

Cardiac Length Tension Curve of the American lobster, *Homerus americanus*

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Hearts respond to increases and decreases in activity by greater or lesser filling with blood, which consequently increases and decreases stretch on the wall of the heart. As the heart wall stretches, the resistance to being stretched increases and the amplitude of the heartbeat increases up to a maximum (Fig. 1: passive and active tension, respectively). That maximum muscle length generally represents the longest functional heart length because a