CHAPTER 16

ENVIRONMENTAL BIOLOGY

Doctoral Theses

169. DAS (Mrinal Kumar)
Biochemical and Functional Studies on a Ribosome Inactivating Protein of Viscum Articulatum and a Peroxidase of V. Angulatum from Western Ghats.
Supervisors : Dr. Vandana Mishra and Dr. Radhey Shyam Sharma
Th 18183

Abstract

The present work, "Biochemical and Functional Studies on a Ribosome Inactivating Protein of Viscum articulatum and a Peroxidase of Viscum anguletum from Western Ghats" is undertaken (i) to purify the ribosome inactivating protein (RIP) from V. articulatum and peroxidase from V. angulatum; (ii) to assess the biochemical and functional properties of the purified RIP and peroxidase; and (iii) to ascertain the potential applications of the purified RIP and peroxidase. Keeping in view the abundance and biomass of the species recorded in the field surveys and the protein content and prominence of targeted protein band in the preliminary screening, Viscum articulatum and V. angulatum are selected for the studies. Both leafless mistletoe (Viscum articulatum) parasitic on Dalbergia latifolia and V. angulatum parasitic on Olea dioica are collected along with their intact haustoria, from Kolhapur district in Western Ghats (India) and stored at - 20^0C.

Contents

170. PATHAK (Rahul)

Studies on Organochlorine Pesticide Residues in Women Population of Delhi with Reference to Adverse Reproductive Outcomes.

Supervisors : Dr. A J Urfi and Prof. B D Banerjee

Th 18182

Abstract

In this thesis, it is be concluded that higher levels of OCPs especially HCH isomers in pregnant women are associated with increased risk of PTD and IURG. Moreover, OCPs induced oxidative stress be considered as one of the important mechanism in idiopathic PTD and IUGR. Only HCH and endosulfan isomers showed a significant correlation with oxidative stress parameters. This study also reported that GSTMI-/GSTTI- gene polymorphisms contribute to the development of PTD and IUGR. The most probable explanation is based on the antioxidant activity of GST anzyme. This study also show that GSTMI-/GSTTI-genotype is associated with increased OCP levels and oxidative stress markers be resulted in low gestational age and birth weight in these subjects. The present study suggests that variation in human genome (polymorphism) modify the effect of environmental health hazards. The findings describe the importance of measuring OCP exposure in adverse reproductive outcomes particularly pregnant women with genetic susceptiblity. This study highlights the reproductive toxicity of environmental chemicals or xenobiotics on the "course of pregnancy" and women with a risk of PTD and IUGR be benefited by knowing about their OCP burden in specialized clinics after consultation with physician/gyecologist.

Contents