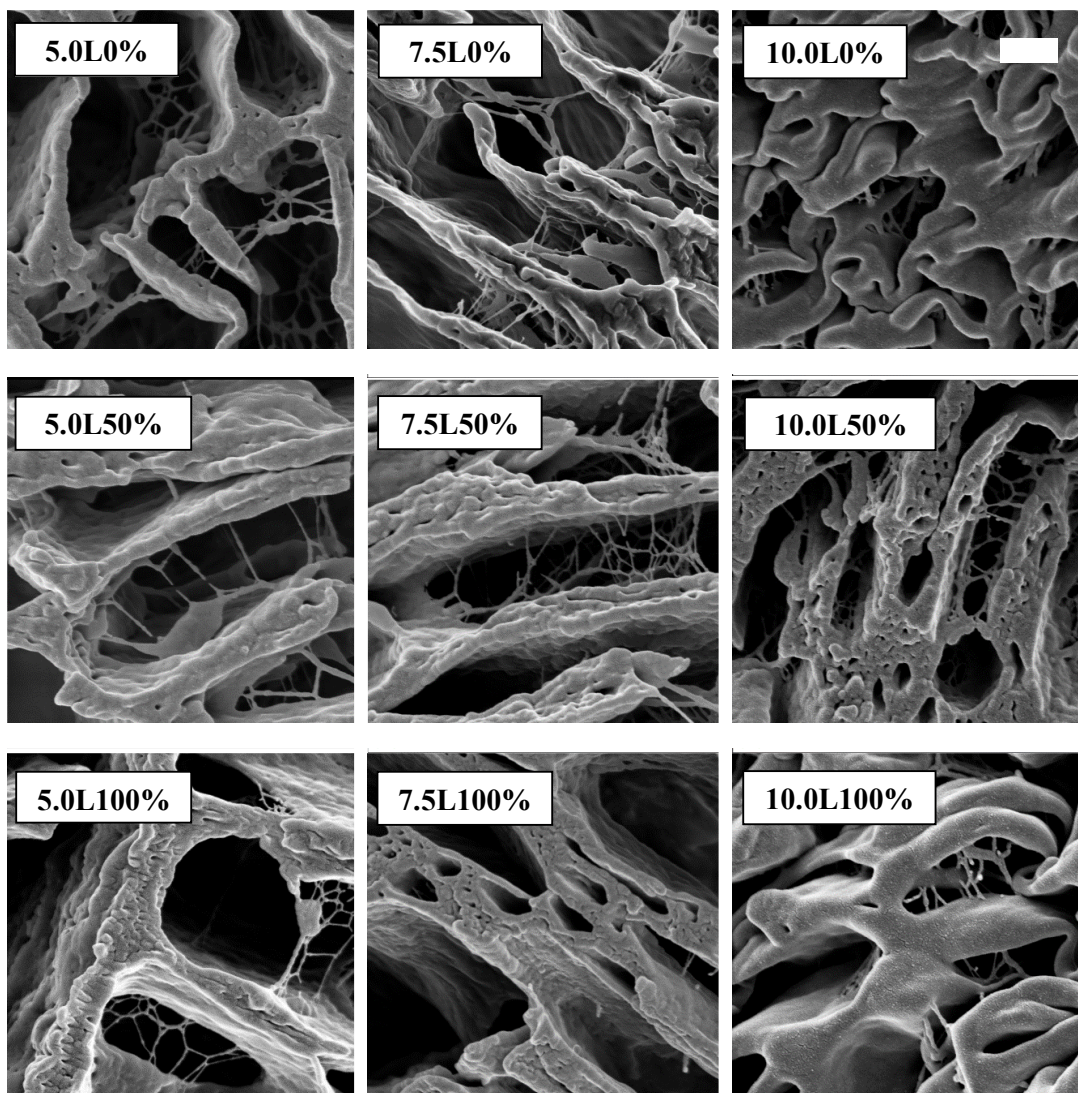


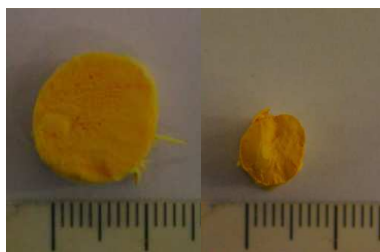
**Highly structured polyvinyl alcohol (PVA) porous carriers. Tuning inherent stability and release kinetics in water.**

**Juan Manuel Sonogo<sup>2</sup>, Johanna M. Flórez-Castillo<sup>1</sup>, Matías Jobbágy<sup>2\*</sup>**

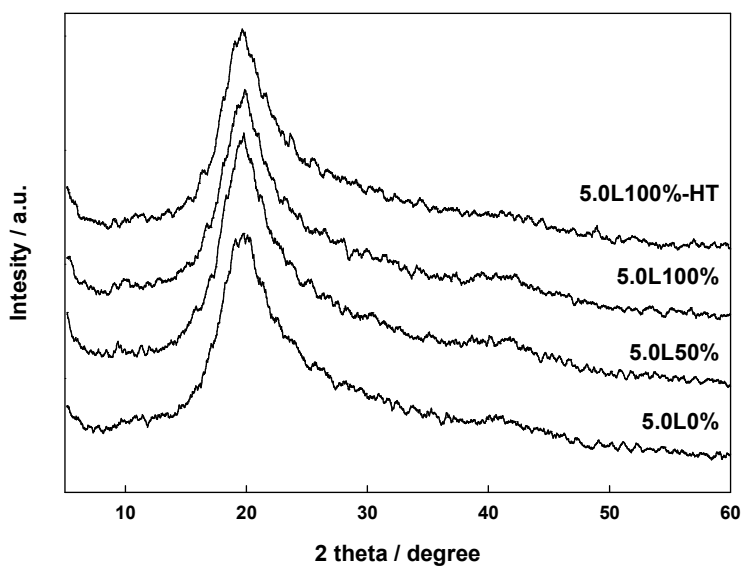
**Supporting Information**



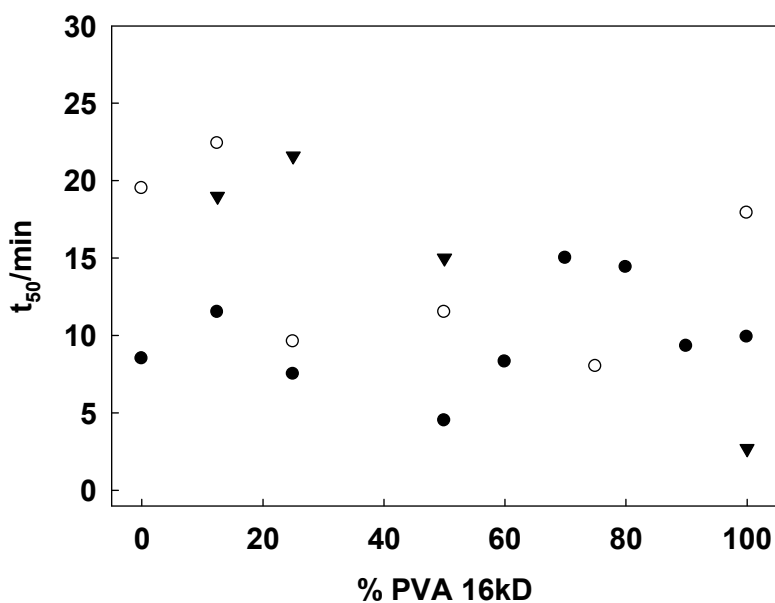
**Figure S1.** FESEM images frozen at  $5.5 \text{ mm min}^{-1}$ . Scale bar placed at the upper right corner represents 500 nm for all images.



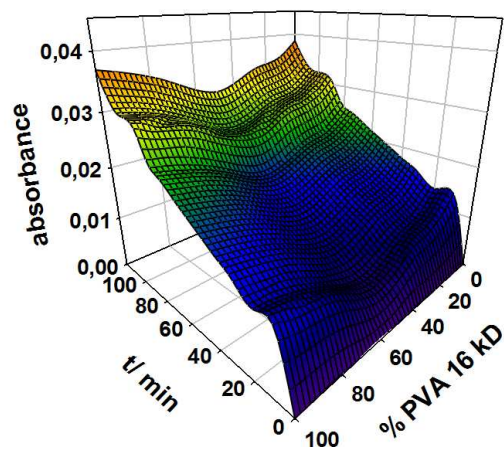
**Figure S2.** Freeze dried samples 5.0L0% (left) and 5.0L100% (right) frozen inside a 15 mm diameter mould at  $5.5 \text{ mm min}^{-1}$ . Scale between minor lines corresponds to 1 mm.



**Figure S3.** PXR D patterns of samples frozen in liquid N<sub>2</sub> at 5 mm min<sup>-1</sup>. A control sample slowly frozen overnight at 263 K, labeled as 5.0L100%-HT, is also presented.



**Figure S4.** Dependence of  $t_{50}$  with PVA 16kD mass fraction for PVA carriers with total content of 7.5 % (▼), 5.0 % (○) and 2.5 % (●). Carriers were prepared by straight immersion of parent PVA solution drops into liquid N<sub>2</sub>.



**Figure S5.** Attenuance recorded at 700 nm as a function of time for carriers with total PVA content of 5% m/v and increasing percentage of PVA 16 kD (samples 5.0L0% to 5.0L100%).