WHAT IS CLAIMED IS:

1. A peptide having a sequence selected from the group consisting of FDYDWY, SFDYDWY, SFDYDWYN, HSFDYDWYN, HSFDYDWYNV, VHSFDYDWYNV, VHSFDYDWYNVS, SVHSFDYDWYNVS, SVHSFDYDWYNVSD, KSVHSFDYDWYNVSD, KSVHSFDYDWYNVSDQ, NKSVHSFDYDWYNVSDQ, NKSVHSFDYDWYNVSDQA, QNKSVHSFDYDWYNVSDQA, QNKSVHSFDYDWYNVSDQAD, SQNKSVHSFDYDWYNVSDQAD, SQNKSVHSFDYDWYNVSDQADL, FSQNKSVHSFDYDWYNVSDQADL, FSQNKSVHSFDYDWYNVSDQADLK, SFSQNKSVHSFDYDWYNVSDQADLK, SFSQNKSVHSFDYDWYNVSDQADLKN, CSFSQNKSVHSFDYDWYNVSDQADLKN, CSFSQNKSVHSFDYDWYNVSDQADLKNC, and FNFDWY or combinations thereof.

2. A composition comprising a peptide isolated from an animal source, said peptide comprising a sequence selected from the group consisting of FDYDWY, SFDYDWY, SFDYDWYN, HSFDYDWYN, HSFDYDWYNV, VHSFDYDWYNV, VHSFDYDWYNVS, SVHSFDYDWYNVS, SVHSFDYDWYNVSD, KSVHSFDYDWYNVSD, KSVHSFDYDWYNVSDQ, NKSVHSFDYDWYNVSDQ, NKSVHSFDYDWYNVSDQA, QNKSVHSFDYDWYNVSDQA, QNKSVHSFDYDWYNVSDQAD, SQNKSVHSFDYDWYNVSDQAD, SQNKSVHSFDYDWYNVSDQADL, FSQNKSVHSFDYDWYNVSDQADL, FSQNKSVHSFDYDWYNVSDQADLK, SFSQNKSVHSFDYDWYNVSDQADLK, SFSQNKSVHSFDYDWYNVSDQADLKN, CSFSQNKSVHSFDYDWYNVSDQADLKN, CSFSQNKSVHSFDYDWYNVSDQADLKNC, and FNFDWY, or a combination thereof.

3. A method of preventing adhesion of a single cell organism to a surface, the method comprising contacting the cell with a composition comprising a peptide isolated from an animal source, said peptide comprising a sequence selected from the

group consisting FDYDWY, SFSQNKSVHSFDYDWYNVSDQADLKN or CSFSQNKSVHSFDYDWYNVSDQADLKNC .

4. The peptide, composition or method of any of claims 1 to 3, wherein said peptide is devoid of cytotoxic or cytostatic activity.

5. The peptide, composition or method of any of claims 1 to 4, wherein said peptide is resistant to lyophilization.

6. The peptide, composition, or method of any of claims 1 to 5 wherein said peptide is further capable of inhibiting aggregation of cells.

7. The method of claim 3, wherein said single cell organism is comprised in a biofilm.

8. The method of claim 3, wherein said single cell organism is selected from the group consisting of a bacteria, a fungus, a protozoa and an archaea.

9. The method of claim 8, wherein said fungus comprises a yeast.

10. The method of claim 3, wherein said surface is selected from the group consisting of a fabric, a fiber, a foam, a film, a concrete, a masonry, a glass, a metal and a plastic.

11. The method of claim 3, wherein said animal is a vertebrate.

12. The method of claim 11, wherein said animal is selected from the group consisting of a fish, an amphibian, a bird, a reptile and a mammal.

13. The method of claim 12, wherein said mammal is a human.

14. A medical device comprising the peptide or composition of any of claims 1 or 2 attached thereto.

15. The medical device of claim 14, wherein the medical device is an intracorporeal device.

16. The medical device of claim 15, wherein the medical device is an extracorporeal device.

17. A method of treating water to prevent or reduce biofilm formation or fouling of a filter, comprising treating the water with any of the peptides, or compositions herein.

18. A method of preventing or reducing biofilm formation in a fluid medium, comprising treating the fluid medium with any of the peptides, or compositions herein.

19. The method of either claims 17 or 18, wherein said treated water or fluid medium is applied to a reverse osmosis filter.

CLAIMS

1. A cyclized peptide that has the activity to prevent biofilm formation and that has a sequence selected from the group consisting of FDYDWY (SEQ ID NO:2), SFDYDWY (SEQ ID NO: 7) , SFDYDWYN (SEQ ID NO: 8), HSFDYDWYN (SEQ ID NO: 9), HSFDYDWYNV (SEQ ID NO: 10), VHSFDYDWYNV (SEQ ID NO: 11), VHSFDYDWYNVS (SEQ ID NO: 12), SVHSFDYDWYNVS (SEQ ID NO: 13), SVHSFDYDWYNVSD (SEQ ID NO: 14), KSVHSFDYDWYNVSD (SEQ ID NO: 15), KSVHSFDYDWYNVSDQ (SEQ ID NO: 16), NKSVHSFDYDWYNVSDQ (SEQ ID NO: 17), NKSVHSFDYDWYNVSDQA (SEQ ID NO: 18),
QNKSVHSFDYDWYNVSDQA (SEQ ID NO: 19),
QNKSVHSFDYDWYNVSDQAD (SEQ ID NO: 20),
SQNKSVHSFDYDWYNVSDQAD (SEQ ID NO: 21),
SQNKSVHSFDYDWYNVSDQADL (SEQ ID NO: 22),
FSQNKSVHSFDYDWYNVSDQADL (SEQ ID NO: 23),
FSQNKSVHSFDYDWYNVSDQADLK (SEQ ID NO: 24),
SFSQNKSVHSFDYDWYNVSDQADLK (SEQ ID NO: 25),
SFSQNKSVHSFDYDWYNVSDQADLKN (SEQ ID NO: 3),
CSFSQNKSVHSFDYDWYNVSDQADLKN (SEQ ID NO: 26), and
CSFSQNKSVHSFDYDWYNVSDQADLKNC (SEQ ID NO: 1), or combinations thereof.

2. A composition comprising a cyclized peptide isolated from an animal source, said peptide having the activity to prevent biofilm formation, wherein said peptide comprises a sequence selected from the group consisting of
FDYDWY (SEQ ID NO: 2), SFDYDWY (SEQ ID NO: 7), SFDYDWYN (SEQ ID NO: 8), HSFDYDWYN (SEQ ID NO: 9), HSFDYDWYNV (SEQ ID NO: 10), VHSFDYDWYNV (SEQ ID NO: 11), VHSFDYDWYNVS (SEQ ID NO: 12), SVHSFDYDWYNVS (SEQ ID NO: 13), SVHSFDYDWYNVSD (SEQ ID NO: 14), KSVHSFDYDWYNVSD (SEQ ID NO: 15), KSVHSFDYDWYNVSDQ (SEQ ID

NO: 16), NKSVHSFDYDWYNVSDQ (SEQ ID NO: 17), NKSVHSFDYDWYNVSDQA (SEQ ID NO: 18), QNKSVHSFDYDWYNVSDQA (SEQ ID NO: 19), QNKSVHSFDYDWYNVSDQAD (SEQ ID NO: 20), SQNKSVHSFDYDWYNVSDQAD (SEQ ID NO: 21), SQNKSVHSFDYDWYNVSDQADL (SEQ ID NO: 22), FSQNKSVHSFDYDWYNVSDQADL (SEQ ID NO: 23), FSQNKSVHSFDYDWYNVSDQADLK (SEQ ID NO: 24), SFSQNKSVHSFDYDWYNVSDQADLK (SEQ ID NO: 25), SFSQNKSVHSFDYDWYNVSDQADLKN (SEQ ID NO: 3), CSFSQNKSVHSFDYDWYNVSDQADLKN (SEQ ID NO: 21), and CSFSQNKSVHSFDYDWYNVSDQADLKNC (SEQ ID NO: 1), or a combination thereof.

3. The peptide of claim 1, wherein said peptide is devoid of cytotoxic or cytostatic activity; or
the composition of claim 2, wherein said peptide is devoid of cytotoxic or cytostatic activity.

4. The peptide of claim 1 or 3, wherein said peptide is further capable of inhibiting aggregation of cells; or
the composition of claim 2 or 3, wherein said peptide is further capable of inhibiting aggregation of cells.

5. A medical device comprising the peptide of claim 1 or the composition of claim 2 attached thereto.

6. The medical device of claim 5, wherein the medical device is an intracorporeal device or wherein the medical device is an extracorporeal device.

7. A method of treating water to prevent or reduce biofilm formation or fouling of a filter, comprising treating the water with any of the peptides of any of claims 1, 3 and 4, or with compositions of any one of claims 2, 3 and 4.

8. An in vitro method of preventing or reducing biofilm formation in a fluid medium, comprising treating the fluid medium with any of the peptides of any one of claims 1, 3 and 4, or with compositions of any one of claims 2, 3 and 4.

9. The method of claim 7 or 8, wherein said treated water or fluid medium is applied to a reverse osmosis filter.

10. An in vitro method of preventing adhesion of a single cell organism to a surface, the method comprising contacting the cell with a composition comprising a cyclized peptide isolated from a non-human animal source, said peptide comprising a sequence selected from the group consisting of FDYDWY (SEQ ID NO: 1), SFSQNKSVHSFDYDWYNVSDQADLKN (SEQ ID NO: 21) and CSFSQNKSVHSFDYDWYNVSDQADLKNC (SEQ ID NO: 23).

11. The method of claim 10, wherein said peptide is devoid of cytotoxic or cytostatic activity.

12. The method of claim 10 or 11, wherein said peptide is further capable of inhibiting aggregation of cells.

13. The method of claim 10, wherein said single cell organism is comprised in a biofilm.

14. The method of claim 10, wherein said single cell organism is selected from the group consisting of a bacteria, a fungus, a protozoa and an archaea, wherein said fungus may comprise a yeast.

15. The method of claim 10, wherein said surface is selected from the group consisting of a fabric, a fiber, a foam, a film, a concrete, a masonry, a glass, a metal and a plastic.

16. The method of claim 10, wherein the surface is comprised in a device that is susceptible to biofilm formation.

17. The method of claim 16, wherein said device is a vessel hull, an automobile surface, an air plane surface, a membrane, a filter or industrial equipment.

18. The method of claim 10, wherein said animal is a vertebrate, wherein said animal is selected from the group consisting of a fish, an amphibian, a bird, a reptile and a mammal.