# Supplementary information

Formation of calcium phosphate nanostructures under the influence of self-assembling hybrid elastin-like-statherin recombinamers

M. Hamed Misbah,[a] M. Espanol,[b] Luis Quintanilla,[a] M. P. Ginebra[b] and J. Carlos Rodríguez-Cabello*[a]

1. G.I.R. Bioforge, University of Valladolid, CIBER-BBN, Paseo de Belén 19, 47011 Valladolid, Spain.
2. Biomaterials, Biomechanics and Tissue Engineering Group, Department of Materials Science and Metallurgy, Technical University of Catalonia, Diagonal 647, 08028 Barcelona, Spain.

1. SDS-page analysis
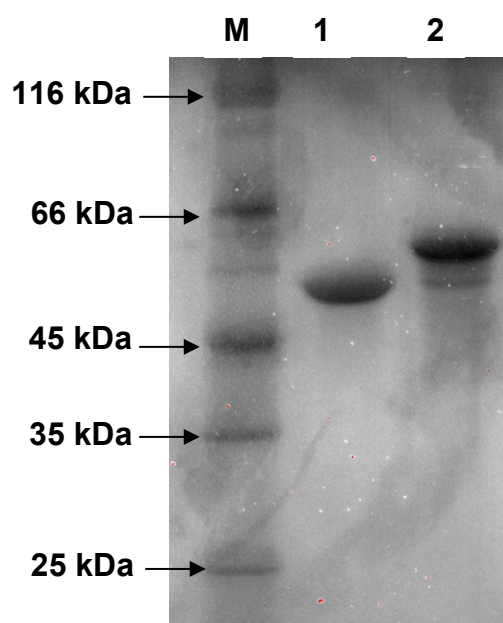
Figure S1. Electrophoresis analysis of the ELRs E50I60 (line 1) and (SNA15)$_3$E50I60 (line 2). The numbers on the left side indicate the molecular weight of the marker (M).

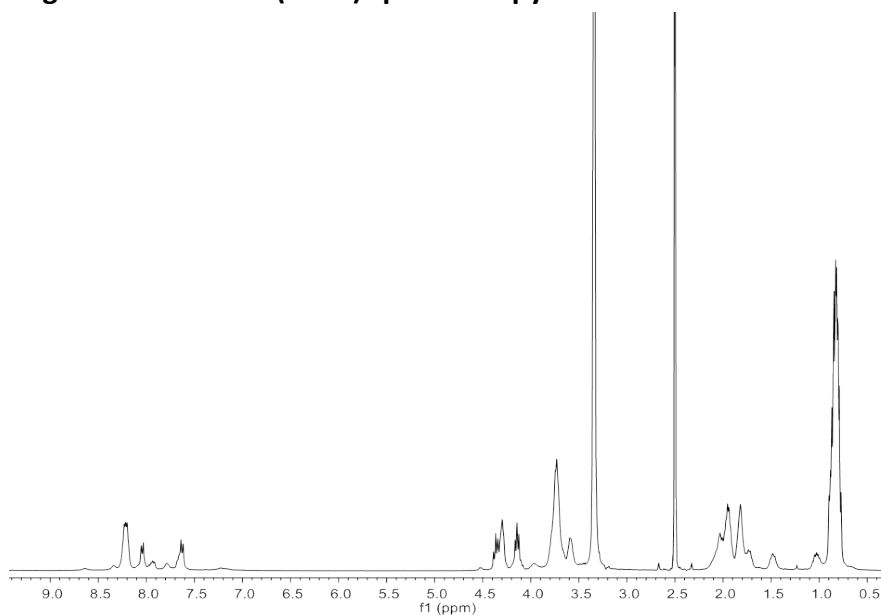## 2. Matrix-assisted laser desorption-ionization time-of-flight (MALDI-TOF) mass spectrometry.
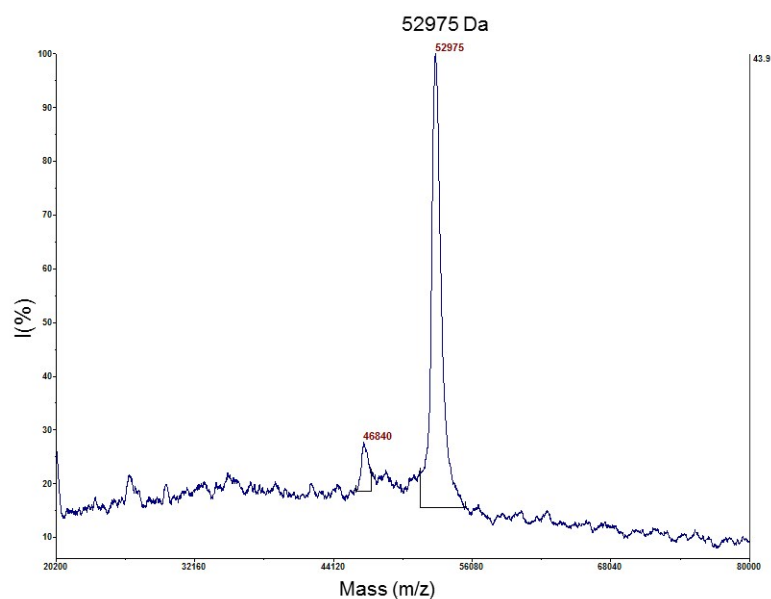
Figure S2. MALDI-TOF of the ELR $(SN_A15)_3E50I60$.

Table S1. Molecular weight (Mw) of the ELR $(SN_A15)_3E50I60$.

	Predicted value (Da)	Experimental value (Da)
Mw	**53018.44**	**52970±12**

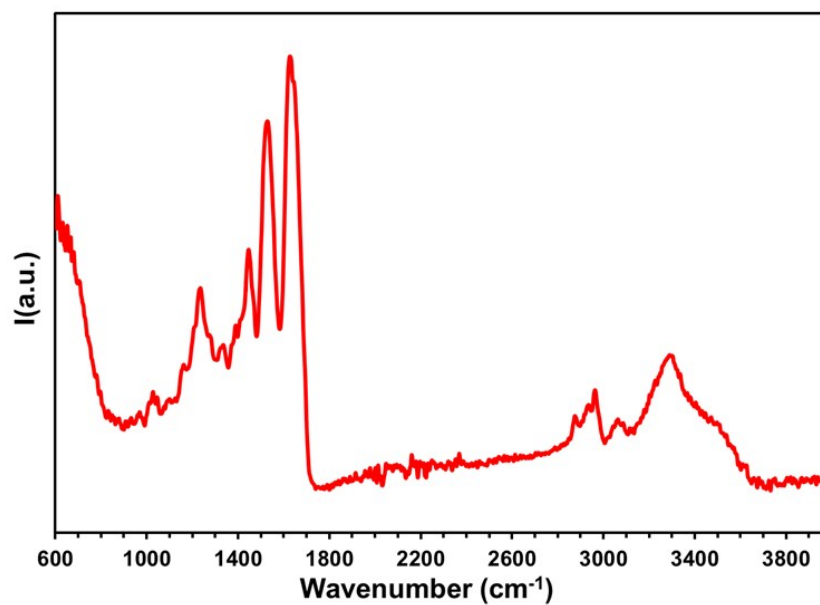## 3. Nuclear magnetic resonance (NMR) spectroscopy.

Figure S3. ^{1}H NMR of the ELR $(SN_A15)_3E50I60$.

4. Amino acid Analysis.
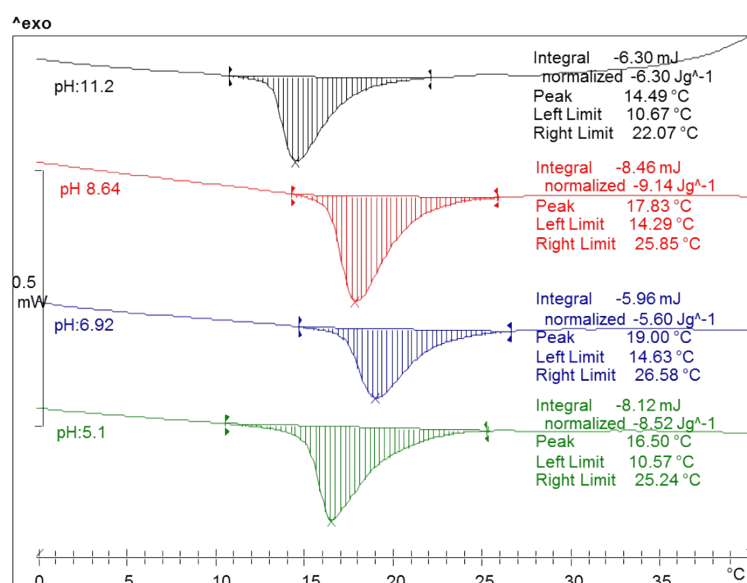
Table S2. $(SN_A15)_3E50I60$ amino acid analysis.

Amino acid	Experimental value (count)	Predicted value (count)
D	8	9
E	17	17
S	1	1
G	241	232
R	9	9
V	147	153
M		1
F	6	6
I	63	63
L	5	5
K	2	3
P	116	111

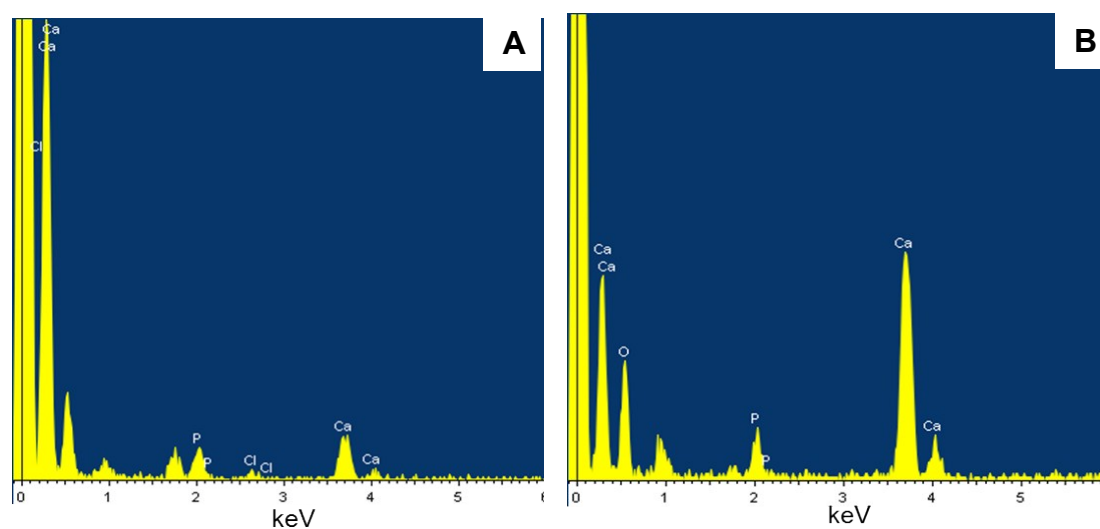## 5. Attenuated total reflection infrared (ATR-IR) spectroscopy.

Figure S4. FTIR spectrum of the ELR $(SN_A15)_3E50I60$.
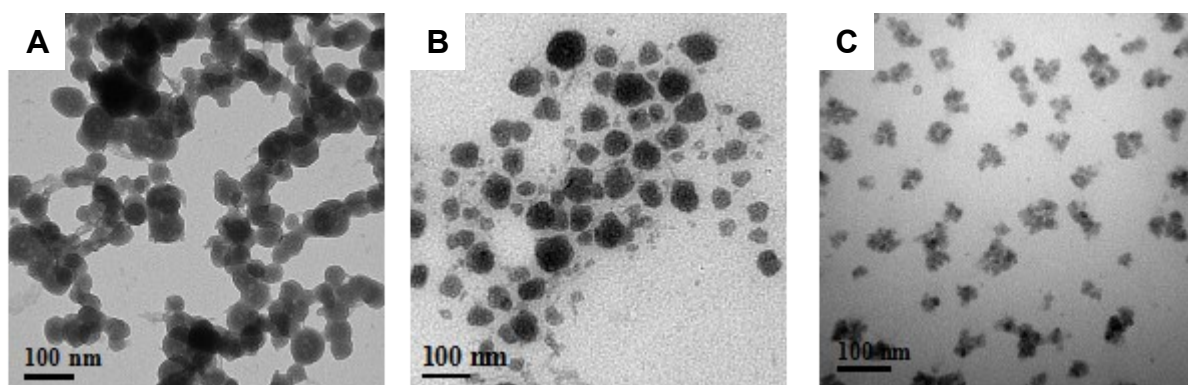
6. Differential scanning calorimeter (DSC).

Figure S5. DSC of the ELR $(SN_A15)_3E50I60$ at 50mg/mL.

7. Energy dispersive X-ray analysis and transmission electron microscopy.

Figure S6. EDX spectra of the core of neuron-like morphology in the presence of ((IK)2-SN_A15-(IK)2)3: (A) at 0.5 mg/mL (B) at 2 mg/mL.

Figure S7. TEM of the primary precipitation: (A) in the absence of ELRs, and in the presence of (B) 2 mg/mL $(SN_A15)_3E50I60$ and (C) 2 mg/mL $((IK)2\text{-}SN_A15(IK)2)3$.