Psychology and Psychiatry: Open access

Extended Abstract Open Access

Auto-inflammation is a Diaeventontological Trigger in Neuropsychiatric disorders

Daniel J Guerra

VerEvMed and Authentic Biochemistry, USA

Single biochemical or cellular events cannot be expected to explain complex neuropsychiatric disease and, while animal models are indispensable for pharmacotherapy and pharmaceutical discovery, they will not fully apprehend these human disorders. Clinical studies have the advantage of authentic examination of human neuropsychiatric pathology, but they cannot holistically arrive at sound theories or practice for surmounting these debilitating diseases, even when precise molecular tools are employed. This is because 'Systems' approaches such as the standard OMIX platforms or cell Sorting/Screening from biological specimens fail to imagine the three-dimensional architectonics of Genetic Environmental and Neuroimmunoepigentic phenomena as event ontologies through time. The distinction is based on arrangement of a recombining between the phenomenological and the metaphysical states appropriated from neuropsychiatric diagnosis from the existing individual perspective rather than externally, as if from a static organization into categories of pathophysiology as outlined in the DSM. This turn to the individual diagnosis,allows for the fusion of event ontologies with the personal experiences of the existing individual. This is how the immune system integrates neurophysiological states with neuropsychiatric disease.The immune system encounters perpetual modifications of the stress-laden environment and most of these cellular and signal tranducing cascades of biochemical pathway alterations are subsumed in transcriptionl and post-translational molecular events. However, the environment also generates a 'plastic response' on the chromatin that leaves behind covalent modifications including methylation of CpG islands and acetylation of lysine residues of histone proteins in association with duplex DNA. These epigenetic alterations, along with micro-RNA mediated control of mRNA translation, function to maintain a perpetual existing into each successive temporal sequence and therefore represents the unique manifestation of each existing individual as a perpetual becoming at the molecular and cellular levels. This is the neuroeimmunoepigenome that ultimately carries the phenomenological signatures including healthy and pathological neuropsychiatric states. Therefore, a paradigm shift is necessary to approach and indeed engage neuropsychiatric disease. A Diaeventontological method is therefore proposed. It starts with a dialectic approach that transcends dogma and conventional principles while preserving truths via coherence and foundational ascendency by isolating and verifying premises that can be used to generate sound epistemological arguments. This is sequentially followed by the generation of hypotheses via the deductive method by implementing careful hermeneutical analysis of both cross-sectional and cohort-based published research. Once theses/ antitheses / syntheses have been proposed according to a justification of truth qualia that better explains the necessary and sufficient relational competency of rational foundational concepts, temporally centered experimentation using human subjects allow for a comprehension of biochemical interactions as a vectorial dynamic flux within cells/tissues/organs and entire organisms that recognize these as processes having three phases: Initiation, Extension and Termination. A case in point are T lymphocytes that react in the intact human dynamic event ontology to respond to the environment, maintain cellular and physiological health and to prepare for future change that includes nutrition, neurological imprinting, disease and aging. T lymphocyte lineages and associated biochemical communication are modified via changes in the epigenome as well as canonical inducible and repressible gene expression and membrane recombination. Synergy between IL-12 and IL-18 for the induction of IFN-γ production and subsequent involvement of the heterodimeric IL-12 receptor leads to STAT4 phosphorylation after recruitment of the kinases Tyk2 and JAK2. STAT4 then transactivates IFN-γ transcription and upon binding of IL-18 to its receptors, there is activation of the MAPK pathway downstream leading to the stabilization of IFN-γ mRNA and enhanced IFN-γ secretion by NK cells. Secreted IFN- γ also activates B cells to mature to IgG producing plasma cells from germinal centers thus inducing a potential autoimmune disease when initial antigen presentation involves host metabolites.IL-12- co-activation of STAT1 and STAT4 mediates histone modification, with a sequentially expanding T follicular helper -Th1-like cells activation and recruitment. When these biochemical and cellular pathologies align in specific CNS nuclei, an autoimmune neuropsychiatric event may result. Using the conventional scientific methods in neuroimmunopsychiatry needs to be re-evaluated. There is always an initial proposition that works as a premise which requires data as transformed into definitive evidence (because of disinterested experimentation). This first movement of the "classical method" functions a priori with the flavor of both necessity and universality in subsequent neuropsychiatric or neuroimmune evaluations and diagnoses being prejudicially deployed as a foundation for treatment and conceptually, to inform further research into the processes of transcendental psychology. This classical process is then is followed discursively via deduction(reasoning from the general to the specific) toward an hypothesis which must be tested empirically via experimentation to reach results that are tabulated into data and finally analyzed critically into evidence that is used to make a new generalization (induction)that either supports the original premise or refutes and thus suggests to replace it. However, the creation of the hypothesis generated with a deductive analysis of previously agreed upon scientific judgments was derived from reasoned analysis of evidence that has been judged accurate, reproducible and thus predictive; hence biasing all future use of the determined inductive conclusion tethered to the original hypothesis as current theory. Therefore a dialectical treatment of this scientific method is lacking in the principle of uncertainty which includes the possibility of error; only an event ontological pathway can lead to the exit from this cave of cyclical a priori judgement. The event in question involves an inclusion of change over space-time as per the observer and the observed as eventuated by the observer himself. .These changes can be followed by close scrutiny of the immune responses during treatment by examining innate immune pattern recognition receptors (e.g. TLR's) and their activation of circulating neutrophils and monocyte -macrophage lineages ultimately leading to dendritic cell mobilization to lymph glands thus involving lymphocyte-mediated acquired immune responses in the pathology of the neuropsychiatric status From these biological data , the analyst can have a discrete individualized neuroimmune event-status of each individual patient that can be monitored over time and treatment modalities subsequently

Psychology and Psychiatry: Open access

Extended Abstract Open Access

by analyzing patterns of change in cytokine, chemokine and growth factors in circulation. In my view, the ontology is the environment that also changes over space-time but is independent of its substance as defined by the observer and yet only apprehended by his owned phenomenology. I conclude therefore that all science is approximation and any judgement based on research can lead to ideas only pretending to be justified true beliefs.Knowledge depends upon coherent and foundational aspects of nature called truths plus argumentation based on reason and empiricism plus the necessity for individual belief. Neuroscience and scientific research in general explain what truths may become; subsequently and uncertainly. Owning this phenomenology may provide a more robust and individualized neuropsychiatric research and practice, to advance treatment and recovery, as we move more deeply into the 21st century.