

Method for developing a composite material for bone defect reconstruction with antimicrobial properties involves preparing hydroxyapatite powder at the first stage. Wherein, at the second stage, distilled water, a suspension of silver nanoparticles, and a previously prepared comfrey solution in distilled water with a concentration of 1 mg/ml are added to the hydroxyapatite powder. At the third stage, the resulting mixture is treated with ultrasound at a frequency of 40 kHz for 10 minutes. It is dried in a drying oven for 24 h at a temperature of 60 °C until dry, resulting in the following concentration of components in the hydroxyapatite matrix, µg/g:

silver nanoparticles	5-20
comfrey extract	100.