

Abstract Submitted
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Flagellar force production during regeneration in *Chlamydomonas reinhardtii*¹ JOHN N. YUKICH, CATHERINE CLODFELTER, KAREN K. BERND, Davidson College — Several respiratory, digestive, and reproductive disorders originate with motional dysfunction of cilia and flagella. The usefulness of cilia and flagella is understood, but the internal mechanism for creating their breast stroke-like motion is not. This study reports on standardization of calibration, trapping and cell movement recording methods. Our techniques permit us to measure the flagellar swimming force of *Chlamydomonas* during flagella regeneration. We find that as flagella length increases, the flagellar force is maximized after 50% of full length is achieved *except* for a significant dip at 75% of full length. These results raise many questions regarding the flagella infrastructure.

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