

Diabetes mellitus can be defined as high blood sugar level in the body. In diabetic condition our body is unable to successfully regulate our blood glucose (also known as blood sugar) on its own. Consistently high blood sugar levels can cause issues with the immune system, circulation, and nerves, all of which can hinder effective wound healing. Wound healing is a complicated process that consist of several phases to repair the damage skin. Most widely used modern technology is the nanotechnology that is very helpful in medical field. Nanotechnology is used to produce many nanoparticles which is used for the treatment of diabetic wound. The current work focuses on the environmentally friendly production of ZnO nanoparticles using zinc acetate dihydrate and bioactive ingredients of mulberry leaves extract. The ZnO nanoparticles were created quickly, easily and sustainably. X-ray diffraction (XRD), scanning electron microscopy (SEM) ultraviolet-visible spectrophotometry (UV-Vis), Fourier-transform infrared spectroscopy (FTIR), and energy dispersive X-ray (EDX) is used to analyze Zinc nanoparticles. Alloxan monohydrate was used to induce the diabetes in albino mice then after this, wound was created using biopsy punch on the skin of diabetic mice to check the healing property of ZnO nanoparticles. After that, to treat the diabetic injured mice, Vaseline petroleum jelly was used as a base to prepare ZnO nanoparticles ointment and this ointment is used to heal the wounds. A histological investigation was completed, and the results showed that wounds healed after 16 days of therapy. Through this research work we concluded that green synthesized ZnO nanoparticles from mulberry leaf extract is used for the treatment of wounds in diabetic mice due to their good healing properties.