

Nanostructured Electrospun Polycaprolactone—Propolis Mats Composed of Different Morphologies for Potential Use in Wound Healing

Agnes Chacor de Figueiredo ¹, Javier Mauricio Anaya Mancipe ^{1,2}, Aline Oliveira da Silva de Barros ^{3,4}, Ralph Santos-Oliveira ^{3,4}, Marcos Lopes Dias ² and Rossana Mara da Silva Moreira Thiré ^{1,*}

¹ COPPE/Program of Metallurgical and Materials Engineering—PEMM, Universidade Federal do Rio de Janeiro, Rio de Janeiro 21941-599, RJ, Brazil

² Institute of Macromolecules Professora Eloisa Mano—IMA, Universidade Federal do Rio de Janeiro, Rio de Janeiro 21941-598, RJ, Brazil

³ Brazilian Nuclear Energy Commission, Nuclear Engineering Institute—IEN, Rio de Janeiro 21941-906, RJ, Brazil

⁴ Laboratory of Radiopharmacy and Nanoradiopharmaceuticals, Universidade Estadual da Zona Oeste, Rio de Janeiro 23070-200, RJ, Brazil

* Correspondence: rossana@metalmat.ufrj.br; Tel.: +55-21-3938-8500

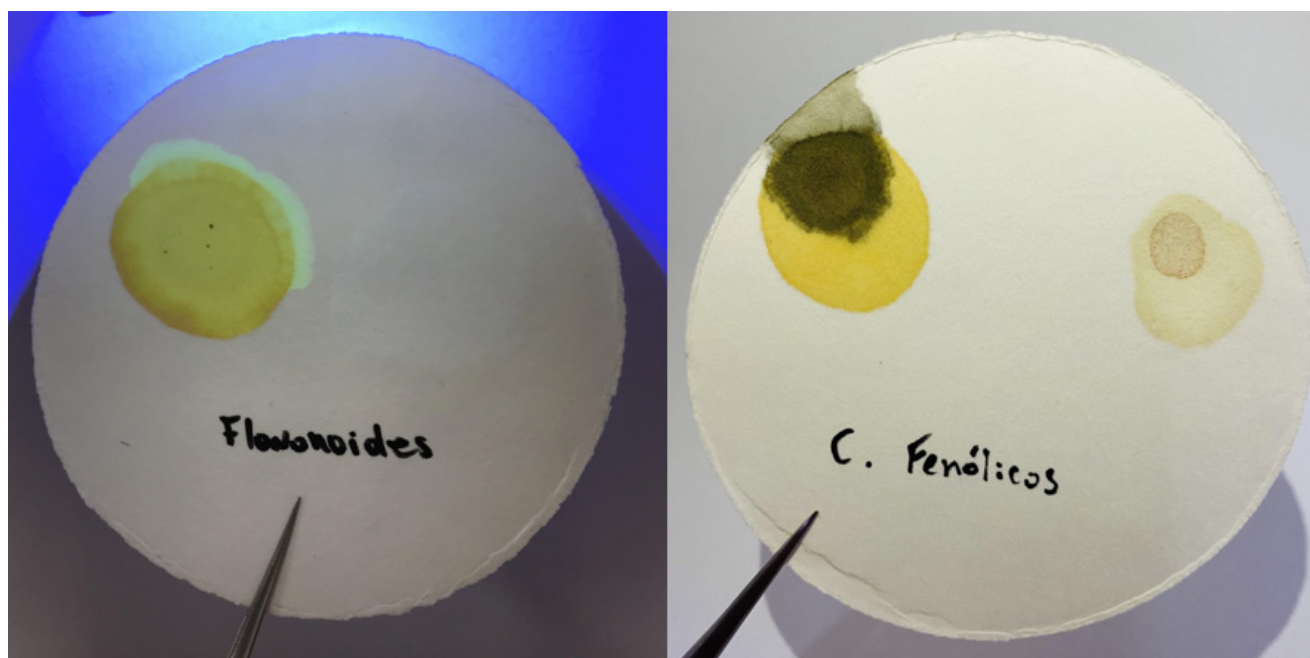


Figure S1. Phytochemical qualitative analyses for flavonoids and phenolic compounds in propolis alcoholic extract.

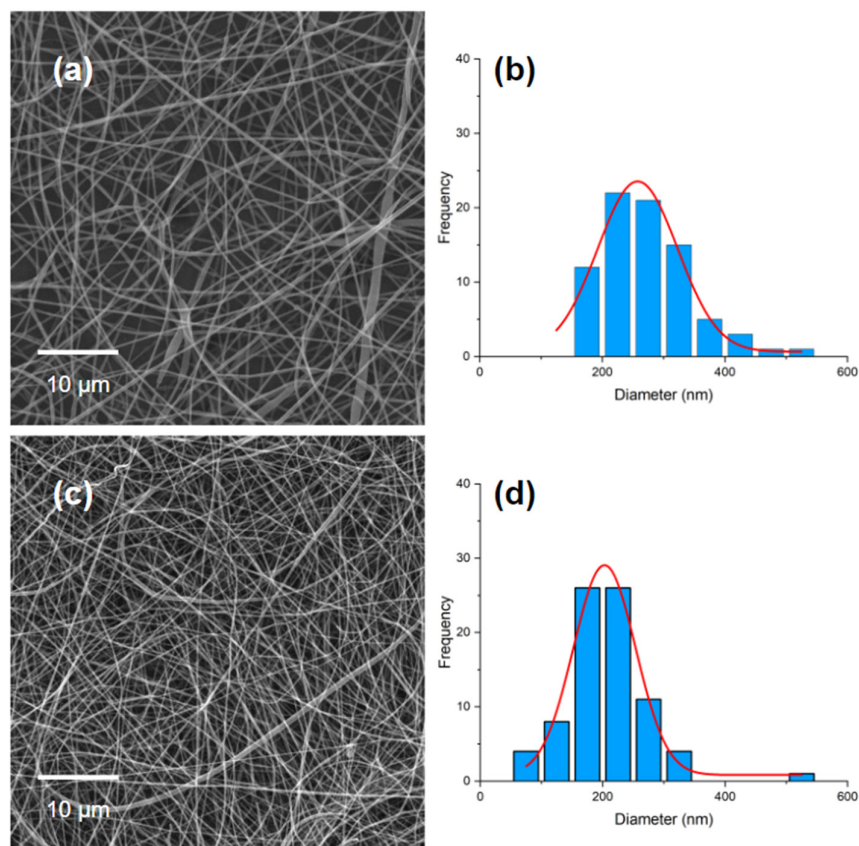


Figure S2. Fibre morphology obtained from 0-day storage solution electrospinning. Respectively: (A,C) Higher magnification scanning electron microscopy image for PCL and PCL + Prop electrospun mats; (B,D) Histograms of fibre diameters for PCL and PCL + Prop electrospun mats.

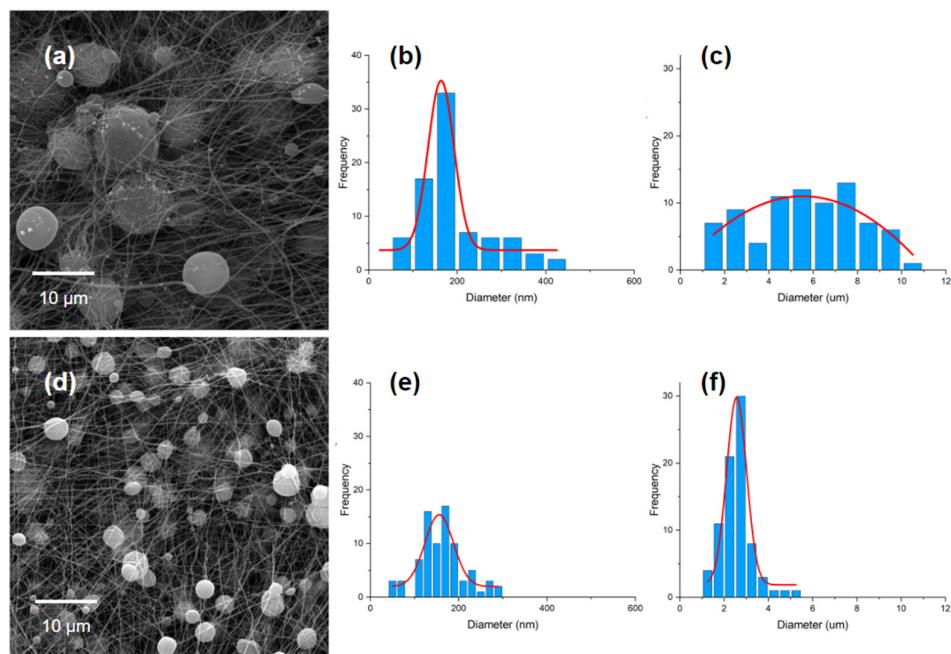


Figure S3. Beaded fibre morphology obtained from 7-day storage solution electrospinning. Respectively: (A,D) Higher magnification scanning electron microscopy image for PCL and PCL + Prop electrospun mats; (B,E) Histograms of fibre diameters for PCL and PCL + Prop electrospun mats; (C,F) Histograms of bead diameters for PCL and PCL + Prop electrospun mats.

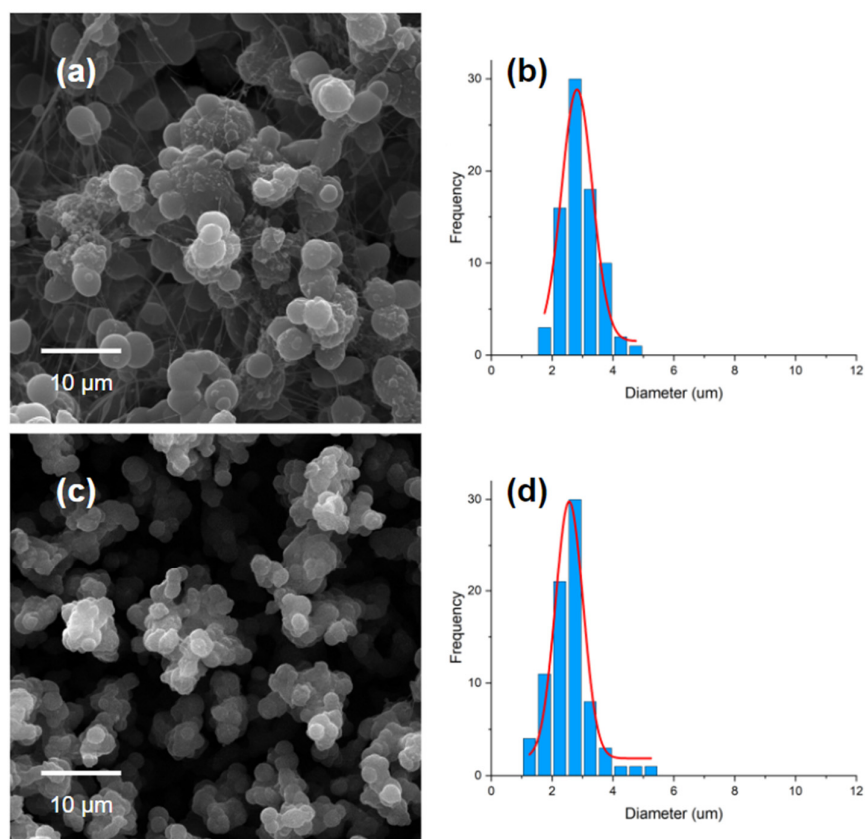


Figure S4. Bead morphology obtained from 14-day storage solution electrospinning. Respectively: (A,C) Higher magnification scanning electron microscopy image for PCL and PCL + Prop electrospun mats; (B,D) Histograms of bead diameters for PCL and PCL + Prop electrospun mats.

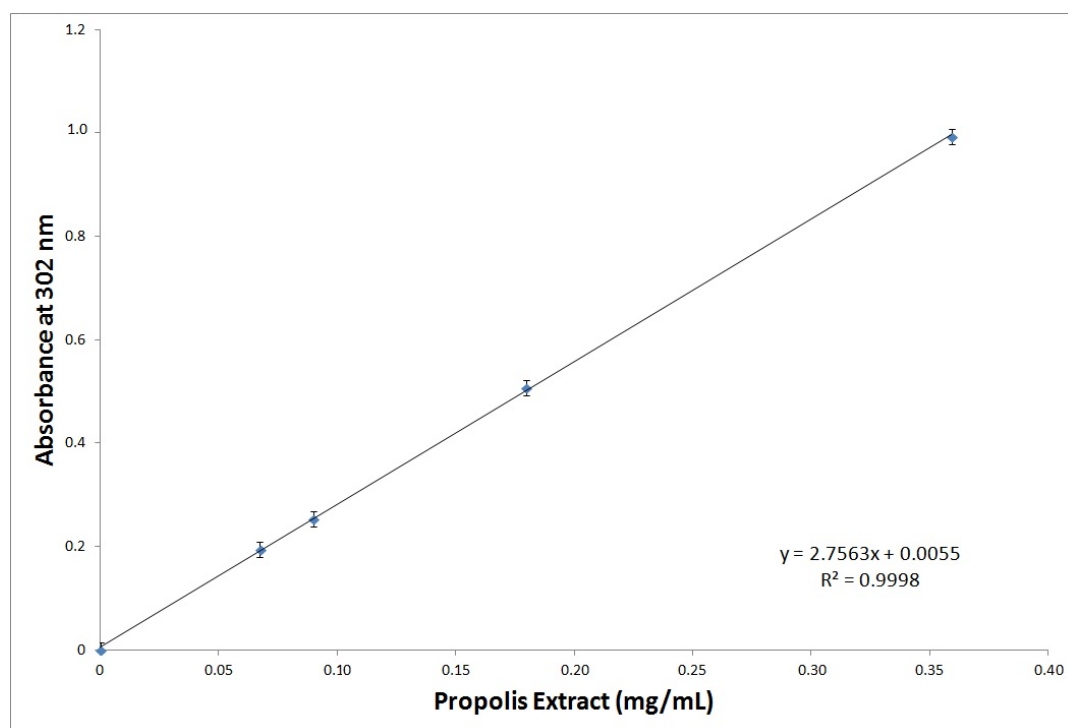


Figure S5. Propolis alcoholic extract calibration curve for propolis release assay. Absorbance at 302 nm.

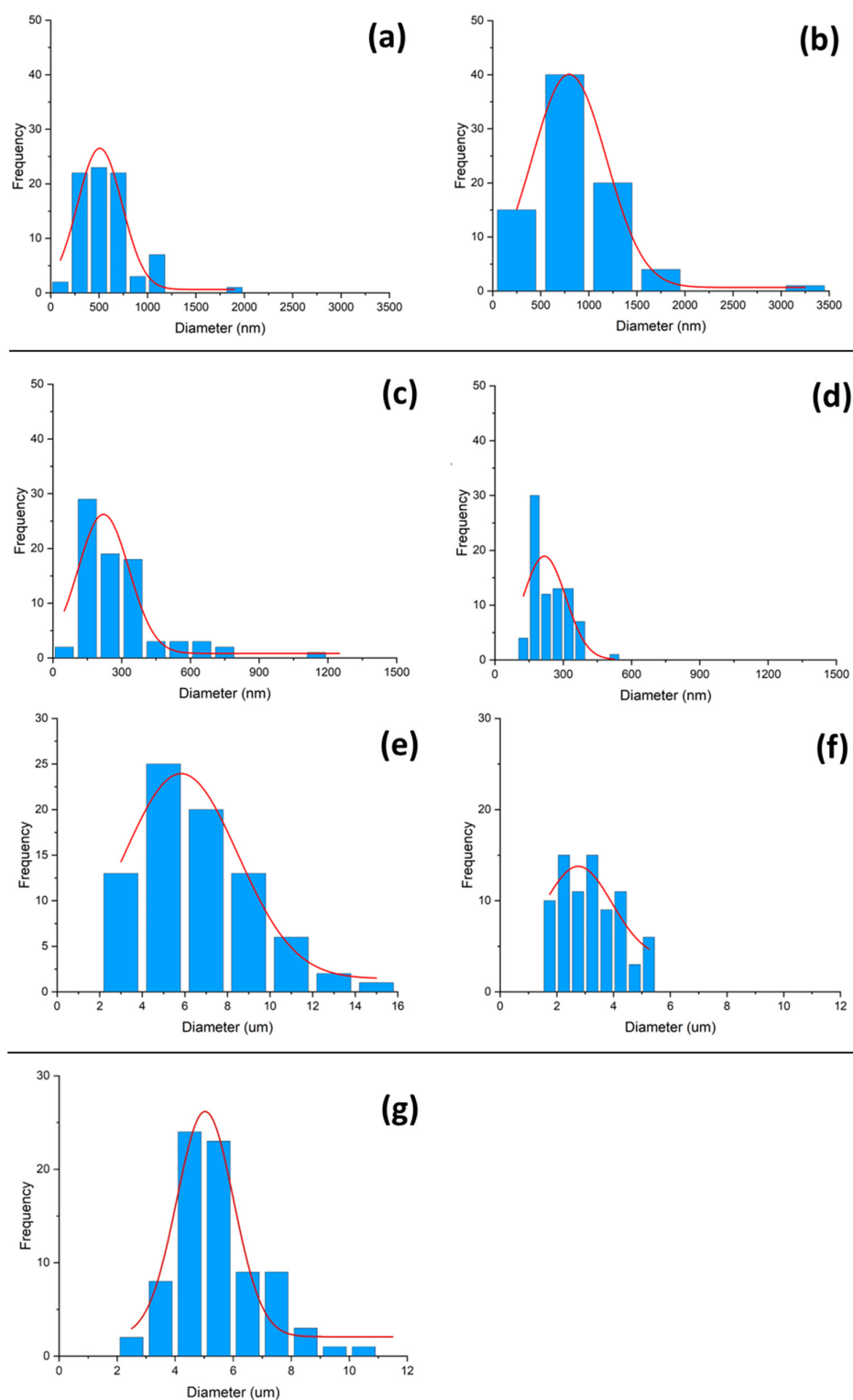


Figure S6. Histogram of morphologies by electrospun mats after swelling assay (Figure 9 in manuscript). Fibre Mats: (A) PCL, (B) PCL + Prop. Beaded Fibre mats: (C) Fibres PCL; (D) Fibres PCL + Prop, (E) Beads PCL, (F) Beads PCL + Prop, and Bead Mats (G) PCL.