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REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claims 1–36 are cancelled.

New claims 37–62 are added and determined to be patentable.

37. A crosslinked biocompatible material comprising at least one covalently crosslinked component; and at least one ionically crosslinked component, wherein the covalently crosslinked component is a photopolymerized derivative of polyethylene glycol, and wherein the ionically crosslinked component is a polysaccharide, a polyanion, or a polycation.

38. The crosslinked biocompatible material of claim 37, wherein the covalently crosslinked component is polyethylene glycol diacrylate.

39. The crosslinked biocompatible material of claim 37, wherein the ionically crosslinked component is alginate.

40. The crosslinked biocompatible material of claim 39, wherein the alginate is capable of ionically crosslinking upon addition thereto of multivalent cations.

41. The crosslinked biocompatible material of claim 39, wherein the alginate is a high G block alginate having at least 60% α -L-guluronic acid.

42. The crosslinked biocompatible material of claim 39, wherein the alginate comprises at least 70% α -L-guluronic acid.

43. The crosslinked biocompatible material of claim 38, further comprising a biologic encapsulated by the material.

44. The crosslinked biocompatible material of claim 43, wherein the material is effective to provide immunoprotection for the biologic in a physiological environment.

45. The crosslinked biocompatible material of claim 43, wherein the material provides immunoprotection of the biologic when xenotransplanted.

46. The crosslinked biocompatible material of claim 43, wherein the biologic is a biologically active material or a diagnostic marker.

47. The crosslinked biocompatible material of claim 46, wherein the biologically active material is a drug.

48. A crosslinked biocompatible material comprising at least one covalently crosslinked component; and at least one ionically crosslinked component, wherein the ionically

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crosslinked component is a polysaccharide, a polyanion, or a polycation, and wherein the covalently crosslinked component comprises polymerized polyethylene glycol (PEG), said polymerized PEG having been formed from PEG monomers with a molecular weight of about 10,000.

49. A crosslinked biocompatible material comprising at least one covalently crosslinked component; and at least one ionically crosslinked component, wherein the covalently crosslinked component comprises polyethylene glycol monomer, and wherein the ratio of ionically crosslinked component to covalently crosslinked component is in the range of about 1:3.0 to 1:7.5.

50. A crosslinkable biocompatible material comprising a mixture of at least one covalently crosslinkable component; at least one ionically crosslinkable component, and a photoinitiator, wherein the covalently crosslinkable component comprises polyethylene glycol monomer, and wherein the ionically crosslinkable component is a polysaccharide, a polyanion, or a polycation.

51. The crosslinkable biocompatible mixture of claim 50, wherein the composition ratio between the ionically crosslinkable component and the covalently crosslinkable component is effective for the stable crosslinking of the mixture, whereby a gelled encapsulation material is formed.

52. The crosslinkable biocompatible mixture of claim 50, wherein the ratio of ionically crosslinked component to covalently crosslinked component is in the range of about 1:3.0 to 1:7.5.

53. The crosslinkable biocompatible mixture of claim 50, wherein the mixture has an osmolarity and pH compatible with living tissue or cells.

54. The crosslinkable biocompatible mixture of claim 53, wherein the osmolarity of the mixture is about 290 milliosmoles per kilogram and the pH is about 7.4.

55. The crosslinkable biocompatible mixture of claim 50, wherein the concentration and the molecular weight(s) of the covalently crosslinkable component are effective to provide immunoprotection to the encapsulated functional core once the mixture has been crosslinked.

56. The crosslinkable biocompatible mixture of claim 55, wherein the concentration and molecular weight(s) of the covalently crosslinkable component are effective for the controlled release of the biologic or components of the biologic once the mixture has been crosslinked.

57. A crosslinkable biocompatible material comprising at least one covalently crosslinkable component; and at least one ionically crosslinkable component, wherein the ionically crosslinkable component is a polysaccharide, a polyanion, or a polycation, and wherein the covalently crosslinkable component comprises polyethylene glycol monomer having a molecular weight of about 10,000.

58. A crosslinkable biocompatible material comprising at least one covalently crosslinkable component; and at least one ionically crosslinkable component, wherein the covalently crosslinked component comprises polyethylene glycol monomer, and wherein the ratio of ionically crosslinkable component to covalently crosslinkable component is in the range of about 1:3.0 to 1:7.5.