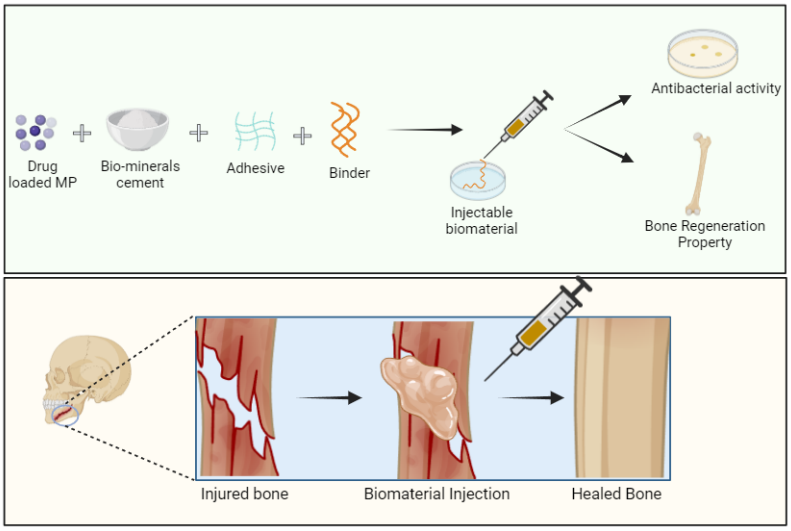
Injectable dental biomaterial with osteogenic and antimicrobial properties - an attempt towards indigenization

Graphical Abstract/ Lavout



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Name of the Funding Agency
Indian Council of Medical Research (ICMR)

Name of the Scheme
Ad-hoc

Sanctioned Amount (in Rupees)
₹ 39,51,000

Duration of the Project (years)
3

Project Description

Maxillofacial defects have an adverse impact on a patient's well-being. Many dental biomaterials are being used in India during clinical practice but all of them are imported, which increases the cost of treatment and poses a financial burden on the patients and their families. Moreover, many of the available dental bone grafts show poor stability at the defect site and weaker mechanical strength. The development of biomaterials is driven by the necessity of an affordable dental biomaterial that can regenerate bone with good integrity, overcome the problem of infection, and benefit society at large. This project aims to develop a cost-effective injectable biomaterial for dental and maxillofacial applications. Injectable biomaterials reduce surgery-related complications and infections. Successful completion of the project would be a step forward toward an indigenous cost-effective dental biomaterial for bone regeneration in the maxillofacial region and provide us a comprehensive data for phase-I clinical trial.

Products/ Instruments/ Results/ Outreach Activities