30. Title: A medicament for the treatment of diseases by biofilm forming microorganism

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Domain: Healthcare (Drugs)

Keywords: Tuberculosis, Drug resistance, Adjunct

Summary: This technology relates to a medicament consisting of drugs, its pharmaceutically acceptable salts thereof, and combinations thereof, for use in treatment of diseases caused by biofilm forming microorganisms. The medicament can be used as adjunct with anti-TB drugs in inhibiting the biofilm forming microorganisms. These medicaments can improve the efficacy of the anti-TB drugs by two- to four-fold. These medicament act on peptidyl prolyl isomerase (PpiB), a generic mechanism by which microorganisms make biofilm matrix. The medicaments can bind with the conserved binding pocket of PpiB, and hence shall be effective in the treatment of diseases selected from a group consisting of tuberculosis, dental caries, and periodontitis.

Advantages:

- The medicaments combination can bind with the PpiB protein and inhibit biofiom formation.
- The medicaments can be used as adjunct with existing anti-TB drugs.
- Addition of drug improves the efficacy of anti-TB drugs by 2-4-fold.
- Due to its inhibitory action on biofilm, these drugs can be used for developing anti-biofilm surfaces on medical devices.
- Can inhibit wide genre of heterogenous population of bacteria in the biofilm.
- More effective biofilm inhibitors as compared to existing ones.

Applications: Healthcare

Scale of Development: Medicaments tested on microorganisms. Preclinical validations are underway

Technology Readiness Level: 4

IP Status: Singapore Patent Application 11201909818, South Africa Granted Patent 2019/07396, ARIPO Granted Patent 5860