

In This Issue**Editor's Summaries of the Articles Published in This Issue of Molecular Medicine Communications****Editorial Staff**

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In this issue, Riaz et al., carried out a pharmacological investigation of Carvacrol against D-galactose-induced cognitive impairment in mice, Fawad and Tahir reviewed the existing and emerging therapies in amyotrophic lateral sclerosis, Jahan and colleagues did a comparative analysis of hepatoprotective potential of Co-enzyme Q10 as a preventive and therapeutic agent in statin-induced hepatotoxicity, Sheikh et al., reviewed studies with angiotensin-converting enzyme inhibitors; their efficacy, adverse effects, and the genetic influence on ACE inhibitors induced cough.

Coenzyme Q10 protects against Statin-induced hepatic damage

Statins induce hepatotoxicity via reduced levels of Coenzyme Q10, inflammation and oxidative stress. Coenzyme Q10 is anti-apoptotic and possesses antioxidative potential and hence has been studied for its hepatoprotective potential. However, owing to the differing mechanisms of prevention of damage and its reversal, it is still debated whether Q10 protects against or treats hepatic damage. Jahan and colleagues conducted an experimental study of 3 weeks

with 35 mice randomly divided into various 7 groups. Group 1 was used as control. Group 2 received simvastatin. Group 3 received rosuvastatin. Group 4 received simvastatin+Q10. Group 5 received rosuvastatin+Q10. Group 6 was given simvastatin & group 7 was administered rosuvastatin for a week, after which both of these groups were started on Q10 in the 2nd week and continued for 2 weeks. Their results suggest that coenzyme Q10 prevents the statin induced liver damage but has no role as a therapeutic agent once the liver damage has occurred. Hence Q10 is not a curative therapy for statin induced liver damage, they concluded.

Olanzapine pharmacogenetic in the treatment of Schizophrenia

Schizophrenia is a chronic disease with a diverse psychopathology and multiple phases of illness. Consequently, numerous factors must be considered when assessing the benefits of a given treatment over short- and long-term periods. Olanzapine is an atypical antipsychotic reported to be effective without producing many of the disabling extrapyramidal adverse effects associated with older, typical antipsychotic

drugs. Despite the fact that olanzapine is still associated with a known risk of metabolic side effects, including weight gain, many clinicians continue to prescribe olanzapine for the treatment of schizophrenia with the expectation of additional therapeutic antipsychotic efficacy relative to other first-line atypical antipsychotics. Salman et al., reviewed epidemiology, pathogenesis, and treatment of schizophrenia with special emphasis on the role of olanzapine in the treatment of schizophrenia. Genetic variant associated with the therapeutic efficacy and adverse effects of olanzapine are reviewed and those with the potential to act as clinical predictor of therapeutic response and/or adverse effects are discussed in detail. Their study recommends the use of some of these genetic variants in clinical medicine.

Emerging Therapies in Amyotrophic Lateral Sclerosis

Amyotrophic lateral sclerosis (ALS) is a fatal neurodegenerative disorder characterized by the loss of cortical and spinal motor neurons, leading to weakness, muscle atrophy, and, in a substantial number of patients, cognitive impairment. Most patients die within 2 to 5 years of diagnosis. The disease initiates from death of upper and lower motor neurons leading to degeneration of motor pathways and the paralytic effects of the disease. The disease has huge economic costs as well. The Food & Drug Administration USA has approved two drugs, riluzole and edaravone for the treatment of ALS. However, these drugs provide modest benefits in mortality and/or function. Fawad and colleagues explored the recent developments in the

understanding of the underlying pathophysiologic processes that contribute to ALS, and that have led to the development of numerous investigational therapies, with several now in phase 3 trials. This article highlights the epidemiology, pathophysiology, and several current and emerging treatment options for ALS including stem cell therapy.

Pharmacogenetics of ACE inhibitors induced cough

Hypertension is a major health condition that increases the risk of a number of other diseases, including renal failure, myocardial infarction, stroke, and death. Angiotensin-converting enzyme inhibitors (ACE-I) are part of most of the protocols being used to manage hypertension and various other conditions, including congestive heart failure, and myocardial infarction. Despite the fact that these therapies are well tolerated, one out of every five individuals discontinue them due to adverse medication reactions, the most prevalent of which is a persistent dry cough. Heritability accounts for 30% to 50% of inter-individual variation in blood pressure. However, the genetic variation connected to ACE-I-induced cough remains contentious and requires additional investigation. Sheikh et al., reviewed the studies that show genetic variation may affect the incidence of ACE-I-related cough. Their review article examines the efficacy of ACE-Is, their adverse effects, and pharmacogenetic studies on ACE inhibitors induced cough.

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