

Supporting Information

RETINOIC ACID/CALCITE MICRO-CARRIERS INSERTED IN FIBRIN SCAFFOLDS MODULATE NEURONAL CELL DIFFERENTIATION

Barbalinardo M.^{a ‡}, Di Giosia M.^{c ‡}, Polishchuk I.^b, Magnabosco G.^c, Fermani S.^c, Biscarini F.^d, Calvaresi M.^c, Zerbetto F.^c, Pellegrini G.^{f,e}, Falini G.^{c *}, Pokroy B.^b, Valle F.^{a,g *}

^a Consiglio Nazionale delle Ricerche (CNR), Istituto per lo Studio dei Materiali Nanostrutturati (ISMN), Via P. Gobetti 101, 40129 Bologna, Italy.

^b Department of Material Sciences and Engineering and the Russel Berrie Nanotechnology Institute Technion-Israel Institute of Technology, 32000 Haifa, Israel.

^c Dipartimento di Chimica "Giacomo Ciamician", Alma Mater Studiorum - Università di Bologna, via F. Selmi 2, 40126 Bologna, Italy.

^d Dipartimento di Scienze della vita, Università di Modena e Reggio Emilia, Via Campi 103, 41125 Modena, Italy.

^e Center for Regenerative Medicine "Stefano Ferrari", University of Modena and Reggio Emilia, Modena, Italy

^f Holostem Terapie Avanzate, Modena, Italy

^g Consorzio Interuniversitario per lo Sviluppo dei Sistemi a Grande Interfase (CSGI), ISMN-CNR, 40129 Bologna, Italy;.

[‡] These authors contributed equally to this work

Corresponding Author

* Francesco Valle - E-mail: francesco.valle@cnr.it

* Giuseppe Falini - E-mail: giuseppe.falini@unibo.it

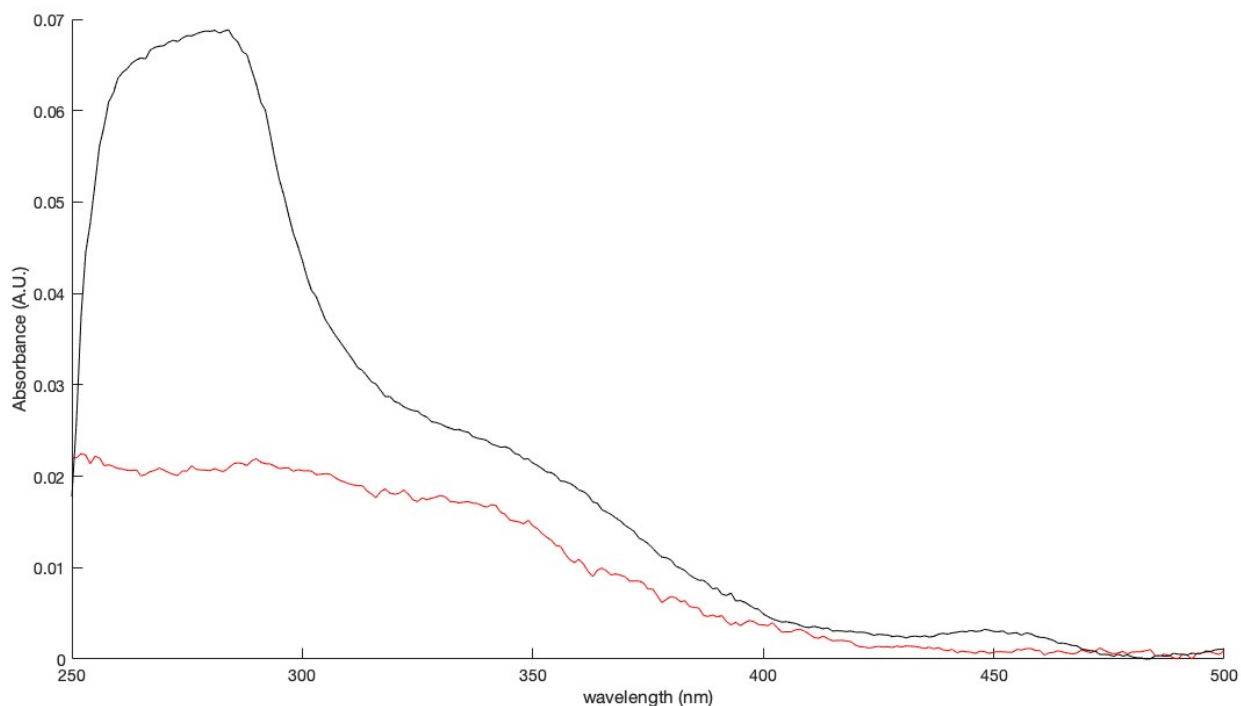


Figure S1. UV-Vis spectra of RA released by calcite/RA hybrid crystals after 10 hours in PBS pH 7.4 (red) and citrate buffer pH 6.2 (black).

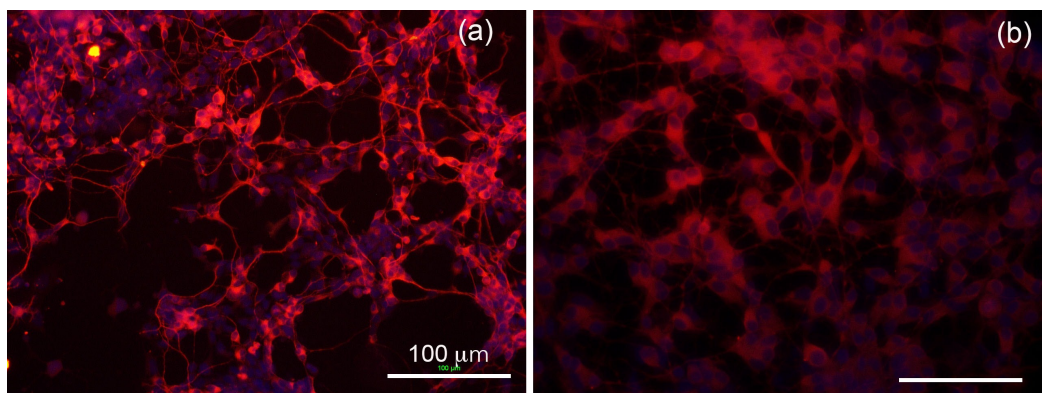


Figure S2. Immunofluorescence images. Cell differentiation within bare fibrin gel at day 8 after the subministration of retinoic acid in solution (a) NE-4C and (b) SH-SY5Y. The red color (III β -tubulin) marker the microtubule and the neuronal filament. The blue color (DAPI) marks the nuclei of the cells.

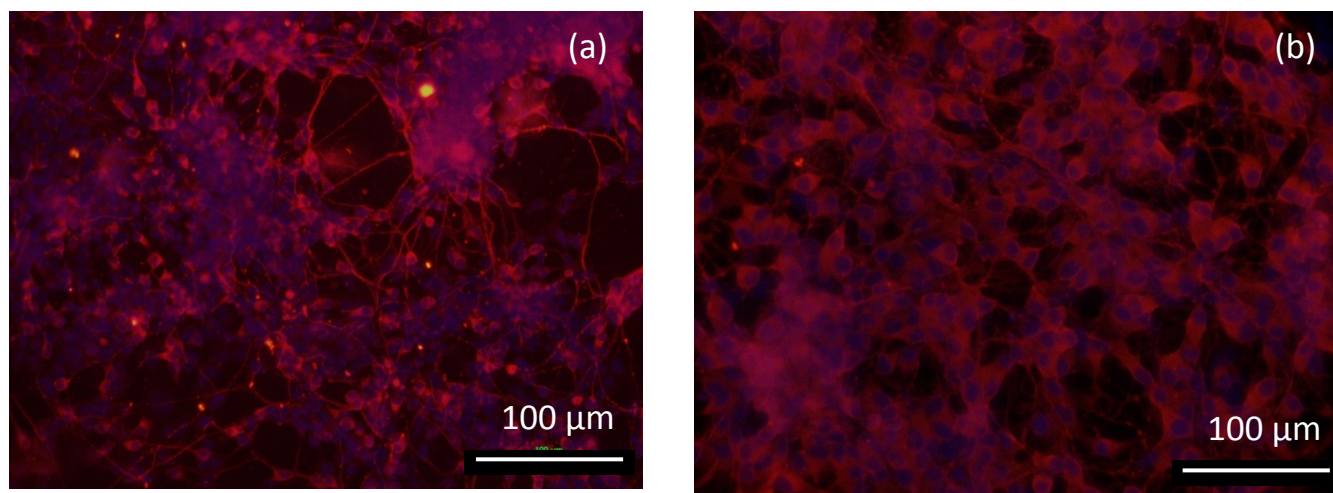


Figure S3. Immunofluorescence images. Cell differentiation on the fibrin+calcite composite at day 8 after the subministration of retinoic acid in solution at 1 μ M concentration (a) NE-4C, (b) SH-SY5Y