# Article information:

The Rnf Complex of Clostridium ljungdahlii Is a Proton-Translocating Ferredoxin:NAD+ Oxidoreductase Essential for Autotrophic Growth | mBio
<https://journals.asm.org/doi/full/10.1128/mBio.00406-12>

# Article summary:

1. The Rnf complex of Clostridium ljungdahlii is a proton-translocating ferredoxin:NAD+ oxidoreductase essential for autotrophic growth.

2. Disruption of the C. ljungdahlii rnf operon inhibited autotrophic growth, resulting in a collapse of ATP synthesis, proton gradient, membrane potential, and proton motive force.

3. The Rnf complex is also implicated in nitrogen fixation and is responsible for translocating protons across the membrane to elicit energy conservation during acetogenesis.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article provides evidence that the Rnf complex of Clostridium ljungdahlii is a proton-translocating ferredoxin:NAD+ oxidoreductase essential for autotrophic growth by demonstrating that disruption of the C. ljungdahlii rnf operon inhibited autotrophic growth, resulting in a collapse of ATP synthesis, proton gradient, membrane potential, and proton motive force. The article also suggests that the Rnf complex is implicated in nitrogen fixation and is responsible for translocating protons across the membrane to elicit energy conservation during acetogenesis.

The article appears to be reliable as it provides evidence to support its claims and does not appear to be biased or one-sided in its reporting. It does not make unsupported claims or omit any points of consideration or evidence for its claims made. It does not appear to contain any promotional content or partiality towards any particular point of view or opinion. Possible risks are noted throughout the article and both sides are presented equally with no unexplored counterarguments present.

# Topics for further research:

* Proton-translocating ferredoxin:NAD+ oxidoreductase
* Autotrophic growth inhibition
* ATP synthesis collapse
* Proton gradient disruption
* Membrane potential disruption
* Nitrogen fixation implications

# Report location:

<https://www.fullpicture.app/item/848169b605abea63b55d07f05b37ddda>