Network-based Lipidomics Analysis using the Lipid Network Explorer

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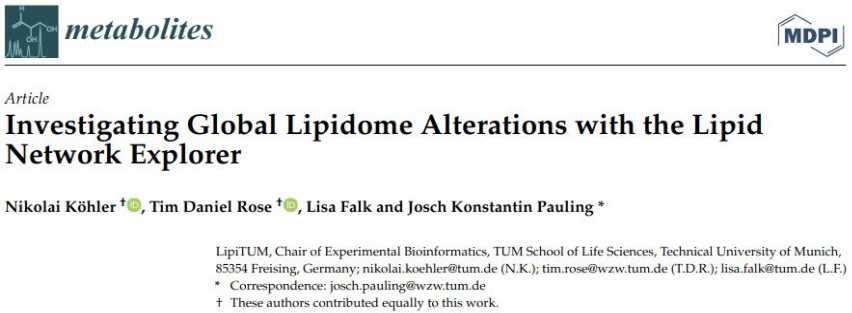
LINEX - Lipid Species Networks

- Tool to generate and analyse lipid metabolic networks on species level
- Why is it interesting?
  - Combined lipid class and fatty acid metabolism
  - Biochemistry-driven lipidomics data interpretation
  - Links to proteomics



metabolites

MDPI

Article

Investigating Global Lipidome Alterations with the Lipid Network Explorer

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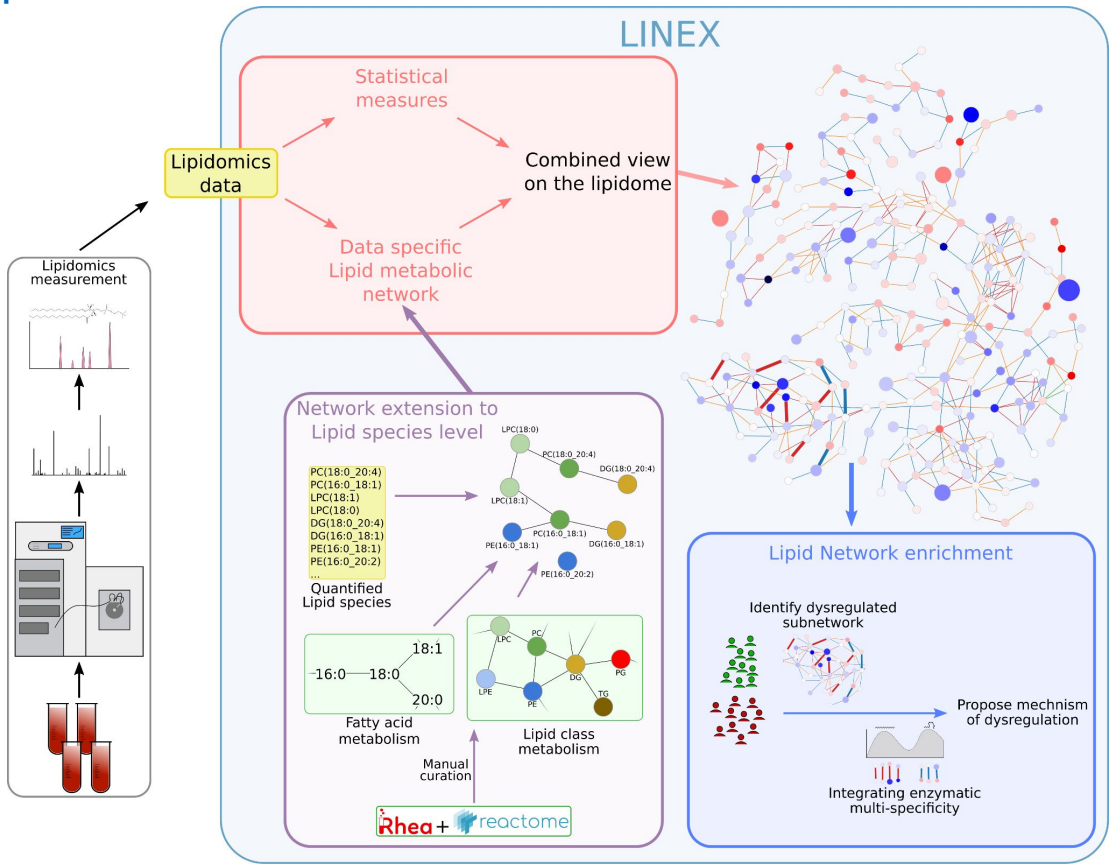

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Network-based Lipid Reaction Enrichment

- Data: Thangapandi et al. 2021, Gut
  - Mboat7 KD mice vs. WT mice
  - Fed a high-fat diet
  - 253 lipids from 15 classes
- Mboat7: Membrane-Bound Acyl-Transferase 7
  - LPI => PI
  - Preference for adding arachidonic acid (20:4)

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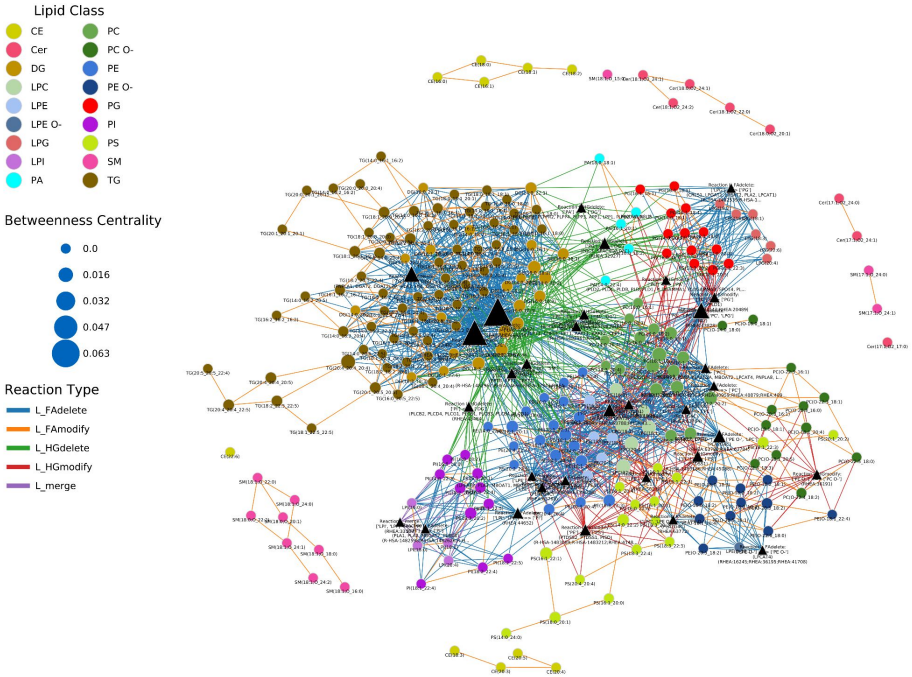
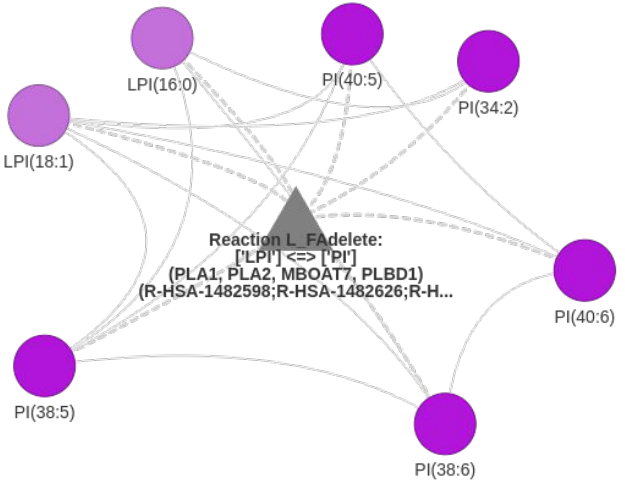
Network-based Lipid Reaction Enrichment





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