Cajal's interstitial cells serve as neurotransmission's pacemakers and mediators.

Imtaiyaz Hassan*

Department of Endocrinology and Metabolism, West China Hospital, Sichuan University, Chengdu, China

Introduction

Therefore, we introduce the term “Master modulators” for drugs or drug combinations promoting evolutionary processes or regulating homeostatic pathways Irritable Bowel Syndrome (IBS) remains an incompletely understood, common syndrome with significant unmet medical needs. Significant progress has been made in the development of novel therapies aimed at normalizing bowel habit alterations and abdominal discomfort, even though some of the most effective treatments are currently only available for patients under a restricted access program from the FDA. Preclinical evidence supports the potential usefulness of several compounds in development for the treatment of chronic abdominal pain. Recent new evidence for a possible role of altered microflora and altered host microbial interactions may provide new treatment targets in the future [1].

Tauopathies are a group of over 20 clinicopathological neurodegenerative diseases including Alzheimer's Disease (AD), the most common type of dementia, progressive supranuclear palsy, Pick's disease, corticobasal degeneration, among others. Tauopathies are defined by neurodegeneration and the presence of tau aggregates in affected brains regions. Interestingly, regional tau aggregation burden correlates with clinical phenotype and predicts cognitive status. Autosomal dominant mutations in the MAPT gene lead to tau deposition and clinical FTD syndromes with cognitive, behavioral, and motor impairment. Polymorphisms in or around the MAPT gene have also been strongly linked to other proteinopathies including synucleinopathies. Taken together these findings suggests that tau plays a critical role in neurodegeneration and proteinopathies, supporting the idea that tau targeted approaches can be disease-modifying and lead to clinically meaningful benefits in slowing or reversing disease progression. Increasingly, human clinical trials are testing this hypothesis. This article reviews tau-targeted therapies tested in clinical trials as well as agents currently in active development based on publicly disclosed information. We describe the therapeutic approaches of these trials based on the potential pathogenic mechanism they target [2].

Our increased understanding of the molecular processes underlying cellular sensitivity to ionizing radiation has led to the identification of novel targets for intervention. New agents have become available for combined use to overcome radioresistance and enhance the clinical efficacy of radiotherapy. This rational selection of potential radiosensitizers contrasts with the empirical approach that has dominated the field of chemo-radiotherapy over the last decades. It allows the identification of those patients who will benefit most from a specific combination by exploiting new predictive biomarkers of response. In this review we present several approaches of targeted radiosensitization and discuss the available in vitro and in vivo results that support their translation into clinical trials. We focus on EGFR-inhibiting, anti-angiogenic, apoptosis-modulating and PARP-interfering strategies [3].

Raditional IBS therapy is mainly symptom oriented and often unsatisfactory. Hence, there is a need for new treatment strategies. Increasing knowledge of brain-gut physiology, mechanisms, and neurotransmitters and receptors involved in gastrointestinal motor and sensory function have led to the development of several new therapeutic approaches. This article provides a systematic overview of recently approved or novel medications that show promise for the treatment of IBS; classification is based on the physiological systems targeted by the medication. The article includes agents acting on the serotonin receptor or serotonin transporter system, novel selective anticholinergics, α-adrenergic agonists, opioid agents, cholecystokinin antagonists, neurokinin antagonists, somatostatin receptor agonists, neurotrophin-3, corticotropin releasing factor antagonists, chloride channel activators, guanylate cyclase-c agonists, melatonin and atypical benzodiazepines. Finally, the role of probiotics and antibacterials in the treatment of IBS is summarized [4, 5].

Conclusion

The highest densities of cannabinoid receptor binding in the hindbrain were localized in the molecular layer of the cerebellar cortex and the dorsal motor nucleus of the vagus, with moderate densities of receptors in the nucleus of the solitary tract. The spinal cord showed very low levels of receptor binding. Studies on the distribution of cannabinoid receptors in the fetal and neonatal human brain showed similar patterns of receptor distribution to that observed in the adult human brain, except that the density of receptor binding was generally markedly higher, especially in the basal ganglia, substantia nigra and cerebellar cortex. The pattern of cannabinoid receptor labelling in the striatum showed a striking patchy pattern of organization which was especially conspicuous in the fetal brain.

***Correspondence to:** Hassan Imtaiyaz, Department of Endocrinology and Metabolism, West China Hospital, Sichuan University, Chengdu, China, E-mail: imtaiyaz@gmail.com

Received*:** *12-June-2023, Manuscript No. BMCR-23-108801;* ***Editor assigned: *14-June-2023, Pre QC No. BMCR -23-108801 (PQ);* ***Reviewed*:** *27-June-2023, QC No. BMCR -23-108801;* ***Revised:*** *29-June-2023, Manuscript No. BMCR -23-108801 (R);* ***Published:*** *o5-July-2023, DOI: 10.35841/ bmcr -7.4.151*

Citation: *Hassan I. Cajal's interstitial cells serve as neurotransmission's pacemakers and mediators. Biol Med Case Rep. 2023;7(4):151*

References

1. Yu TW, Lane HY, Lin CH. Novel therapeutic approaches for Alzheimer's disease: An updated review. Int J Mol Sci. 2021;22(15):8208.
2. Fraccarollo D, Galuppo P, Bauersachs J. Novel therapeutic approaches to post-infarction remodelling. Cardiovasc Res. 2012;94(2):293-303.
3. Pollmann R, Schmidt T, Eming R, et al. Pemphigus: a comprehensive review on pathogenesis, clinical presentation and novel therapeutic approaches. Clin Rev Allergy Immunol. 2018;54:1-25.
4. Franke AJ, Skelton IV WP, Starr JS, et al. Immunotherapy for colorectal cancer: a review of current and novel therapeutic approaches. JNCI. 2019;111(11):1131-41.
5. Barbault A, Costa FP, Bottger B, et al. Amplitude-modulated electromagnetic fields for the treatment of cancer: discovery of tumor-specific frequencies and assessment of a novel therapeutic approach. J Exp Clin Cancer Res. 2009;28:1-0.

Citation: *Hassan I. Cajal's interstitial cells serve as neurotransmission's pacemakers and mediators. Biol Med Case Rep. 2023;7(4):151*