Julie Klein
Renal-Fibrosis lab/Inserm U858
Toulouse-France

e-LICO PROJECT

« Two rudimentary KUP Use-Cases »

Use-case #1:

Pre-selection of urinary biomarkers of obstructive nephropathy

Dataset #1 (available in our lab)

Mouse

Kidney tissue

Control vs Obstructive nephropathy

Transcriptomic

Differentially expressed genes

Dataset #2 (pubmed)

Human

Urine

Healthy

Proteomic

Detected proteins

Common genes/proteins: differentially expressed during obstruction (in mice) and detectable in human urine

Pre-selection of a reduced number of biomarkers that we can test later in the urine of patients

Use-case #2:

Selection of clinically relevant targets to be studied in the mouse model of diabetic nephropathy

Dataset #1

Mouse

Kidney tissue

Control vs Diabetic nephropathy

Transcriptomic

Differentially expressed genes

Dataset #2

Human

Urine

Healthy vs Diabetic nephropathy

Proteomic

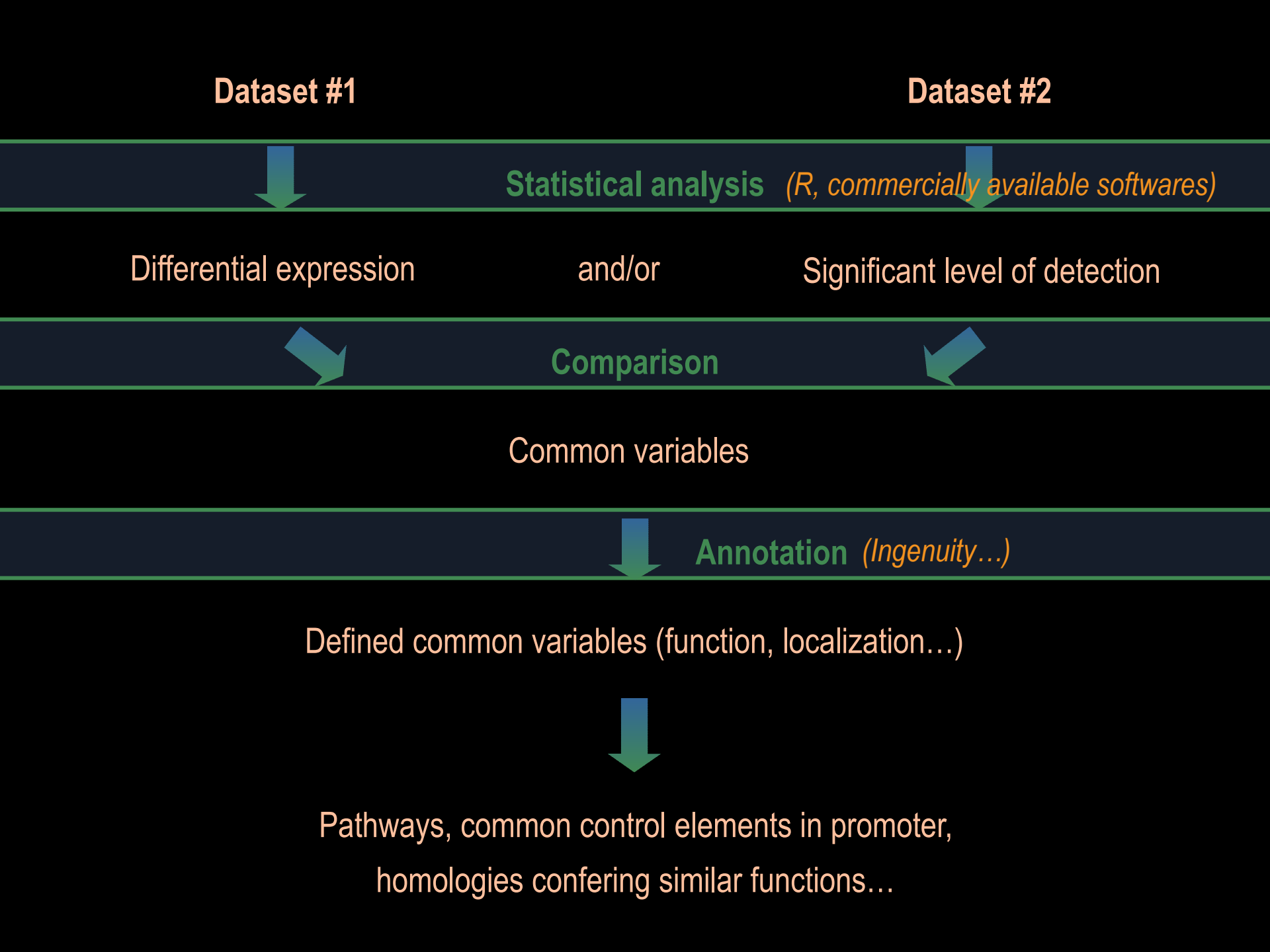
Differentially expressed proteins

Common differentially expressed genes/proteins

Selection of targets clinically relevant to be studied in mice

Use-case:

Common Schema

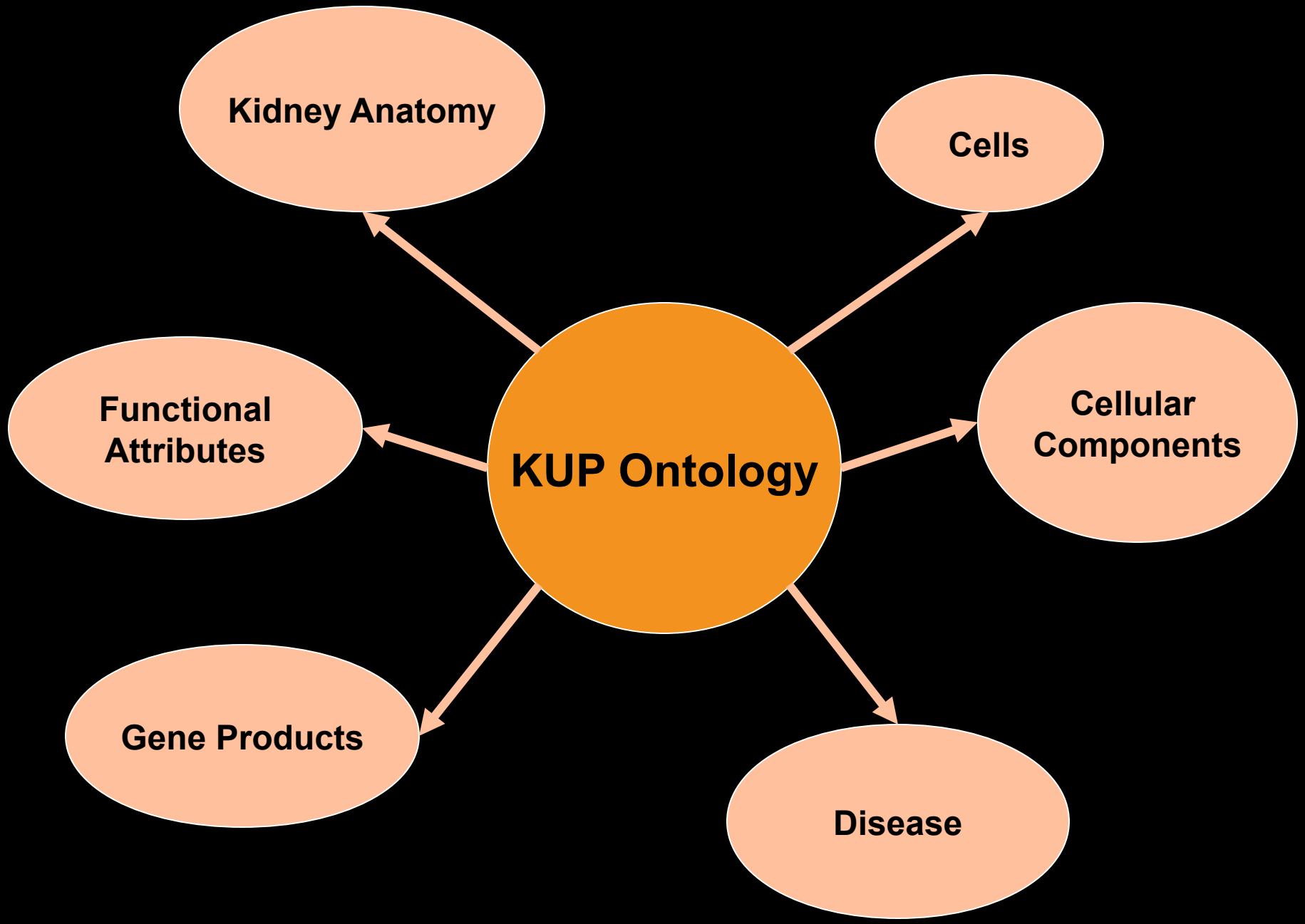

Dataset #1
Dataset #2
Statistical analysis (R, commercially available softwares)
Differential expression
and/or
Significant level of detection
Comparison
Common variables
Annotation (Ingenuity…)
Defined common variables (function, localization…)
Pathways, common control elements in promoter,
homologies confering similar functions…

Questions/specifications

Are your questions similar to ours? Other questions?

Annotation issue:

- pre-existing annotations databases e.g. Gene Ontology
- new annotation specific to KUP domain. What do you expect?


Kidney Anatomy
Cells
Functional Attributes
KUP Ontology
Cellular Components
Gene Products
Disease

Questions/specifications

Are your questions similar to ours? Other questions?

Annotation issue:

- pre-existing annotations databases e.g. Gene Ontology
- new annotation specific to KUP domain. What do you expect?
- are you interested in the localization?