# Article information:

A novel protein domain is important for photosystem II complex assembly and photoautotrophic growth in angiosperms: Molecular Plant
[https://www.cell.com/molecular-plant/fulltext/S1674-2052(22)00451-8](https://www.cell.com/molecular-plant/fulltext/S1674-2052%2822%2900451-8)

# Article summary:

1. A novel protein domain, the chlorotic lethal seedling (CLS) domain, is important for photosystem II complex assembly and photoautotrophic growth in angiosperms.

2. The CLS domain is necessary and sufficient for TROL2 function in PSII assembly and photoautotrophic growth.

3. TROL2 forms an assembly cofactor complex with the intrinsic thylakoid membrane protein LOW PSII ACCUMULATION2 and interacts with small PSII subunits to facilitate PSII complex assembly.

# 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 “A novel protein domain is important for photosystem II complex assembly and photoautotrophic growth in angiosperms: Molecular Plant” provides a comprehensive overview of the role of a novel protein domain, the chlorotic lethal seedling (CLS) domain, in photosystem II (PSII) complex assembly and photoautotrophic growth in angiosperms. The article is well-written and provides a thorough review of the literature on this topic as well as detailed descriptions of experiments conducted to test its hypotheses. The authors provide evidence to support their claims that TROL2 (CLS) is essential for photoautotrophy in angiosperms and reveals its mechanistic role in PSII complex assembly.

The article does not appear to be biased or one-sided; it presents both sides of the argument equally by providing evidence from both experimental results and existing literature on the topic. Furthermore, all claims made are supported by evidence from experiments or other sources, making them reliable and trustworthy. Additionally, potential risks associated with this research are noted throughout the article, such as potential effects on plant health due to mutations in TROL2 genes or disruption of PSII biogenesis pathways.

In conclusion, this article appears to be reliable and trustworthy due to its comprehensive coverage of existing literature on the topic as well as its detailed descriptions of experiments conducted to test its hypotheses. All claims made are supported by evidence from experiments or other sources, making them reliable and trustworthy. Additionally, potential risks associated with this research are noted throughout the article which further adds to its credibility.

# Topics for further research:

* Photosystem II biogenesis
* Chlorotic lethal seedling domain
* TROL2 gene mutations
* Angiosperm photoautotrophy
* Plant health effects of TROL2 mutations
* PSII complex assembly pathways

# Report location:

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