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Acta Biomaterialia is an international journal that publishes peer-reviewed original research reports, review papers and communications in the broadly defined field of biomaterials science. The emphasis of the journal is on the relationship between biomaterial structure and function at all length scales.

The scope of Acta Biomaterialia includes: Hypothesis-driven design of biomaterials Biomaterial surface science linking structure to biocompatibility, including protein adsorption and cellular interactions Biomaterial mechanical characterization and modeling at all scales Molecular, statistical and other types of modeling applied to capture biomaterial behavior Interactions of biological species with defined surfaces Combinatorial approaches to biomaterial development Structural biology as it relates structure to function for biologically derived materials that have application as a medical material, or as it aids in understanding the biological response to biomaterials Methods for biomaterial characterization Processing of biomaterials to achieve specific functionality Materials development for arrayed genomic and proteomic screening

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