CHAPTER 33

MEDICAL SCIENCES
PHYSIOLOGY

Doctoral Theses

296. AGRAWAL (Anurag)
Effect of Mucus Hypersecretion on Respiratory Impedance in a Murine of Asthma and the Secretory Role of Munc 18-2.
Supervisors : Prof. M. Fahim and Dr. Burton F. Dickey
Th 14724

Abstract

Tests a novel approach of suppressing mucus hypersecretion and to precisely define the pathophysiological role of mucus in a murine model of allergic inflammation that mimics key features of human asthma including airway inflammation, mucous metaplasia, and airway hyperresponsiveness (AHR) and concludes. Munc 18-2 transcription is upregulated during allergic asthma, Munc 18-2 transcription correlates with secretory processes and cellular differentiation in airway epithelium and mast cells, Regulation of munc 18-2 transcription is via multiple overlapping pathways, Inhibition of the MARCKS protein function by topical administration of a related peptide (MANS) blocks mucus secretion in mouse airways, Inhibition of mucus hypersecretion results in improvement of SGaw by about 35% during MCh induced airway obstruction, Strategies to inhibit mucus secretion have potential benefit in improving airway obstruction in asthma and merit further investigations.

Contents

297. NAMDAR YOUSEFVAND
Cardiovascular Functions on Exposure to Arsenic in Rats.
Supervisor : Dr. M. Fahim
Th 14708

Abstract

Investigates the effect of acute and chronic exposure to arsenic on: Blood pressure (BP), heart rate (HR) and baroreflex control (BRC) before and after administration of adenosine, acetylecholine (ACh), isoproterenol and sodium nitropuusside (SNP) (In-vivo). Vascular responsiveness in isolated aorta of rat. Dose-reponse of arsenic, ACh, adenosine, isoproterenol and sodiumnitrorprosside (SNP). (In-vito). In order to examine the role of endothelium dependent mechanisms in arsenic induced changes, the dose-response of ACh, SNP, adenosine and isoproterenol were studied on tissues treated with NO- synthase inhibitor L-NAME, inhhibitor of hyperpolarizing factor glibenclamide and prostacyclin inhibitor, indomethacin (In-vitro).

Contents