

# Mummichog hand-on session

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Topics to cover:

- Installation
- Running mummichog program
- Understanding the output
- Visualization of networks via Cytoscape
- Visualization of metabolite features using heat maps

## Tools and resources:

- Installation - follow instruction on <http://mummichog.org>
  - a. Anaconda (<http://continuum.io/downloads>)
  - b. Mummichog
- Installation of Cytoscape (<http://cytoscape.org>)
- Heat map generation
  - a. Point and click:  
MeV (<http://www.tm4.org/mev.html>),  
Gitoools (<http://www.gitools.org>)
  - b. Coding required:  
R with ggplot2 <http://ggplot2.org/>;  
Python with Bokeh <http://bokeh.pydata.org/>