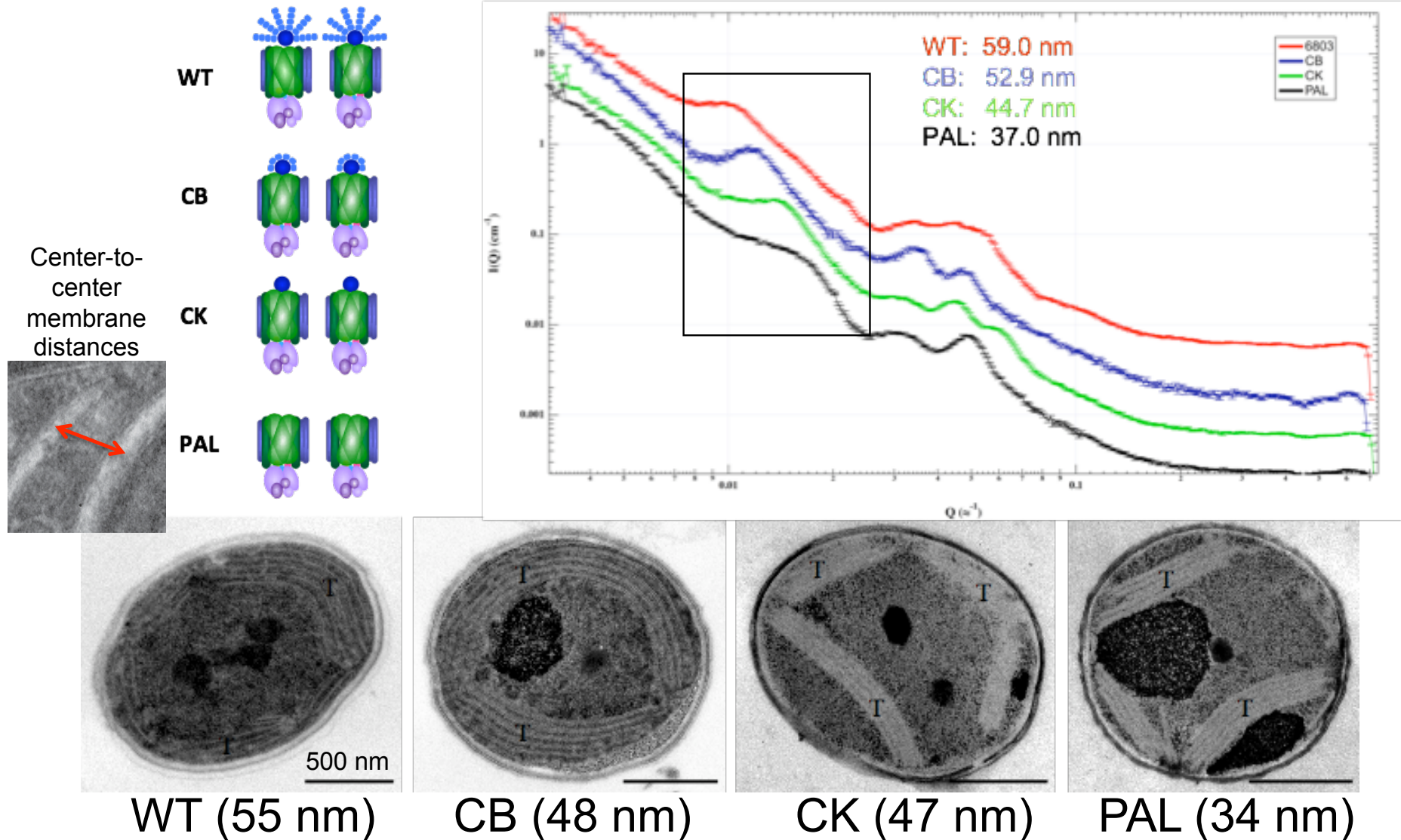


Antenna truncation results in altered thylakoid membrane morphology as measured by SANS and TEM

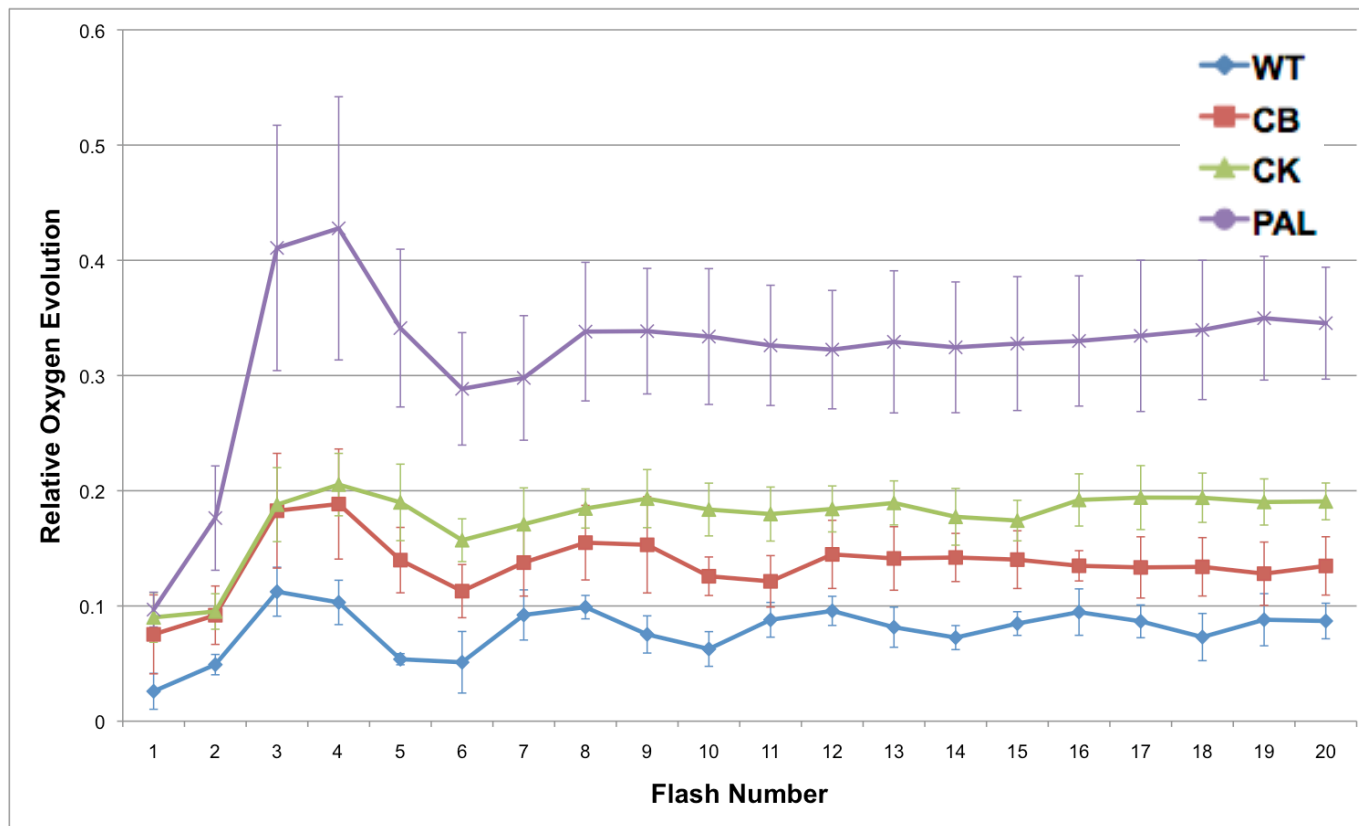


Liberton M, Page LE, O'Dell WB, O'Neill H, Urban VS, Pakrasi HB Organization and Flexibility of Cyanobacterial Thylakoid Membranes Examined by Neutron Scattering. Submitted.

Himadri Pakrasi 9-25-2012

Flash-induced oxygen evolution

The number of PSII centers per cell is increased in antenna truncation mutants (Collins *et al.*, 2012)



Antenna mutants show an increase in flash-induced oxygen evolution as well as damping as antenna size decreases.

Ongoing studies and future directions

Using synthetic biology to probe the physiological consequences of modified antenna in cyanobacterial cells

- Examination of IsiA, a chlorophyll-binding protein that can act as an antenna for photosystem I under iron starvation and other stress conditions
- Introduction of membrane-intrinsic antenna proteins for PSII in *Synechocystis* 6803 (Pcb proteins)
- Production of Chlorophyll *b* in *Synechocystis* 6803

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