

**CLAIMS**

1. A composition comprising:
  - a) a self-assembling peptide, and
  - b) a dental agent selected from the group consisting of a dental sealant, a fluoride varnish, and a dental bonding agent,wherein the composition preferably is a pharmaceutical composition.
2. The composition of claim 1, wherein the dental agent is a dental sealant selected from the group comprising
  - (i) glass-ionomer cement-based sealants selected from the group comprising glass-ionomer cements and resin-modified glass-ionomer cements, and
  - (ii) resin-based sealants selected from the group comprising polyacid-modified composite resins and resin-based composites,wherein, preferably, the dental sealant is a glass-ionomer cement-based sealant.
3. The composition of claim 1, wherein the dental agent is a fluoride varnish.
4. The composition of claim 1, wherein the dental agent is a dental bonding agent.
5. A kit comprising, in separate form,
  - a) a self-assembling peptide, and
  - b) a dental agent that is a glass-ionomer cement-based dental sealant selected from the group comprising glass-ionomer cements and resin-modified glass-ionomer cements,wherein the kit preferably is a pharmaceutical kit.
6. The composition of any of the claims 1-4 or the kit of claim 5, wherein the dental agent is capable of releasing fluoride ions, wherein, preferably, the dental agent is also capable of releasing calcium ions.
7. The composition of any of the claims 1-4 or 6 or the kit of any of claims 5-6, wherein the dental agent is permeable for and to ions.

8. The composition of any of the claims 1-4 or 6-7 or the kit of any of claims 5-7, wherein the self-assembling peptide undergoes self-assembly at a pH below 7.5, wherein the self-assembling peptide preferably is P11-4.
9. The composition of any of the claims 1-4 or 6-7 or the kit of any of claims 5-7, wherein the self-assembling peptide undergoes self-assembly at a pH of at least 7.5, wherein the dental agent has a pH of at least 7.5, wherein the self-assembling peptide preferably is P11-8.
10. The composition of any of the claims 1-4 or 6-9 or the kit of any of claims 5-9, wherein the self-assembling peptide comprises a sequence of the formula X1-X2-X1-X2-X1, wherein X1 is an amino acid with an acidic side chain and X2 is an amino acid with a hydrophobic side chain.
11. The composition of any of the claims 1-4 or 6-10 or the kit of any of claims 5-10, wherein the self-assembling peptide comprises the amino acid sequence SEQ ID NO: 1 or an amino acid sequence having at least 80% identity thereto.
12. The composition of any of the claims 1-4 or 6-11 or the kit of any of claims 5-11, wherein the self-assembling peptide is in predominantly monomeric form.
13. The composition of any of the claims 1-4 or 6-11 or the kit of any of claims 5-11, wherein the self-assembling peptide is in predominantly assembled form.
14. A composition or kit comprising
  - a) a self-assembling peptide, and
  - b) a dental agent selected from the group consisting of a dental sealant, a fluoride varnish, and a dental bonding agent,

wherein the composition preferably is a composition of any of claims 1-4 or 6-13 or the kit preferably is a kit of any of claims 5-13,

for use in preventing secondary caries after failure of the dental agent in treatment of a cavitated carious lesion.
15. The composition or kit for use of claim 14, wherein the treatment of the carious lesion comprises steps of
  - a) cleaning of the tooth surface,
  - b) optionally, drying of the tooth surface,
  - c) optionally, etching the tooth surface,

- d) administering the composition or the components of the kit to the carious lesion,
- e) optionally, curing.

16. A composition or kit comprising

- a) a self-assembling peptide, and
- b) a dental material selected from the group comprising a dental sealant, a dental bonding agent and a filler,

wherein the composition preferably is a composition of any of claims 1-4 or 6-13 or the kit preferably is a kit of any of claims 5-13,

for use in pulp capping, wherein, optionally, the composition or the components of the kit are to be administered to a carious lesion in contact with pulp.

- 17. The kit for use of any of claims 15 or 16, wherein administering the composition or the components of the kit to the carious lesion comprises administering the self-assembling peptide to the carious lesion and then administering the dental agent to the carious lesion.
- 18. The kit for use of any of claims 15 or 16, wherein administering the composition or the components of the kit to the carious lesion comprises administering a mixture of the self-assembling peptide and the dental agent to the carious lesion.