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(54) **Title:** SYNTHETIC SURFACES FOR CULTURING CELLS IN CHEMICALLY DEFINED MEDIA

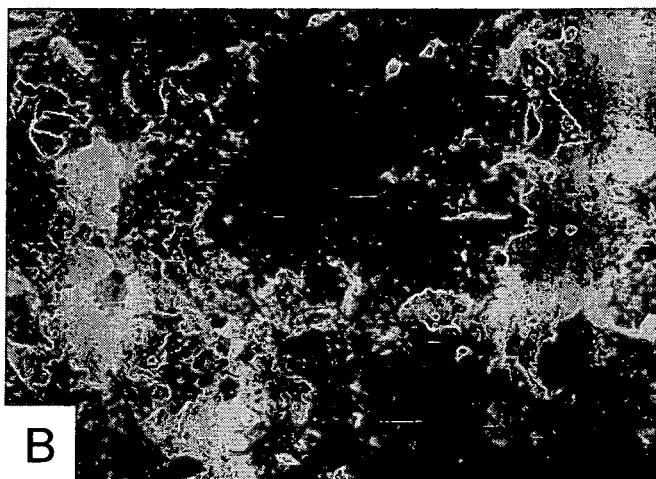


FIG. 7

(57) **Abstract:** Synthetic surfaces capable of supporting culture of eukaryotic cells including stem cells and undifferentiated human embryonic stem cells in a chemically defined medium include a swellable (meth)acrylate layer and a polypeptide conjugated to the swellable (meth)acrylate layer. The swellable (meth)acrylate layer may be formed by polymerizing monomers in a composition that includes a carboxyl group-containing (meth)acrylate monomer, a cross-linking (di- or higher-functional) (meth)acrylate monomer, and a hydrophilic monomer capable of polymerizing with the carboxyl group-containing (meth)acrylate monomer and the cross-linking (meth)acrylate monomer. The swellable (meth)acrylate layer has an equilibrium water content in water of between about 5% and about 70%. The conjugated peptide may include an RGD amino acid sequence.

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