# Article information:

Rhodobacter capsulatus forms a compact crescent-shaped LH1–RC photocomplex | Nature Communications
[https://www.nature.com/articles/s41467-023-36460-w?utm\_source=xmol=affiliate=meta=DDCN\_1\_GL01\_metadata](https://www.nature.com/articles/s41467-023-36460-w?utm_source=xmol&utm_medium=affiliate&utm_content=meta&utm_campaign=DDCN_1_GL01_metadata)

# Article summary:

1. Rhodobacter capsulatus forms a compact crescent-shaped LH1–RC photocomplex, which is the smallest LH1 complex reported by far.

2. The structure of the native Rba. capsulatus LH1–RC complex was determined at 2.62 Å resolution and contains only 10 αβ-subunits, compared to 14 in the Rba. sphaeroides wild-type monomeric complex.

3. An extra BChl a molecule was identified from the cryo-EM density map in the inner space between LH1 and RC on the cytoplasmic side, which interacts with nearby Asn52 of the RC H-subunit and Arg15 of an LH1 α-polypeptide through its C131 and C133 carbonyl groups, respectively.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article provides an overview of Rhodobacter capsulatus forming a compact crescent-shaped LH1–RC photocomplex, as well as details on its structure and cofactors. The authors provide evidence for their claims through detailed descriptions of their experiments and results, as well as comparison to other related species such as Rba. sphaeroides and Rba veldkampii.

The article appears to be reliable overall; however, there are some potential biases that should be noted. For example, while the authors do compare their findings to those of other related species, they do not explore any counterarguments or alternative explanations for their results that could arise from differences between these species or other factors that may have influenced their findings. Additionally, while they do mention possible risks associated with their experiments (e.g., solubilization), they do not provide any further detail on how these risks were addressed or minimized during their research process.

In terms of trustworthiness, it is important to note that this article was published in Nature Communications, which is a reputable journal with high standards for peer review and publication quality assurance processes; thus it can be assumed that this article has been thoroughly reviewed by experts in the field prior to publication and is likely trustworthy overall. However, it should also be noted that this article does not present both sides equally; rather it focuses primarily on supporting its own claims without exploring any counterarguments or alternative explanations for its results that could arise from differences between species or other factors that may have influenced its findings. Additionally, there is no mention of potential conflicts

# Topics for further research:

* Rhodobacter capsulatus photocomplex structure
* Rhodobacter capsulatus photocomplex cofactors
* Rba. sphaeroides photocomplex structure
* Rba veldkampii photocomplex structure
* Risk mitigation strategies for Rhodobacter capsulatus experiments
* Conflict of interest in Rhodobacter capsulatus research

# Report location:

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