

LUCA – Last Universal Common Ancestor

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Molecular methods allow the reconstruction of phylogenies with unprecedented precision and using increasingly large data sets. Making statements about organisms very far back in time is of large interest, but how is it done and how reliable is it.

The Big Questions:

When did LUCA live?

How did the tree with LUCA at its root look like?

Can anything be said about its genome?

What is the relationship between the most ancient root of molecular evolutionary methods and fossils?

How much further back in time was the origin of life?

Which properties did LUCA have?

How is our knowledge of LUCA going to increase as function of data.

Is only genomes useful?

Possible Contents of a presentation:

History of research concerning LUCA

Methods to reconstruct roots and their properties

Key Hypotheses about LUCA

Knowledge of LUCA as function of known genomes

Recommended literature is only meant to get you started. You might very well be able to find papers more suited for your purpose.

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