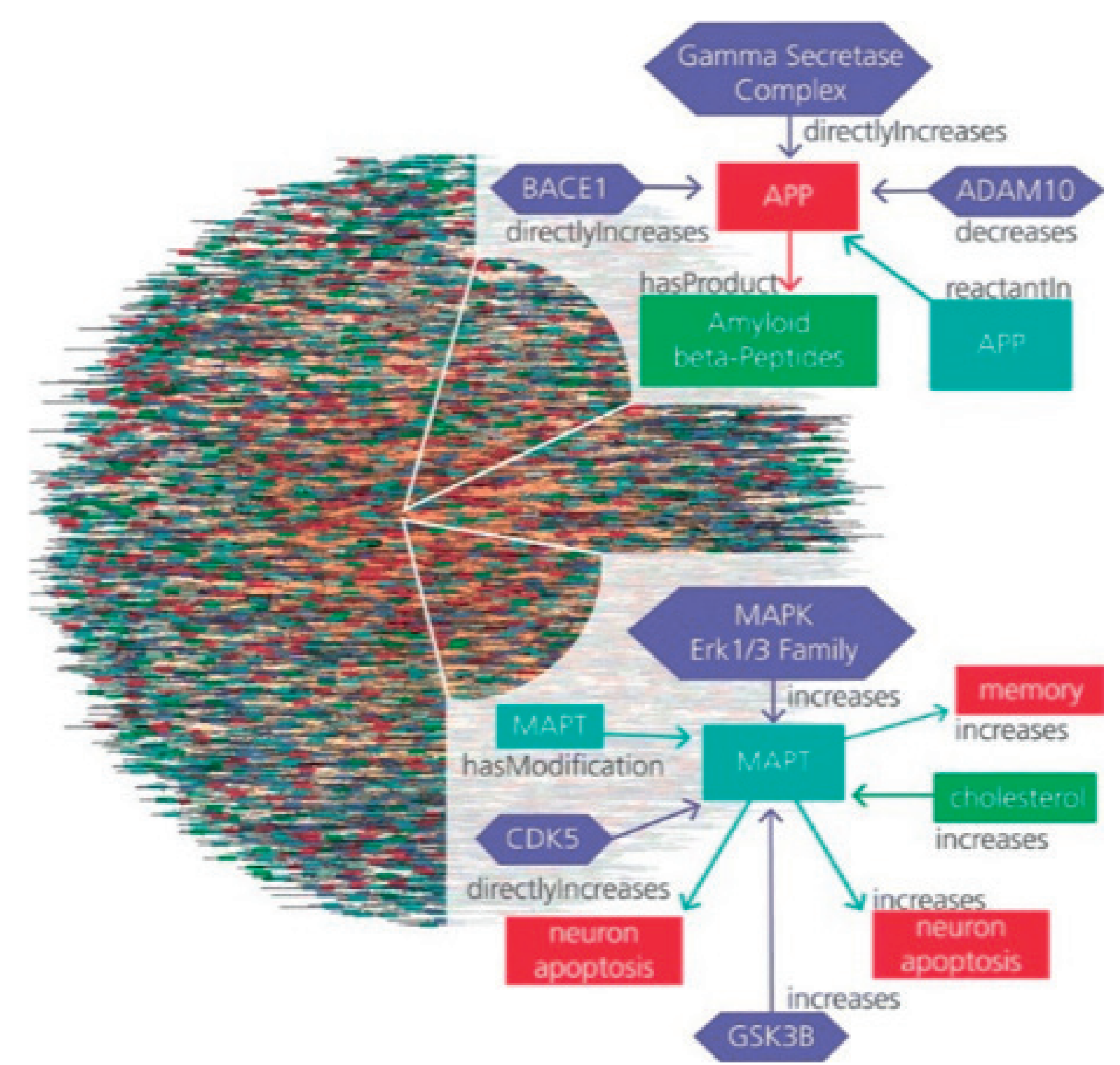
Knowledge Mining

- AETIONOMY generates hypotheses about multi-scale mechanisms of neurodegenerative pathophysiology. Conceptually, disease specific features are identified and organized at different scales to perform data-driven analysis. This analysis identifies robust combinations of features that correspond to disease sub-types. Selected mechanisms of neurodegeneration, that may distinguish disease subtypes, are tested and validated using patient-level data.



Disease Modelling

- Disease knowledge assembly models have been generated to capture the vast knowledge around Alzheimer's and Parkinson's disease. The underlying models are based on the Biological Expression Language (BEL), encoding literature-derived "cause and effect" relationships into networks, which can be subjected to causal reasoning using quantitative data such as gene expression.



www.aetionomy.eu



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