Tentative Outline

Special Thematic Issue for Current Neuropharmacology

Title of thematic issue:

"Treatment principles and new approaches in neuromuscular diseases"

Guest Editor(s): Prof.Dr. Esra Küpeli Akkol and Prof.Dr. Haroon Khan

Aims & Scope: Muscle and Nerve Diseases (Neuromuscular Diseases, NMD) are diseases that affect the movement and sensory systems and involve the anterior horn cells (second motor neuron or motor neuron only), peripheral nerves, nerve-muscle junction and muscles in the spinal cord.

NMD is classified as anterior horn diseases (Amyotrophic lateral sclerosis, Spinal muscular atrophy), peripheral nerve diseases (Guillain Barre syndrome, Charcot Marie Tooth disease), nerve-muscle junction diseases (Myasthenia gravis, Congenital myasthenic syndromes) and muscle diseases (Polymyositis / Dermatomyositis, Muscular dystrophies). NMD can be hereditary (genetic) or acquired. The most important symptom of NMD is arm-leg or hand-foot weakness, numbness, burning, tingling and muscle cramps. Obtaining accurate information from the patient is the most important part of the diagnosis. In accordance with the information obtained from the patient, laboratory tests (creatine kinase enzyme, electromyography, muscle/nerve biopsy, radiological examination of the arm and leg (MR), genetic examination, antibodies, cerebrospinal fluid examination) are used to make certain diagnosis. Nowadays, most of the muscle diseases are genetically defined by advanced examination methods and thus there are promising steps in their treatment. Physical therapy and rehabilitation practices, appropriate drug use, device and surgical approaches may be necessary for the problems that may occur with the progression of the diseases.

Therefore, the aim of this special issue, is to compile diverse research and reviews articles for future and novel therapeutic applications in treating neuromuscular diseases such as amyotrophic lateral sclerosis, spinal muscular atrophy, Guillain Barre syndrome, Charcot Marie Tooth disease, Myasthenia gravis, Congenital myasthenic syndromes, polymyositis / dermatomyositis, and muscular dystrophies by using synthetized and natural compounds. Thus, the inclusion of synthesis, isolation, theoretical studies of structure-activity relationship and pharmacological-clinical trials are welcome.

Keywords: Muscle and nerve diseases, nerve-muscle junction diseases, Myasthenia gravis, peripheral nerve diseases, Polymyositis / Dermatomyositis, Amyotrophic lateral sclerosis, Spinal muscular atrophy.

Subtopics:

The subtopics to be covered within this issue are listed below:

- Studies of isolation, chemical characterization of new drugs against muscle and nerve diseases and their symptoms.
- Elucidating the mechanism of action
- Evidenced-based research and clinical trials of the active synthesized and natural compounds on muscle and nerve diseases
- Drug delivery system
- Studies of structure-activity relationship and computational design to develop the current drugs and to recommend novel drugs by using conventional approach and/or the use of supramolecular systems to release the active compounds.

Schedule:

- Manuscript submission deadline: **September 2020**
- Peer Review Due: **October 2020**
- Revision Due: **November 2020**
- Announcement of acceptance by the Guest Editors: **December 2020**
- Final manuscripts due: **December 2020**

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