

Advancing The Biomedical Paradigm Ewing GW

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Abstract

The author considers how greater understanding of the biological mechanisms and, in particular, how the brain regulates the autonomic nervous system and physiological systems can lead to the development of technologies which advance the prevailing biomedical paradigm. In particular he considers the Strannik technology developed by Dr Igor Gennadyevich Grakov and its potential to improve the screening and treatment of medical conditions at significantly lower cost.

Keywords: Strannik; Neuromodulator; Autonomic nervous system

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Introduction

The ever increasing demand for healthcare challenges governments in an unprecedented manner. If allowed to increase further it threatens global prosperity because, in simple terms, every dollar spent on healthcare is a dollar which cannot be spent elsewhere i.e., the spiralling cost of healthcare is a drain on the world economy which has to be financed from taxation and/or profits.

There is a worldwide shortage of doctors. Moreover there are significant shortcomings and limitations of the current healthcare model which is provided by the primary care GP and is supported by a plethora of secondary care specialists [1]. Furthermore there is not a recognised or accepted cause of most common pathologies. Whilst it is recognised that smoking damages lung function and that the consumption of alcoholic and/or acidified beverages, lack of exercise, hyperindulgence, obesity, psychological and/or psychophysiological stress, increases predisposition to pathological onset e.g. of diabetes, cancer(s), alzheimer's disease, etc; it is not yet accepted that these issues (with the exception of smoking) are the fundamental cause of pathological onset.

Such conditions alter the fundamental nature of the biological environment which enables pathological onset and progression to occur i.e., by increasing the levels of blood glucose and lipids; by introducing foreign toxins; by increasing the prevailing level of intercellular acidity which (i) depletes the body of minerals, vitamins and profactors; and (ii) increases levels of heavy metals which facilitates the onset of free radical reactions and/or other pathological processes.

In recognition of the need to stimulate the development of radical innovative technologies which would ultimately lead to better and less expensive ways of screening and/or treating patients the European Commission established the Human Brain Project [2] and the US government established the Brain Initiative however the fundamental aims and objectives of these projects, in particular the Human Brain Project, was completed in the period 1981-1997-2006 by the brilliant researcher Igor Gennadyevich Grakov (Dr) i.e., before the idea for the Human Brain Project had been perceived by Henry Markram [3]. Grakov completed what has hitherto been regarded as medicine's 'holy grail' i.e., a mathematical model of how the body is regulated [4] via the autonomic nervous system and physiological systems.

Grakov made a number of observations which have immense significance to the future of medicine:

1. That the fundamental purpose and/or function of the brain is to regulate the body's stability – that everything which we think or do, including our emotional consciousness [5], psychological profile [6] and how we act or behave, is linked to our biology;
2. That changes of colour perception have pathological origins – this occurs because pathological processes are accompanied by the emission of bioluminescence which influences colour perception in the retina [7] – and hence that a cognitive test could be used to screen patient health in an extraordinary level of detail [2,8,9];
3. That in many cases the body produces more of a particular protein than it requires i.e., the levels of coiled and reactive proteins and the reaction conditions which facilitate the

- reaction of a protein (and/or biologically active moiety) with its substrate have to be taken into account;
4. That light functions as a photo-activator of proteins and hence of protein-substrate reactions; and
 5. That the brain is sustained by the flow of nutrients from the viscera yet it functions as a neuromodulator regulating the stability of the autonomic nervous system and physiological systems [2,8,10,11].

Discussion

Grakov's Strannik technology performs two fundamental functions: (i) as a screening technology [9] which is able to determine the onset and progression of pathologies in all main organs (typically 15 pathologies per organ in the 30 main organs), each pathology being defined in terms of its genotype and its phenotype [10]; and (ii) to treat the most destabilised physiological system thereby re-establishing optimum autonomic stability and homeostasis [11]. Such a technology is an extraordinary development which initial research has indicated appears to be more advanced than any current technology(s) [12,13].

Grakov's Strannik technology has the potential to reduce the number of patient consultations and thereby improve the effectiveness of the GP; to reduce the need for patients to see their GP (they can access the technology, do the test, and receive their test results without needing to see their GP); reduce the flow of patients from primary care to secondary care; improve therapeutic outcomes and reduce the need for drugs; reduce the need for blood/fluid samples, syringes, rubber gloves; reduce the need for histopathology testing (in particular to confirm test 'positives' and eliminate the tests which yield a negative); reduce the number of journeys to and from the doctor and hence lower

vehicle emissions; screen the health of the patient throughout their lives and lead to the proactive introduction of measures to prevent or slow pathological progression. Initial estimates of cost-savings are at a level which is far beyond any current cost-saving initiative, typically 15-25% of current total healthcare expenditure.

Such a technology would complement the 'care manager' model identified by Ciccone et al. [14] although currently covered by the existing primary care model, implemented by the GP, in the UK.

Conclusion

Although Strannik has been available since 1997 it has not received an enthusiastic response from the medical profession who, it would be fair to say, have difficulty understanding how a cognitive technique could be so effective and hence regard it with suspicion and/or as pseudoscience. Responses to date include (i) 'over my dead body', (ii) 'do you really think that this will catch on', (iii) not invented here, (iv) 'this is not what I entered medicine to practice', (v) hocus pocus, (vi) snake-oil salesman, (vii) the medical profession is sick of change, (viii) the medical profession would not embrace such a complementary and/or alternative technique.

This raises a question: 'What is the purpose of medicine or medical research?' Is it to sustain vast numbers of jobs; or to sustain the flow of taxes to the government; or to provide profits for healthcare, medical devices, and pharmaceutical companies; or to enable clinicians or researchers to develop yet another diagnostic test or drug of dubious validity thereby further increasing the complexity of healthcare; or is it to provide a better quality and quantity of life for the ordinary citizen?

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