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## **Flow velocity and morphology of a submerged patch of the aquatic species *Veronica anagallis-aquatica* L.**

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### **ABSTRACT**

The interaction between macrophytes and hydrodynamic conditions is an important feature in many aquatic ecosystems. Submerged macrophytes can form monospecific patches that interact with the flow and alter current velocity; within the same vegetation patch, plants are exposed to different levels of hydrodynamic stress. Due to the high morphological variability of aquatic plants, we expect different architectural and morphological traits to emerge for individuals located at different positions within the same patch. In this study, we have measured the flow velocity around a patch of *Veronica anagallis-aquatica* in submerged conditions and measured the morphological traits of individuals along a gradient of exposure to flow velocity within the patch. Results show that the more exposed individuals present smaller sizes than the sheltered ones, lower relative allocation to stems, higher allocation to roots and reduced water content in roots and stems. The knowledge obtained helps to clarify the role of morphological adaptations to flow stress in the context of plant-flow interactions.