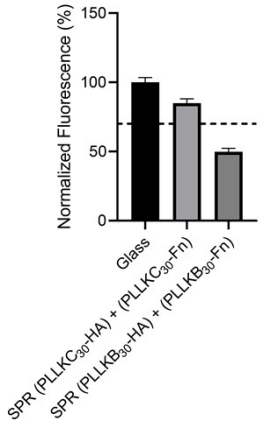
Supplementary



Supplementary Figure 1. Counterion-dependent cytocompatibility of spray-coated multilayers. Cytocompatibility assessment revealed a counterion-dependent effect specific to spray-deposited films under identical spray-coating conditions, multilayers fabricated with $PLLKB_{30}$ resulted in cytotoxic surfaces, whereas $PLLKC_{30}$ produced cytocompatible coatings. Round glass slides of 12 mm diameter were used as substrate.

Mean Roughness (Sa, nm)

	Glass	Lower regions	Aggregates
$(PLL\text{-}HA)_{10}$	10	40–70	180–250
Intercalated Fn architecture	10–20	40–150	150–400
Top-Layer Fn architecture	10–30	30–80	150–250
SPR (PLL_{30}-HA) + (PLL_{30}-Fn)	10–20	150–200	550–650

Supplementary Table 1. AFM surface roughness analysis of dip- and spray-deposited coatings. Mean roughness values (Sa, nm) were extracted independently from small defined regions of interest corresponding to three distinct surface features: bare glass areas exposed by needle scratch, lower coating regions, and aggregate features. Measurements were performed using Gwyddion software.