

## Site Attachment Inhibition Therapeutics: A Core Summary

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### Part A

The concern with respect to antimicrobial resistance and the associated health threat has gained increasing attention and there has been difficulty in gaining traction globally. Given the lack of success by the two pathways established to date which have focused on: 1) "replication of infective agent" and, 2) "immune system enhancement," the current researcher has conceptualized and developed the new, or third, mode of action pathway represented by "site attachment inhibition (or, negation of cellular attachment by infective agents)." The current author anticipates site attachment inhibition therapeutics to include drug (medication) based therapies, stem cell based treatment (including prenatal and earlier), and waveform (e.g. electromagnetic radiation) based treatment [1,2]. With respect to viruses, support for the likely success of the new mode of action pathway: A) the known CCR5-Δ32 mutation achieves resistance (immunity) against HIV through negation of cellular attachment; B) other areas of medicine use analogous receptor antagonism (e.g. beta blocker therapy); C) advanced IT uses analogous site attachment inhibition to remove viruses. With respect to bacteria, support for the likely success of the new mode of action pathway: A) advanced IT uses analogous site attachment inhibition to remove IT infections; B) glycoproteins are key proteins/receptors for attachment and, analogous to glycoprotein IIb/IIIa medications which inhibit (negate) platelet aggregation and thrombus formation, it seems reasonable to pursue antagonism or blockade of other glycoprotein receptors in order to prevent bacterial attachment to human cells (note: this is also relevant to viral infections); C) the human immune system coats infective agents in an attempt to negate cellular attachment, therefore this mode of action represented by site attachment inhibition makes scientific sense.

Attention must be directed toward correctly identifying the target receptors and appreciating the difference between association and causation. Looking at mutations noticed in the human population and connecting this to the innate resistance they possess to certain infections is not enough as this may simply represent association as opposed to causation [1,2].

Full length reports by the current author discuss the potential for new immunization programs to be developed utilizing stem cell therapy based site attachment inhibition. The reports discuss the pathway as potentially worthy of pursuit given the current global context of antibiotic resistance, metaphorical superbugs, and deficiencies in successful antiviral therapies [1-3]. Trials in high-risk areas, including Africa (notorious for HIV and other serious infective agents), may be an initial starting point, as discussed in the reports. The reports discuss the basis for optimistic pursuit of such highly innovative pathways (stem cell therapy based site attachment inhibition) with intention to develop new generation immunization programs based on such therapeutic methods, including the evidence in support of relative safety with regards to deletion (or, mutagenesis) of genes. Whilst there is no guarantee against risks, the pursuits can be undertaken in a manner that minimizes potential harm. For instance, avoiding genetic illness associated with the homozygous mutagenesis (or, deletion) state by way of assessing for effective therapeutic intervention potential through heterozygous mutagenesis (or, deletion). Genetic therapy in

the prenatal (and earlier) stages is becoming increasingly researched and utilized. It does not seem unreasonable to at a minimum consider the potential for such new generation immunization strategy, utilizing stem cell therapy based site attachment inhibition, to become as routine as other procedures for instance chorionic villus sampling, and initial trial in high-risk areas as detailed above impresses as a worthy initial starting point [4]. The development of new generation immunization programs is discussed further in the report referenced under section titled 'References.'

The above being said, ethical considerations must first be properly considered (detailed further below).

In conclusion, this paper presents the new, or third, mode of action pathway in antimicrobial therapy represented by *site attachment inhibition therapeutics*.

*Site attachment inhibition* therapeutics is intended to be potentially applicable to all bacteria, viruses and perhaps other infective organisms.

### Part B

The purpose pertaining to Part B is to delineate a number of key issues that need to be addressed in the process of (or, prior to) considering the strategic implementation of *site attachment inhibition* therapeutics.

- 1) There appears to be a key convergence of fields occurring in medicine namely the merging of neurology, immunology and physics (quantum physics, including advanced computing and IT). Neurology is converging with immunology through a multitude of factors including the increasingly noticed mimicry of CNS neurons by infective agents with associated demonstration by infective agents of voltage gated ion channel communication [1-16]. Furthermore, the role of infective agents and inflammation in mental health and neuropsychiatric disorders is becoming increasingly noticed.
- 2) Infective agents (including bacteria and viruses) can be considered conscious entities and this therefore demands proper ethical consideration by community and ethics based committees, with respect to continued use of antimicrobial agents. The importance with respect to this is underscored in considering that segments of the computing and IT professions have called for proper consideration of the potential need to provide computers (and related entities) rights and protections

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equivalent to that of human rights based on the stated entities demonstrating consciousness [1-4,17].

- 3) In the event that such consideration take the opinion that infective agents are conscious or aware, therapeutic use of antimicrobials may still seem reasonable based on the need for self-defence with respect to the person of the human being, given the likely continued entry (or, invasion) of the person by infective and foreign agents (including bacteria and viruses).
- 4) It should be noted that in consideration of the potential demonstration of consciousness by bacteria and viruses, the medical profession would be well-advised to shift away from the previous line of thought revolving around terming bacteria as living and viruses as non-living on grounds that appear to be discriminatory, noticeably that the agents termed living are those which are similar in structure to the human cells and those termed non-living are those that are dissimilar (e.g. lacking the arbitrary indicators of cells wall and golgi apparatus). It may seem optimal to shift the focus to the demonstration by each type of infective agent with respect to indicators of consciousness [1-17].
- 5) The current researcher seeks to have a degree of future guidance, whether it is based on implied (or, express) patent type reasoning, with respect to site attachment inhibition therapeutics.
- 6) Quantum physics is the most rigorous and robust of the sciences yet to date there is minimal application to the medical and surgical professions. This should occur based on the improvement potential to the profession alone, however it can also be said that given infective agents including bacteria have now demonstrated the ability to perform voltage gated ion channel firing (communication) the field of neurology needs to update past such basic science and improve to the level of advanced science, represented by quantum physics as a starting point. The medical and surgical professions broadly need to follow suit with respect to such a pathway forward.
- 7) The medical profession appears to be lagging other professions including the computing and IT industry, with examples represented by the following:
  - The lack to date of proper consideration with respect to the consciousness of infective agents (including bacteria and viruses). The current researcher Dr Simon Raymond commenced discussion with respect to the topic in publication.
  - The tremendously slow response time of the medical profession with respect to dealing with infections. The IT industry deals with new infections at a very rapid pace, apparently often the same day. In comparison, the medical profession takes many years of research and even then seems to lack successful eradication (or, even therapeutic treatment of) of many infective agents. Substantial improvement needs to occur in the medical profession. There are arguments against excuses that biological infections are more difficult to combat than IT infections. In addition, the IT industry is facing the same stressors with respect to dealing with potential consciousness of relevant entities. In fact, there are arguments that the IT profession has always had similar levels of pressure to that of the medical profession.
- 8) Examples as a commencing point, regarding the application

of quantum physics to medicine, may include: In neurology (and, ophthalmology) the updating of basic principles, for instance: (1) an understanding that the central beam theory may perhaps be better explained by way of scientific principles, in quantum physics, revolving around light acting in both wave and particle forms and, by application of the pinhole aperture, light may arguably as result hit the retina more predominantly in particle form, and subsequently in a more concentrated manner, thereby increasing visual acuity; (2) monocular abilities to judge depth (depth perception) may perhaps be better explained through interaction of diffraction wave patterns (E.g. from points of different distance relationships), with accompanying neurological calculation of time and distance relationships based on such analysis, as opposed to historical explanations such as texture gradient, interposition, relative size etc. Interestingly, partial coherence interferometry (used in ophthalmology for measurement of ocular axial length in calculation regarding the IOL to be implanted in the surgical eye), utilizes such principles. The author intends to seek patent rights regarding application of quantum physics to medicine and surgery.

- NB: Infective agents may also be functioning at the level of quantum physics.

## Summary and Conclusion

The concern with respect to antimicrobial resistance and the associated health threat has gained increasing attention and there has been difficulty in gaining traction globally. Given the lack of success by the two pathways established to date which have focused on: 1) “replication of infective agent.” and, 2) “immune system enhancement”, the current researcher has conceptualized (invented) the new, or third, mode of action pathway represented by “site attachment inhibition (or, negation of cellular attachment by infective agents).”

A number of key issues need to be addressed in the process of (or, prior to) considering the strategic implementation of site attachment inhibition therapeutics. This includes proper consideration by community and ethics based committees with respect to issues including those afore-stated [1-4,17].

It appears noteworthy that the medical profession is lagging behind other professions to a substantial degree without any reason that would seem to hold credibility. It is also of note that the profession was historically considered one of the most prestigious and high profile professions recognized globally. The innovative and creative professions revolving around IT and computing would seem to possess the ability to not only adapt rapidly to changing environmental circumstances but also maintain a culture of high-level professionalism and continual knowledge and ability updating. The high-level of management skill (including strategic management) perhaps contributing to the ability of these professions to excel. It may be that the medical profession is experiencing difficulty in adapting to the contemporary environment which requires flexibility, rapid adaption to environmental change and the ability to leverage the key drivers of relevant industries, whilst at the same time addressing in a professional manner any ethical issues in an integral manner. In conclusion, this publication has presented “site attachment inhibition therapeutics.”

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