# sciomics

Antibody meets microarray

Biomarker Discovery Service:
Novel biomarkers for AKI

Acute kidney injury (AKI) is a major complication after cardiac surgery and solid organ transplantation with incidence rates of 30 - 60%. In this study novel biomarker candidates for prediction and early diagnosis of perioperative AKI were identified using complex antibody microarrays targeting 900 highly relevant proteins.

Contact us for further details or to start your scio-Discover study.
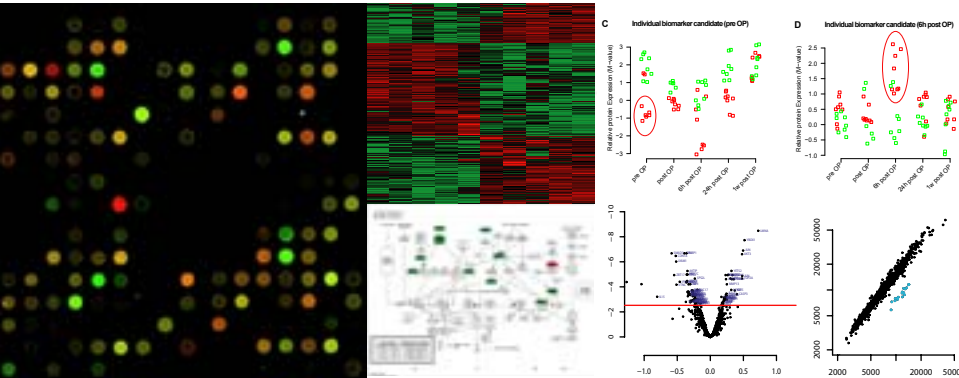
scio-Discover – Biomarker discovery service

- Selection of appropriate study layout
- Protein extraction & quantification
- Protein labelling
- Array incubation
- Array scanning
- Data analysis
- Identification of differential proteins
- Preparation of a detailed study report

In-depth pathway profiling

Development of diagnostics

Toxicology

Biomarker verification

Link Genomics & Proteomics
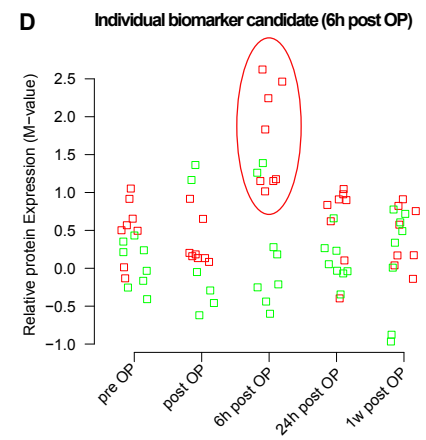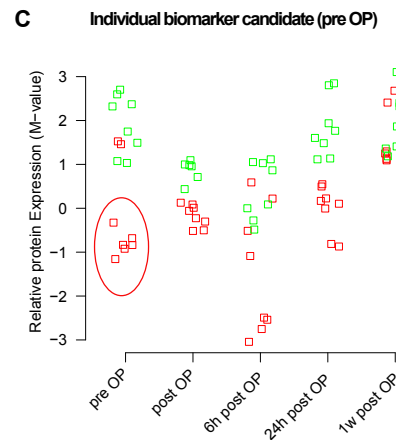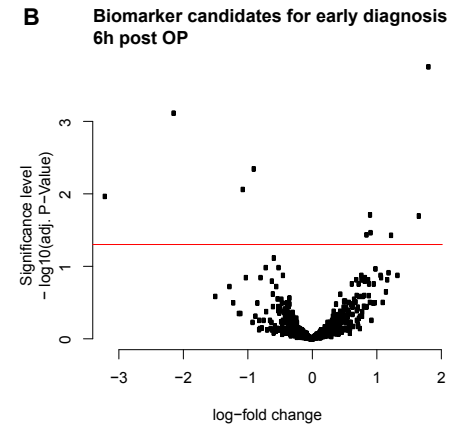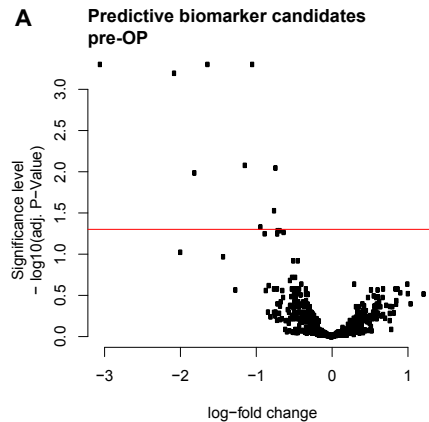
Longitudinal mouse studies

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Diagnosis and prediction of perioperative AKI

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In a discovery study with complex antibody microarrays targeting 900 highly relevant proteins (scio-Discover) sets of biomarker candidates for prediction of AKI prior to surgery (A) and early diagnosis of AKI after surgery (B) were identified. The volcano plots in panels (A) and (B) summarise the results of the discovery study. Dots above the red line represent biomarker candidates with significant differential expression in patients with and without perioperative AKI (adj.p-value < 0.05). Panels (C) and (D) present the expression values of two individual candidate protein biomarkers at different time-points in patient plasma samples with (red) and without (green) peri-operative AKI.

A Predictive biomarker candidates pre-OP

B Biomarker candidates for early diagnosis 6h post OP

C Individual biomarker candidate (pre OP)

D Individual biomarker candidate (6h post OP)

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