

Novel biocompatible electrospun gelatin fibers mat with antibiotic drug delivery properties

Sakthivel Nagarajan^{a,b}, Laurence Soussan^a, Mikhael Bechelany^a, Catherine Teyssier^c, Vincent Cavallès^c, Celine Pochat-Bohatier^a, Philippe Miele^a, Narayana Kalkura^b, Jean-Marc Janot^a, and Sebastien Balme^{a*}

Viscosity of the polymer solutions analyzed at various temperatures

The viscosity of the polymer solution is a very important parameter which affects fiber formation. The viscosity of the polymer solutions analyzed at various temperatures is shown in Figure S11. The viscosity achieved at 35°C is highly suitable to obtain fibers of uniform size without beads during electrospinning.

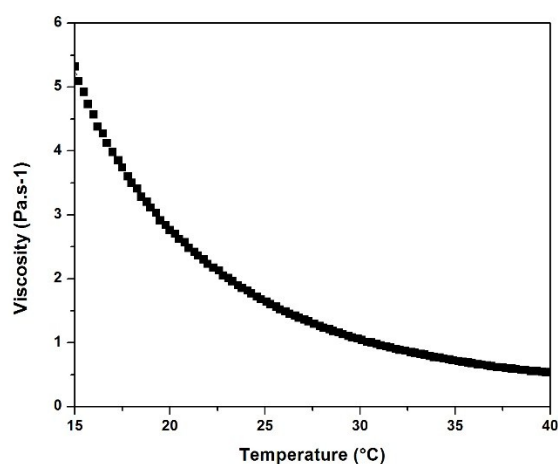


Figure S11. Viscosity of the polymer solutions at various temperatures

Gelatin release

The Gelatin release profile observed at 275 nm is shown at Figure S12. The drug chlorohexidine produces a maximum of absorption at 265 nm, hence drug release interferes with the Gelatin release. To predict the release mechanism of the ESM, a model using rhodamine has been employed.

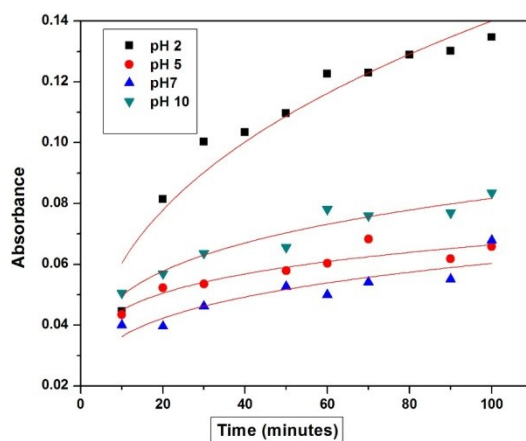


Figure S12. Gelatin release profile at different pHs

Rhodamine release 72 hours

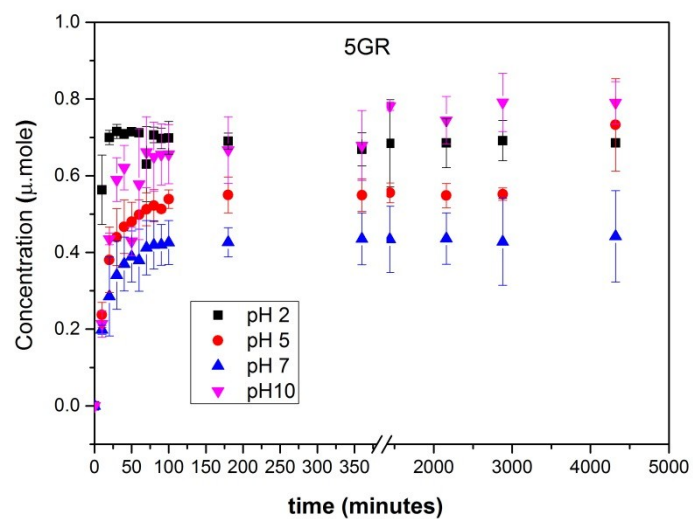


Figure S13. Rhodamine release profile