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Kathleen A Hoffman* (khoffman@umbc.edu), 1000 Hilltop Circle, Baltimore, MD 21250, and
Nicole Massarelli, Christina Hamlet, Eric Tytell and Tim Kiemel. *Understanding Lamprey Locomotion.*

Lampreys are model organisms for vertebrate locomotion because they have the same types of neurons as higher-order vertebrates, but with fewer numbers. Lamprey locomotion requires combining the electrical activity in the spinal cord, that innervates muscle, which in turn contracts the body, propelling the animal through the water. The resulting motion exerts a force on the fluid, and the fluid exerts forces on the body. I will present results of a longterm interdisciplinary collaboration that combines mathematical models and computational fluid dynamics with biological and fluid experiments to understand locomotion through the water. (Received January 19, 2015)