



Supplementary Figure S1- Dependence on SA:V of the Na⁺-K⁺-ATPase fractional cost and Na⁺-K⁺-ATPase maximal activity. (a) Na⁺-K⁺-ATPase cost is presented as a fraction of total resting ATP cost; see Table 2. (b) Na⁺-K⁺-ATPase maximal activity. For (a) and (b), a SA:V curve for a cylinder (cost or activity = $\alpha 2/r$) was iteratively fit to the mean values for the small and large size class, where α is an adjustable coefficient and r is the fiber radius. For each species the + = small and = large animals (data in Table 2). The symbol color indicates species group (pink = marine shrimp, green = marine lobster, gray = freshwater crayfish, black = marine crab, blue = marine teleost fish, cyan = freshwater teleost fish, and orange = marine elasmobranch). The standard error for mean fiber diameter and Na⁺-K⁺-ATPase activity are not show in the plots but are in Tables 1 and 2. There is no standard error associated with the Na⁺-K⁺-ATPase fractional cost, since it is derived from the difference in mean values, but the standard error of the rate measurements that were used for this calculation are presented in Table 2.