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## Polyhydroxyesters as scaffolds for tissue engineering

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### ABSTRACT:

Tissue engineering is a field that has gained a lot of advancement since the discovery of biopolymers. Biopolymers are simply polymers that are made-up of polymeric biomolecules. They consist of monomeric units that are covalently bonded to one another in order to form very large structures. Biopolymers have been widely used as biomaterials for the construction of tissue scaffold. Scaffolds have been used for tissue engineering such as bone, cartilage, ligament, skin, vascular tissues, neural tissues and skeletal muscles. Polyhydroxyesters are typical examples of synthetic biopolymers that have been employed for this application. Their exceptional properties, such as: high surface-to-volume ratio, high porosity with very small pore size, biodegrading, and mechanical property have made them gain a lot of attention in this field. Also, they have advantages which are significant for tissue engineering. This chapter focuses on polyhydroxyester, such as: PLA (Polylactide), PGA (Polyglycolide), which have diverse applications in tissue engineering. Details of these polyhydroxyesters and their application in tissue engineering will be discussed in this chapter.