PULSUS
WWW.PULSUS.COM
35 Years in Assessing the Impact of Healthcare Research

8th International Conference on

Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Poster Presentations

38 YEARS OF EXCELLENCE IN MEDICAL PUBLISHING

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Receive date: 19-08-2022 | Accepted date: 22-08-2022 | Published date: 10-10-2022

Lipid based nanoparticles for treatment of CNS diseases: Review article

Paria Aminroaia[1], Salar Masoomzadeh[2]
[1]Lehigh University, USA
[2]Tabriz University of Medical Sciences, Iran

Central Nervous System (CNS) is one of the most important organs which is managing so many functions in human body. So, impairment of its function may results in several disorders in body, or CNS diseases, which are considered very important. CNS diseases are divided into many different groups and each group is treated with its own related medication. Some drugs that are used for treating CNS impairments have disadvantages like short length effect, renal and digestive toxicities and restrictions in pharmaceutical form. Some other drugs may cause complications worse than disease itself so the scientist should find the ways to solve these problems.

Methods: First "Scopus", "PubMed", and "ScienceDirect" were searched with the keywords "CNS". "CNS diseases" and "lipid based nanoparticles" and the whole articles were collected; then the most irrelevant and inappropriate articles was removed and 105 articles were remained; at the last section of article selection the best articles was selected from the 105 articles that were remained and the finally selected articles were reviewed and this article was written.

Results: The review of many important articles and summarizing them was shown that the scientists and drug designers have used many ways to overcome all or some of the disadvantages of the CNS drug delivery (as mentioned above) and they found that one of the best ways to fix these bugs is using lipid-based nanoparticles in nanotechnology field.

Recent Publications

1. Kanazawa T, Akiyama F, Kakizaki S, Takashima Y, Seta Y. Corrigendum to 'Delivery of siRNA to the brain using a combination of nose-to-brain delivery and cell-penetrating peptide-modified nano-micelles' [Biomaterials 34 (2013) 9220–9226]. Biomaterials. 2014;35(13):4247
2. Hwang SR, Kim K. Nano-enabled delivery systems across the blood–brain barrier. Archives of Pharmacal Research. 2013;37(1):24-30.5
3. Høgsberg T, Loeschner K, Löf D, Serup J. Tattoo inks in general usage contain nanoparticles. British Journal of Dermatology. 2011;165(6):1210-8.

Biography

Paria Aminroaia has her expertise in pharmaceutical and is passionate in improving the health and research. Her open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. She has built this model after years of experience in research, evaluation, teaching and administration in pharmaceutical companies. This approach is responsive to all stakeholders and has a different way of focusing.

paa522@lehigh.edu

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date: 18-08-2022 | Accepted date: 22-08-2022 | Published date: 10-10-2022

A safety net: Novel natural-product based drug discovery design as a viable solution to the on-market natural nutrition products that possess pro-cancer qualities

Jessie Dong
Roslyn High School, New York, USA

With supplement and nutraceutical trust and consumption at a record high with a rise in >103 countries, an alarming public health crisis is emerging. Even in Europe where regulation is considered to be the strictest, these products do not require authorization. In the U.S., product potency and purity are not cleared by the FDA and it is voluntary for companies to report adverse effects. The present study assessed youth behaviors to marketed nutrition products, demonstrated wet-bench research on core compounds in the products (luteolin, resveratrol), and herein for the first time, constructed a viable solution to combat the consequences: a novel design to repurpose dangerous marketed products for drug discovery expedition. Trust and consumption for luteolin (supplements) and resveratrol (nutraceuticals) has dramatically increased. Of particular interest are the growing claims on therapeutic benefits, especially because many youth are purchasing these products as preventative cancer care. Wet-bench research was conducted on luteolin and resveratrol on three cancers (neuroblastoma, lymphoma, and colorectal) through cellular assays, organoid models, flavone combinations, and to qualify the mechanisms, data science and molecular profiling was applied. Results indicate that youth tend to trust natural products, perhaps due to the view that the pharmaceutical industry is problematic. Results demonstrate that luteolin does have therapeutic effects on both cancers likely via mitochondrial matrix 1 yet certain concentrations have significant adverse effects.

Given that 85% of labels neither contain the maximum dose nor dosage amount of each ingredient, this research is a call to action to advocate for reform in the supplement industry and understand that natural does not mean neutral: caution and proactivity are imperative. The conditional benefits of the products can be repurposed into the novel model for drug discovery that is natural-product based.

Biography

Jessie Dong is a student in New York who hopes to major in bioethics and pursue a career that is an intersection between public health policy and translational medicine. She has done extensive research on public health including topics on vaccine hesitancy, water bioremediation, unregulated nutrition products, and the dangerous lack of communication between academia and industry. She has been invited to many research fairs such as Columbia University's Research Symposium, New York State's Science and Engineering Fair, the Regeneron International Science and Engineering Fair, and the International Genius Olympiad. She also pushes for public health policy through her project-based organization PFPH (Push for Public Health) and through working with programs at the T.H. Chan School of Public Health. She is enthusiastic about working with others to alleviate the consequences that public health crises have brought into our world.

jessiesagedong@gmail.com

8th International Conference on
Neuroscience and Neurological Disorders

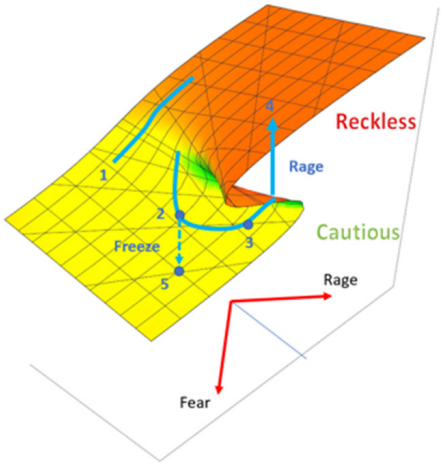
September 28, 2022 | Webinar

Received date: 03-09-2022 | Accepted date: 05-09-2022 | Published date: 10-10-2022

Cusp catastrophe model of intermittent explosive disorder and road rage

P J Riley
Deakin University, Australia

Recent studies in Intermittent Explosive Disorder (IED) have addressed the aggression faciltatory role of an underlying complex neurochemistry (NC) detected by inflammatory markers. These studies confirm that there are non-personality mechanisms which drive aggression in an agonist/antagonist modulating mechanism. Whilst these models are successful in identifying NC processes, they do not address the "explosive" nature of aggressive behavior observed in both IED and average subjects. Lorentz/Zeeman successfully modeled explosive aggression with Rage and Fear as competing co-existent drivers leading to behavioral hysteresis. We previously demonstrated a cusp catastrophe model for abnormal sleep/wake cycles based upon a general principle in Logistic catastrophes where there are two competing processes, the sleep & wake NCs mediated by a scavenging function. We now propose a Lorentz/Zeeman type Logistic Cusp Catastrophe model with competing NCs and scavenging, promoting both Rage and Fear, applied to road rage behaviors. Overall, the model explains a variety of behaviours observed in road rage incidents that are not readily explicable in 2D linear models.



Conclusion

Several trajectories are demonstrated in the figure above:

1. A smoothe transition between states as modeled by typical 2D agonist/antagonist mechanisms.
2. Average driving requires acquisence to driving regulations so is driven by low level fear to conformity unless provoked by threatening situations.
3. Aggressive driving by IED subjects starts them closer to the catastrophe cusp and are more susceptible to abrupt changes in behaviour.
4. 'Close to the edge` subjects require only minor provocations to be driven to the cusp with a subsequent catastrophic 'explosive' jump to the reckless driving state ie. Rage.
5. Drivers who are overtaken by fear tend to exhibit a freeze in their behaviour.

Recent Publications

1. A Neurochemistry Cusp Catastrophe Model of Abnormal Sleep-Wake Cycles, Riley.P, EC Psychology and Psychiatry 8(1):50-52 01 Jan 2019.
2. An evaluation of the effect of tube potential on clinical image quality using direct digital detectors for pelvis and lumbar spine radiographs, Peacock, Steward, Riley.P, Journal of medical radiation sciences 67(4):260-268 Dec 2020.
3. Cusp Catastrophe Models in Neurochemistry & Behaviour, Riley.P, Neuroscience Summit 2021, virtual, 05 Oct 2021-05 Oct 2021.

Biography

Peter Riley is a Consultant in Medical Physics teaching into the Medical Imaging course at Deakin University. He has previously undertaken non-linear modeling of tumor growth and abnormal sleep/wake cycles. He is developing Deep Neural Networks for the detection and staging of disease from medical images, including covid-19 and prostate cancer.

peter.riley@deakin.edu.au

PULSUS
WWW.PULSUS.COM
35 Years in Assessing the Impact of Healthcare Research

8th International Conference on

Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Accepted Abstracts

38 YEARS OF EXCELLENCE IN MEDICAL PUBLISHING

8th International Conference on

Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date: 05-06-2022 | Accepted date: 07-06-2022 | Published date: 10-10-2022

Precision teaching: A dynamic match for education in Neurosurgery

Laurel A Seltzer[1,4], Ryan E. Radwanski[2,4], Susan C. Pannullo[3,4]

[1]Department of Neurological Surgery, Tulane Medical Center, New Orleans, LA, USA
[2]Department of Neurological Surgery, Rutgers and RWJ Barnabas Health, New Brunswick, NJ, USA
[3]Department of Neurological Surgery, Weill Cornell Medicine, New York, NY, USA
[4]Medical Student Neurosurgery Training Center, Brain and Spine Group, Inc., Pasadena, CA, USA

Introduction: Neurosurgical education in medical school lacks a cohesive structure, reiterated by widespread variability in curriculum content. Of increasing use in medical education, precision teaching (PT) comprises a standardized, targeted teaching approach with quantifiable outcomes. Herein, we detail our use of PT as a model for creating a global set of neurosurgery learning objectives for medical students, evaluating for its educational efficacy and clinical practicality.

Methods: We enrolled 14 medical students in the project, each of whom expressed interest in neurosurgery and participated voluntarily. Participants ranged from years two through four of their medical school training, included one MD/PhD candidate, and represented four US medical schools. Participants were randomly assigned to five groups. The study design included participation in weekly hour-long educational sessions taught by a multidisciplinary team comprising a neurosurgeon with expertise in brain and spine tumors, a neurosurgery PGY-1 resident, and a PT specialist. Groups then formulated PT-based learning objectives for assigned subtopics. Faculty participants from each subspecialty assessed for accuracy and functionality and provided targeted commentary, which was addressed with appropriate content modifications. Participant feedback was obtained continuously throughout the study.

Results: Through student participants' evaluations, a PT-based model was found to clearly identify and systematically construct learning objectives with pinpointed and measurable outcomes. The collaborative and multidisciplinary nature of the project was found to be advantageous. The objective determination of learners' successful knowledge and skill acquisition yielded favorable feedback and lended additional practical value. The magnitude of content was found to vary by subspecialty, with timeline for production modified accordingly.

Conclusion: We demonstrated that with the use of PT, a global set of measurable neurosurgery learning objectives for medical students can establish a targeted curriculum and a means for objectively determining successful knowledge and skill acquisition.

References

1. Agarwal N, Norrmén-Smith IO, Tomei KL, Prestigiacomo CJ, Gandhi CD. Improving Medical Student Recruitment into Neurological Surgery: A Single Institution's Experience. World Neurosurgery. 2013/12-01/ 2013;80(6):745-750. doi:https://doi.org/10.1016/j.wneu.2013.08.027
2. Awad AJ, Sarkiss CA, Kellner CP, et al. Impact of Neurosurgery Medical Student Research Grants on Neurosurgery Residency Choice. World Neurosurgery. 2016-08-01/ 2016;92:349-352. doi:https://doi.org/10.1016/j.wneu.2016.05.029
3. Burford C, Hanrahan J, Ansaripour A, Smith B, Sysum K, Rajwani K, Huett M, Vergani F, Zebian B. Factors Influencing Medical Student Interest in a Career in Neurosurgery. World Neurosurg. 2019 Feb;122:e367-e374. doi: 10.1016/j.wneu.2018.10.056. Epub 2018 Oct 16. PMID: 30336295.

lseltzer@tulane.edu

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date:10-07-2022 | Accepted date: 12-07-2022 | Published date: 10-10-2022

A biochemical event, ontology on the axis of the immune and neuropsychiatric systems: An epigenetic dialectic

Daniel J Guerra

Washington State University, USA

Biological phenomena involve the a priori synthesis of a Reception and Signal Transduction Cascade Network (RSTCN). This pattern of cohering event appears as energetic and mass dynamics; much like chemical bonds. The Dialectical interactions between environment and inheritance event occurs as trigonal planar axis ontology via stochastic epigenetic re-tailoring of a biological communication system using the immunological domain. This is a well-established immuno-epi-transcriptomic and lipidomic tailoring of neural, endocrine, digestive, cardiovascular, adipose, muscle and metabolic response to the micro and macro-environment through classical constitutive-surveillance and acquired- effector cellular and humoral defense mechanisms using reversible covalent modification and hydrophobic interactions of nucleic acids, carbohydrates, proteins, and lipids. A synthesis of these phenomena toward a central molecular theory for free-will drive/agency-based existing individual adaptation and assimilation that better explains the core event ontology of individual CNS development and decline, at the molecular level, would obtain a sharper grasp of the biochemical/physiological processes that become chronically compromised upon processing of perceived threatening experiential and existential phenomena. The neuropsychiatric event ontology is explicitly mediated via epigenetic modification of membrane associated signaling including synaptic neurobiochemical transmission and downstream action potential reinforcement. A thorough analysis followed by synthesis of the research literature driven by the faculties of the mind including instantiating ideation and knowledge-ordered conceptualization will be employed to apprehend this theory.

Recent publications

1. Appiasie D, Guerra DJ, Tanguay K, Jelinek S, Guerra DD, Sen R. “Multiomics” Approaches to Understand and Treat COVID-19: Mass Spectrometry and Next-Generation Sequencing. BioChem. 2021; 1(3):210-237. https://doi.org/10.3390/biochem1030016
2. Damian D.Guerra, Daniel J.Guerra. Mask mandate and use efficacy for COVID-19 containment in US States. International Research Journal of Public Health, 2021; 5:55. DOI: 10.28933/irjph-2021-08-1005
3. Guerra, Daniel J. 2018 The Molecular Diaeventology of Anxiety Disorders. In: Anxiety Disorders - From Childhood to Adulthood, ISBN 978-953-51-6712-9.InTech Open Access.

djgphd@gmail.com

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date: 23-05-2022 | Accepted date: 25-05-2022 | Published date: 10-10-2022

Prevalence of Huntington Disease in Asia, systematic review and meta-analysis

Basavaraja Papanna

Essex Partnership University, UK

Introduction: The epidemiological studies on Huntington's disease (HD) suggest that prevalence rates in the Asian population are significantly lower than the western population. Our systematic review of epidemiological data of HD prevalence in Asia has highlighted the level of impact of HD on the Asian population and limitations for HD genetic testing. \

Methods: Original articles and reviews about HD prevalence in the Asian population were found through databases such as EMBASE, Medline, and Psych Info. Relevant articles were analyzed with the scrutiny of references, including specific keywords. A meta-analysis was performed on prevalence rates to find the degree of similarities with I2. Point Prevalence was measured as the number of people affected by HD on 100,000 population and expressed as Point Prevalence (PP) = Number of people affected/100,000 with 95% Confidence Intervals (CI95).

Results: Results from random-effect meta-analysis show the highest point prevalence of HD in Middle East with PP=4.0 (CI95=2.90□-5.30). The lowest point prevalence was found in the Chinese population with PP = 0.25 (CI95 = 0.16□0.36). Europe remains at a high prevalence compared to Asian countries with PP = 1.00 (CI95 = 0.82□1.19). The overall prevalence in Asia is PP = 0.70 (CI95=0.44□1.0).

Conclusion: Our study reveals that Huntington Disease affects the population in Asia to a lesser extent than Europe, although some countries like Middle East present with the higher prevalence. The plausible explanation for differences in prevalence is that some countries the affected individuals will not self-refer to HD screening for fear of social stigma and negative influence in marriage and lack of genetic and neurological testing, and other explanation that studies that used genetic testing exclusively were able to identify the CAG repeats, subgroups of CAG repeats A1 & A2, and also haplogroup C, which has less predisposition to high HD prevalence in the Asian population when compared to the Caucasian population.

b.papanna@nhs.net

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

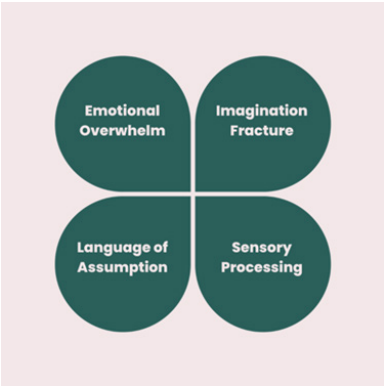
Received date: 24-07-2022 | Accepted date: 26-07-2022 | Published date: 10-10-2022

Using our approach of the "4 Foundation Blocks" to help explain ADHD, and create support to live an ADHD lifestyle

Annie Clements

CEO of Autism & ADHD, UK

Statement of the Problem: ADHD individuals can have huge challenges on a day to day basis, trying to dovetail into systems that are developed for those living with neurotypical processing. There is an expectation that if we 'try harder' we will somehow be able to achieve targets and success criteria that are based on different brains to ours, missing that if we are set targets that respond to our ADHD brains we can achieve and thrive perfectly well. To date, when this isn't done, it leads to long term mental health conditions, dependency on drugs to manage symptoms, poor work outcomes, low academic scores, family breakdown and high numbers in the criminal justice system. Our 4 foundation Block Approach has been developed from the experience of supporting 1000's of families and individuals who needed a clear, straightforward explanation of themselves so that they can move forward emotionally, academically, and practically. The structure comes from the clinical understanding of what ADHD is, and turns it into normal day to day language, creating a framework to enables both parents, individuals and professionals to understand where the challenge may be originating from, enabling support plans to be created that are achievable, with straightforward & simple strategies and resources that are adjusted to the individuals presentation and lifestyle.



annie.clements@autismandadhd.org

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date: 27-06-2022 | Accepted date: 29-06-2022 | Published date: 10-10-2022

Covert cognitive-communication impairments after brain injury and how to maximise interactions with your patient

Claire MacLaine

HCML Rehabilitation Solutions, UK

Cognitive-communication disorders are prevalent in people with brain injury and are often missed if not diagnosed by a specialist speech and language therapist. If a patient is not verbally supported to compensate for these issues, they may misunderstand and not be able to engage effectively with others. This has negative repercussions for their everyday life. Patients with brain injury often miss subtext in language, they lack the ability to understand metaphor and humour, and they have poor comprehension of the linguistic concepts of time processing and spatial awareness. These basic linguistic traits are further impeded by poor memory and attention skills, dysexecutive disorder, and impaired social cognition. Their overall central coherence is impaired, and this can leave them socially isolated. With a lack of cognitive-communication skills, patients with brain injury can become excluded from conversations as they lack linguistic error detection and repair strategies, and this can lead to inappropriate social behaviours. This has a detrimental impact on their mental health, social and vocational success, and can cause family breakdown. Many clinical services for people with brain injury focus of the immediate needs of rehabilitation to be able to be discharged home. The long-term impact of cognitive-communication impairment is often not addressed at this time by a specialist speech and language therapist, and the impact has a profound impact on the patient's long-term functioning. This humorous presentation highlights cognitive-communication issues, providing practical strategies to modify our communication to develop better interactions with our patients. The ultimate goal is to improve the quality of interactions for these patients to support them to engage more successfully in their community.

Claire.maclaine@hcml.co.uk

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date: 21-08-2022 | Accepted date: 21-08-2022 | Published date: 10-10-2022

The digital revolution and human health

Erik Matser

Psychologist, the Netherlands

The world is changing at a dizzying speed. The digital developments to which we are exposed change every second. This has major consequences for public health. New diseases are emerging with huge numbers of people dropping out. For example: myopia in combination with headache in children and complex fatigue syndromes in adults. From the brain sciences one can conclude that neurological systems are totally overstimulated in a far too high number of people. It must be concluded that medical intervention techniques lag behind the tsunami complaints related to fatigue and overstimulation and that analysis of the real cause is necessary for the next step of medicine. We can state that from a neurobiological perspective people can perform qualitatively concentrated for 90 minutes before cognitive rest is needed and that with sufficient training we can walk further than a horse. However, the digital revolution is pushing us into the chair with an overexposure in hours to visual and cognitive stimuli. So we do the exact opposite of what nature made us for. For example: Children have far too little exercise at school and far too little exercise at home, but are exposed to excessive digital exposure in their home and school environment. Moreover, hybrid and office workplaces are often insufficient to create a good alternation between mental and physical effort to stay healthy. The question must be asked: who are we really as a species and what do we need to develop optimally as humans. Without answering this question, we will get stuck in more and more complex - extreme difficult to cure health problems. This is for the young and adults.

References

1. Meier, Scott T. Kim, Sunha (2022). Meta-regression analyses of relationships between burnout and depression with sampling and measurement methodological moderators. Journal of Occupational Health Psychology, Vol 27(2), 195-206
2. C. Enthoven, J. Tideman, J. Polling, J. Yang-Huang, C. Klaver (2020). The impact of computer use on myopia development in childhood: The Generation R study. Preventive Medicine. Volume 132
3. B. Resnick, J. Belluz, E. Barclay (2019). Is our constant use of digital technologies affecting our brain health? We asked 11 experts. Vox: feb 26.

matser@neuro-psychologie.nl

8th International Conference on
Neuroscience and Neurological Disorders

September 28, 2022 | Webinar

Received date: 01-09-2022 | Accepted date: 05-09-2022 | Published date: 10-10-2022

Mild Learning Disability awareness

Emma O'Loughlin
University College Dublin, Ireland

The United Nations Convention on the rights of persons with disabilities states that a person with a disability must be given reasonable accommodation to maintain employment legally. It is against the law not to provide this accommodation. Still, unfortunately, a lot of employers will not provide this accommodation, and many governments turn a blind eye and offer little support to employers to fulfil their duties to employees with disabilities.

Awareness needs to be made in the workplace and the public domain, as a mild learning disability is an invisible disability. People diagnosed with a mild learning disability have a below-average general intellectual function. The disability manifests in a slow maturation rate, reduced learning capacity, and insufficient social adjustment. People with mild learning disabilities may also experience delayed conceptual development difficulties in articulating ideas and feelings in words. They have a limited ability to abstract and generalise content, limited attention span, and poor retention abilities. Students may also experience difficulties with reading and writing and poorly comprehend mathematical concepts. A person with MGLD is likely to struggle with the content, process, and presentation of their work on an ongoing basis (NCSE,2022).

Firstly, people must be aware they must be kind and patient with people with mild learning disabilities. They may need instructions to be repeated a few times. More time will be required to process information, and instruction must be short and precise to enable the person to understand and retain the information. Grammarly is a brilliant app to help correct spelling and grammar mistakes a person with a mild learning disability typically makes. Easy read is an app that will read a text out loud on the computer to aid understanding of the text to the person. This app also proves to be very beneficial for prove reading one's work to identify errors one has made.

Reference

1. Mild General Learning Disability. National Council for Special Education. Mild General Learning Disabilities | National Council for Special Education - CPD and In-School Support (sess., i.e.)

eo39loughlin@gmail.com