Electronic Supplementary Material (ESI) for Integrative Biology.

Supporting information

Template-Assisted Extrusion of Biopolymer Nanofibers under Physiological Conditions

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Results and discussion

To study the dimensions of extruded nanofibers in more detail we also analyzed the actual distribution of fiber diameters for different biopolymers. All diameters were obtained from SEM images of dried fibers.

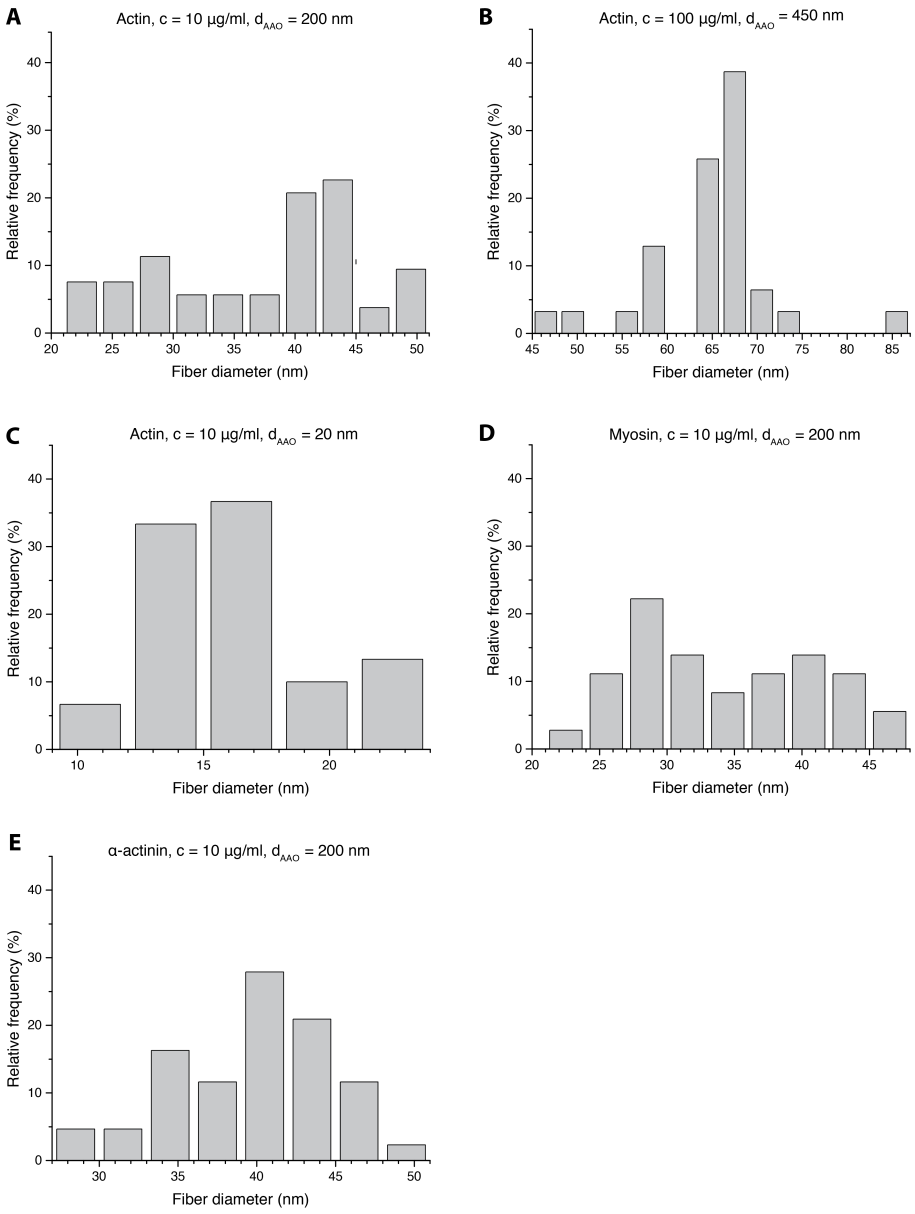

Figure S1: Diameter distributions of nanofibers from intracellular proteins, which were extruded with different parameters (bin size 3): (A) actin (c = 10 µg/ml, d_{AAO} = 200 nm, 53 measurements), (B) actin (c = 100 µg/ml, d_{AAO} = 450 nm, 31 measurements), (C) actin (c = 10 µg/ml, d_{AAO} = 20 nm, 30 measurements), (D) α-actinin (c = 10 µg/ml, d_{AAO} = 200 nm, 43 measurements), (E) myosin (c = 10 µg/ml, d_{AAO} = 200 nm, 36 measurements)

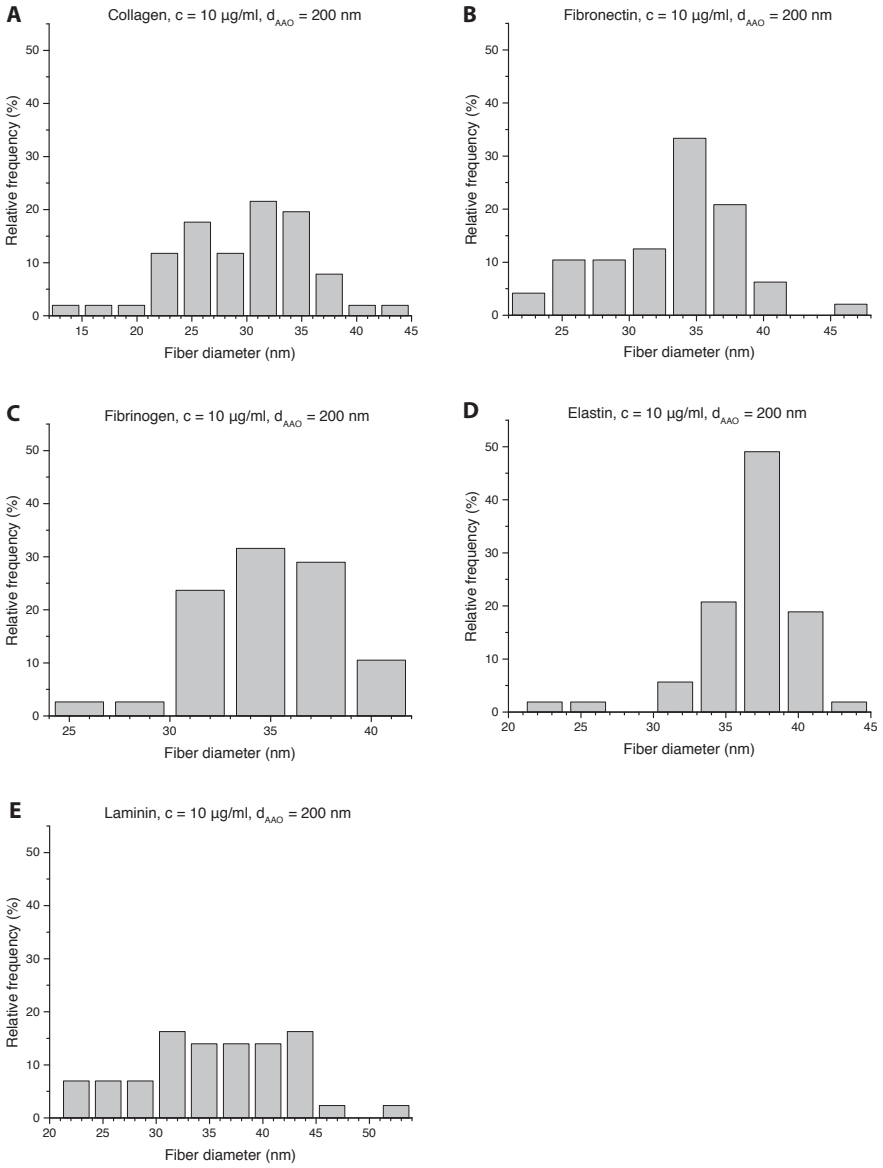

Figure S2: Diameter distributions of nanofibers from different extracellular proteins (bin size 3). All ECM proteins were extruded with c = 10 µg/ml and d_{AAO} = 200 nm: (A) collagen (51 measurements), (B), fibronectin (48 measurements), (C) fibrinogen (38 measurements), (D) elastin (53 measurements), (E) laminin (43 measurements)

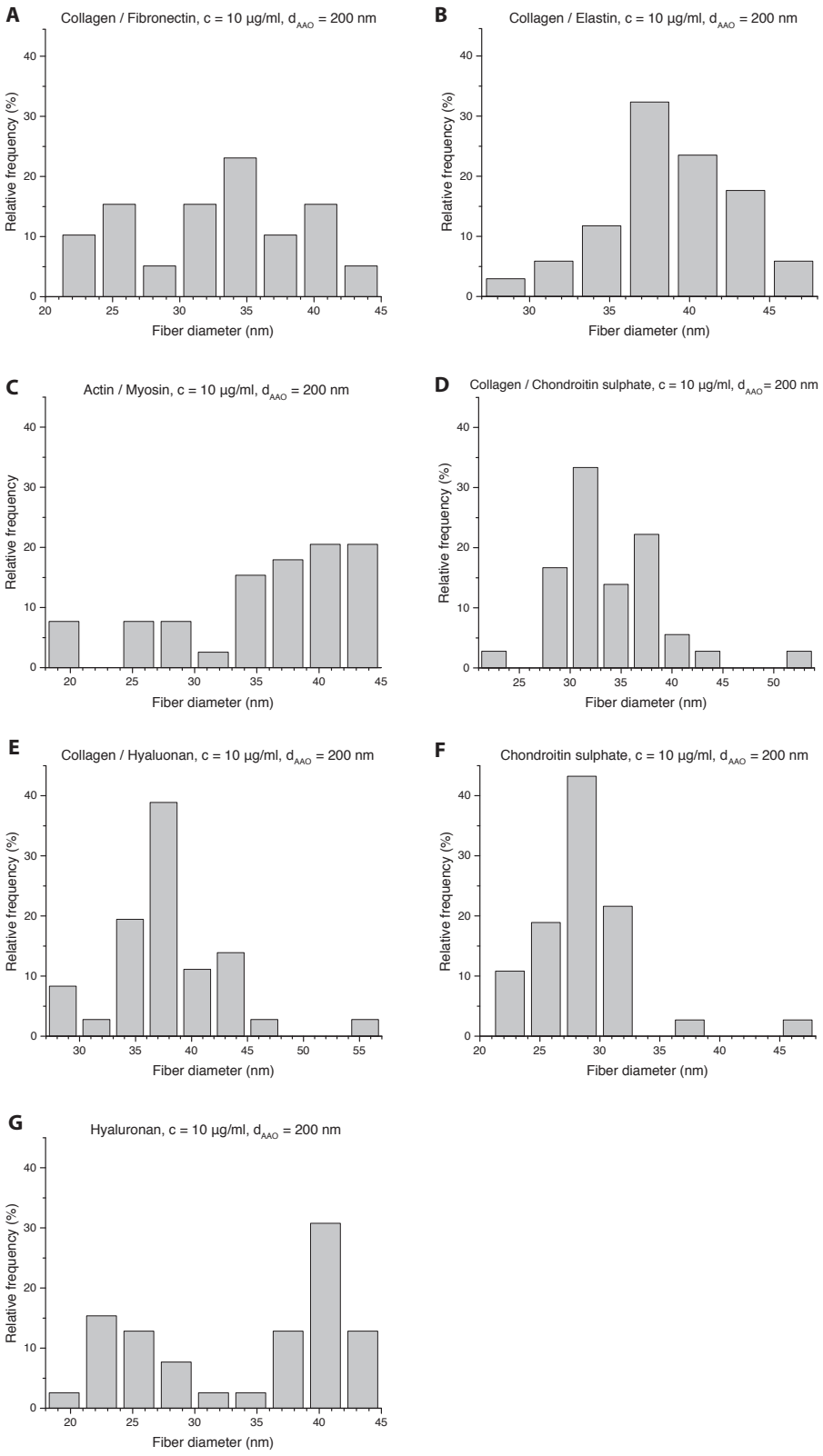

Figure S3: Diameter distributions of various protein composite nanofibers and polysaccharide nanofibers (bin size 3), which were extruded with c = 10 µg/ml and d_{AAO} = 200 nm: (A) collagen/fibronectin (39 measurements), (B) collagen/elastin (34 measurements), (C) actin/myosin (39 measurements), (D) collagen/chondroitin sulphate (36 measurements), (E) collagen/hyaluronan (36 measurements), (F) chondroitin sulphate (37 measurements), (G) hyaluronan (39 measurements)