

3D-nano printed bioceramics for personalized bone healing

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The growing clinical need for synthetics that specifically enhance the repair of critical large bone defects and aged bone matched by the escalating demand for grafts, is driven largely by an ageing population whose natural regenerative responses are impaired. This presentation will describe the following: 1) Our strategies in developing a platform of patented engineered nanostructured, 3D-printed biomaterials for cell-free personalised treatment to promoting bone healing in load bearing challenging situations. 2) Our unique fabrication strategies that will enable customisation of the implant's shape, size, structure and architecture to meet patient-specific requirements Identification of the composition of bioceramics that achieves antibacterial effects. 3) Our technologies open avenues for skeletal and soft tissue regeneration in various clinical applications.