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Skin Cell Regeneration

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Skin is known to be the largest organ of our body, serving as a protective barrier against pathogens and foreign invaders. There are circumstances however, in which people suffer from different skin conditions, such as diabetic foot ulcers or high degree burns. In these cases people may refer to biomedical applications. Hydrogels have proven to be significant biomaterials, having appropriate properties for use in tissue engineering of the skin. The Printed Biomaterial Laboratory at the University of Texas at El Paso studies printable hydrogels in order to create a substrate for cell proliferation, and be applicable for people who suffer from mentioned conditions. Two materials being used to create the hydrogel are alginate and gelatin, both which have shown high biocompatibility and promote cell proliferation and vascularization. The purpose of this research is to create a low cost wound care material that promotes skin regeneration through the use of inkjet printing technology.