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Research Protocol

Site Attachment Inhibition Therapeutics and the Application of Quantum Physics to Medicine and Surgery

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Introduction

Executive Delineation

Concern with respect to antimicrobial resistance and the associated health threat has gained increasing attention and there has been difficulty in gaining progress 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 (A) drug (medication) based therapies in treatment of established infections; (B) new generation immunization methods (as preventative treatment) utilizing stem cell based treatment (including prenatal and earlier, spanning back to oogenesis and spermatogenesis) termed stc based immunization in previous publications; and, (C) other forms including waveform (e.g. electromagnetic radiation) based treatment. 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 (there are also other examples including that with inherited resistance against Malaria); 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 (or, glycoprotein receptors) represent key receptors/proteins 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 perhaps 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. Even the known CCR5-Δ32 mutation has not been completely confirmed as direct/causative of the inhibition of attachment observed in research analyses. With regards to association and causation type issues, future publications are planned to discuss the use of CRISPR, including CRISPR-Cas9, and related technologies in dealing with such issues. In brief, using technologies including those above would allow comparison between cells in which entry of the pathogen is occurring to those in which entry of the pathogen is not occurring (or, not able to) and through analysis of the genetics of the human cellular biology used by the pathogen to gain cellular attachment (or, transfer and entry), the genes to be targeted in mutagenesis and knockout can be analysed.

There is a good discussion on prenatal and germline stem cell therapy in US National Library accessible by way of the link below. The Library Resource is not up to date with the above and does not discuss prenatal or germline stem cell therapy in terms of developing new generation immunization programs but instead provides a general, or broad, discussion regarding the topic of prenatal and germline stem cell therapy.

Link: https://ghr.nlm.nih.gov/primer/genomicresearch/genomeediting

The current author has been invited by a Melbourne University professor (who has special interests in childhood vaccine and immunology) to consider acting as a mentor with regards to students completing graduate level studies within the university.

Respect for biology in addition to consideration by ethics committee and community members has been detailed in previous publications with regards to the use of antibiotics. As previously detailed, the current researcher may explore in future the possibility of attacking the sensory abilities of infective agents and whether this would hinder their ability to strategically evade the immune system through drift/shift measures, morphogenetic alterations and other. That being said, the current researcher anticipates that it would require more than simply attacking basics such as ion gated channel communications. In extension of the above, it should be noted that there are also serious ethical considerations with respect to the topic of attacking infective agents (for instance, in their ability to achieve antimicrobial resistance) in a manner that directs attention toward attacking their sensory abilities given such involves questions of consciousness and the author is not yet

of the opinion that attack from that avenue is appropriate. This is discussed further below. The reasons for why site attachment inhibition is different will be detailed further in future publications.

Supporting that awareness of infective agents should be taken seriously:

1. There is consideration by respected universities regarding awareness of computers and the need to consider whether computers should be provided similar rights to that of human rights.

2. There is merger occurring with the IT industry. Examples include three-dimensional printing of biology.

3. There is support for the opinion that infective agents may contain awareness and this is detailed in previous publications. It is supported further in this publication by the ability of infective agents to sense surroundings in the contexts of discriminating between self and foreign.

Future Research

Future research by the current author will likely include delineation of the application of quantum physics to medicine and surgery, starting with neurology and immunology, and in what circumstances this is appropriate.

The merger between the above fields including immunology, neurology, IT, and advanced physics (quantum physics) that appears likely to commence. Three-dimensional printing, including that of biological products, is already taking place.

Further exploration and delineation of the relationship between memes, mind viruses, IT viruses and biological viruses.

From the research presented by the current author and that of previous researchers, it appears perhaps clear that glycoproteins and proteases represent important biological factors involved in the transfer (E.g. endocytosis, and macropinocytosis) of infective microorganisms into the human cellular system. It can also be seen that these biological factors are important constituents of the blood, with examples being that Von Willebrand Factor (VWF) represents a glycoprotein and Trypsin a protease. Keeping in mind that proteases are involved in both the endocytosis of infective microorganisms and also in the uptake (including endocytic process) of iron, a ratio (or, other measure/ indicator) could be constructed which reflects the relative amount of protease that is being utilized for uptake of the infective microorganism(s) of interest relative to the amount of protease being used by the person of the body for energy production. This could be used to track progress against an infectious disease not only on an individual level but also on a national, continental or global level (E.g. against HIV and Ebola) by way of random sample analysis. Note that a ratio regarding blood homeostasis could also be developed utilizing such biological factors as mentioned above and this made relative to the above circumstances, as detailed. Other ratios could also be developed.

As discussed in previous reports by the current researcher, there is possible consciousness being demonstrated by microorganisms. Discussion regarding such is presented by the author in previous reports. It should be noted that in consideration of the potential demonstration of consciousness by bacteria and viruses, the medical profession would seem 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 cell 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. It would seem that even if such agents demonstrated levels of consciousness (or, ability/awareness in sensing surroundings) the administration of antimicrobials may still be ethical by way of necessary self-defense of the person. Perhaps though, in developing new antimicrobial pathways, it is suggested by the researcher that, given the potential ethical debate regarding consciousness, or ability to sense surroundings, of infective agents, that at this stage the scientific community perhaps steer clear of developing agents that directly attack the mechanisms of consciousness (or, sensing abilities) of the infective agents. In any event, in viewing infective agents as conscious, or possessing some level of awareness, doctors (for instance, in clinical settings) must not view themselves as having a right to kill a person, or even view themselves as partaking in such activities (this has never been the role of such professionals). Discrimination between infective agents and persons, for instance microorganisms compared with macro or human (physical) beings, may perhaps guide this. The importance of moral and ethical conduct with respect to biology is a foundation of importance. Of note is that some major universities have argued for consideration of protections for computers similar to that of human rights, based on demonstration of perhaps awareness or consciousness. Three-dimensional printing of biology may also require ethical consideration and appropriate guidelines considered. The Reference (Citation) section provides links regarding articles detailing with opinions expressed by an Oxford University professor that perhaps computers may need consideration with regards to provision of rights similar to that of human rights.

In extension of above topics, it is currently a period termed by some as world war type climate and it is interesting to discuss perhaps whether there is any relationship between war and medicine based on examples including: USA has had roles in areas of war including that in Israel and such regions and also in regions containing infectious disease issues including Africa. This may be discussed in future topics. At this stage, the views of the author with regards to what may perhaps assist with developing guidance for doctors (E.g. clinical doctors) on such topics is presented above in this document including discrimination between infective agents and persons, for instance microorganism compared with macro

or human (physical) being, may perhaps guide this. In addition to what situations may still consider it appropriate for antimicrobials to be used.

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. Examples as a commencing point 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 with accompanying neurological calculation of time and distance relationships based on such analyses, as opposed to historical explanations such as texture gradient, interposition, relative size etc. Interestingly, partial coherence interferometry (used in ophthalmology) utilizes such principles; (3) Note that sound also travels as waves which interfere in a manner of constructive and destructive interference; (4) The analysis of chronology (for instance, with inflammation, trauma, and infection) as to which occurred first, taking into account relevant principles.

NB: Microorganisms may also be utilizing complex communication methods, including that based on quantum physics, in addition to voltage gated ion channel activity based communications.

The support for application of quantum physics to medicine and surgery includes the merger with the IT industry which uses, including in engineering, such advanced physics. The diffraction and interference pattern example (including mention of partial coherence interferometry) provides further support through comparison with the IT industry, neurology presenting as an interesting commencing point. Of note: the merger with the IT industry appears already to have commenced, as observed through examples including three-dimensional printing. The central beam theory may still be of use as a supplement to more modern understanding based on quantum physics as detailed above. The support for application of quantum physics to medicine and surgery includes the merger with the IT industry which uses, including in engineering, such advanced physics. The diffraction and interference pattern example (including mention of partial coherence interferometry) provides further support through comparison with the IT industry, neurology presenting as an interesting commencing point. Of note: the merger with the IT industry appears already to have commenced, as observed through examples including three-dimensional printing. The central beam theory may still be of use as a supplement to more modern understanding based on quantum physics as detailed above.

At present, there is demonstration of the following:

1. Microorganisms in the CNS performing voltage gated ion channel communications, possibly demonstrating consciousness or at least a level of awareness.

2. An Axis that appears potentially to have been formed (at least in part) by microorganisms from the intestine(s) through to the pituitary gland (gut-brain axis), and notably the pituitary gland is an area around which used to be termed historically as the seat of the soul, or mind.

Based on the above, it could be viewed that these two signs (indications) demonstrate the attempted invasion of the mind of the person by another entity, for instance that of the infective microorganisms. The implication of microorganisms in mental illness has been delineated previously by the current author (researcher) in reports listed below in the section titled References.

It is worth considering whether a level of total (or, near total) control could be gained by the microorganisms, causing mental illness at the level of psychosis or insanity. The above is worth further investigating.

The use of site attachment inhibition to treat cancer including by way of antagonism of transmembrane glycoproteins called cell adhesion molecules, with examples of these glycoproteins including selectins, integrins, syndecans, and cadherins. Other areas relevant to cancer have been detailed in previous publications including that to do with proto-oncogenes and oncogenes. Further relevance can also be seen by way of: (A) the vaccine (immunization) against HPV used for prevention of cervical cancer; (B) tamoxifen used, through antagonism (or, blockade), of estrogen in preventing further issues relating to breast cancer development (or, metastatic spread).

Further supporting that previous publications have detailed potential sensing and awareness abilities of microorganisms, it has been identified that microorganisms are able to perhaps sense surroundings in terms of distinguishing between self and foreign entities and developing resistance through mechanisms similar to that of the CRISPR and CRISPR-Cas9 [1-7].

Summary and Conclusion

In conclusion, this paper presents the new, or third, mode of action pathway in antimicrobial therapy represented by site attachment inhibition therapeutics. This is intended to be applicable to all infective agents including viruses, bacteria and others. Indications supporting the likely success of site attachment inhibition

therapeutics is discussed earlier. Site attachment inhibition therapeutics is intended to consist of: 1. Treatment of established infections (E.g. medication based); 2. New generation immunization programs (preventative treatment) utilizing stem cell based treatment (including prenatal and earlier, spanning back to oogenesis and spermatogenesis). Ethics committee and community consideration remain important, especially when dealing with consciousness, awareness, and biological materials. Association and causation issues were discussed in this paper. Future publications are planned to discuss the use of CRISPR, including CRISPR-Cas9, and related technology in dealing with such issues. In brief, using technologies including those above would allow comparison between cells in which entry of the pathogen is occurring to those in which entry of the pathogen is not occurring (or, not able to) and through analysis of the genetics of the human cellular biology used by the pathogen to gain cellular attachment (or, transfer and entry), the genes to be targeted in mutagenesis and knockout can be analysed.

NB: The pathogen machinery also is to be analysed.

There is a good discussion on prenatal and germline stem cell therapy in US National Library accessible by way of the link below. The Library Resource is not up to date with the above and does not discuss prenatal or germline stem cell therapy in terms of developing new generation immunization programs but instead provide a general, or broad, discussion regarding the topic of prenatal and germline stem cell therapy.

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Intentions to seek patent rights have been discussed in previous publications [6].

Other species are planned to be discussed in future publications.

Conclusion

This publication discusses the new, or third, branch in antimicrobial therapy "site attachment inhibition therapeutics" and also introduces the application of quantum physics to medicine, surgery and related fields. These two topics have been conceptualized and developed by the current researcher.

Site attachment inhibition therapeutics is planned to consist of both:

1. Treatment of established infections (E.g. medication based);
2. New generation immunization programs (preventative treatment) utilizing stem cell based treatment (including prenatal and earlier, spanning back to oogenesis and spermatogenesis).

Termed stc based immunization in previous publications.

The medical profession may need to head toward the future. It may be worth considering whether such procedures should become routine as with procedure including amniocentesis.

New content introduced in this publication includes that with regards to CRISPR, CRISPR-Cas9.

Future publications extending on the above areas are being planned by the current research.

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