

are elevated in FA and these may be considered as useful parameters in diagnosis of disorder. It is also possible to design treatments on the basis of blocking of chemokines expression by application of antibodies against them to overcome allergic complications in patients suffering from FA.

### 11080P

#### Upregulation of gelatinase- Bin human monocytes and mouse macrophages by phytohemagglutinin in vitro

\*Hajighasemi F

*Department of Immunology, Faculty of Medicine, Shahed University, Tehran, Iran.*

**Introduction:** Macrophages and monocytes can induce inflammation by different mechanisms including matrix metallo proteinases (MMPs) production. MMP-9 known as gelatinase-B degrades the extracellular matrix and plays an essential role in several inflammatory disorders including allergic asthma. Lectins are carbohydrate-binding proteins exist in many nutrients especially plants. Phytohemagglutinin (PHA), a mostly studied lectin, is a T-cell mitogen with allergenic and inflammatory properties. In this study, effect of PHA on gelatinase-B activity in human monocytes and mouse macrophages has been assessed in vitro. **Materials and methods:** Human monocytic U937 cells and mouse peritoneal macrophages were cultured in complete RPMI medium. Then the cells at logarithmic growth phase were cultured in serum-free RPMI medium and subsequently were incubated with different concentrations of PHA (1-10 µg/ml) for 24 hours. The cell culture supernatants were collected. Next the activity of gelatinase-B was evaluated by gelatin zymography. **Results:** PHA considerably increased gelatinase-B activity in human U937 cells and mouse peritoneal macrophages dose-dependently compared with non-stimulated control cells. **Conclusion:** Our results showed that PHA could be a potential stimulator of gelatinase-B activity in monocytes and macrophages. Therefore, the inflammatory effects of PHA reported by others may be partly due to its enhancing effects on gelatinase-B. Processing the PHA-rich nutrients such as kidney beans to remove, neutralize or decrease the PHA might be useful for prevention or alleviating the inflammatory-based diseases such as asthma in which gelatinase-B is overexpressed. Besides PHA could be useful in screening of MMPs modulators in immunocompetent cells. **Keywords:** Phytohemagglutinin, gelatinase-B, macrophages

### 11086P

#### Evaluation the mast cells recruitment post injection of formal saline 5% in rat's plantar dermis

Shahrooz R<sup>1</sup>, Hashemi A<sup>1</sup> BA, Bakhtiary Z<sup>1</sup>

*1Department of Basic science, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran*

**Introduction:** Mast cells determine as induction sensitivity (allergy) that causes symptoms sharply allergy apposed of external antigens, allergens and toxins in dermis and mucus. This study performed to evaluate mast cells recruitment after formalin stimulation in different times. **Materials and Methods:** 36 Wistar rats were randomly and equally divided in 6 groups. Control group was injected normal saline (50µl) in dermis of right plantar skin and in next groups formal saline 5% (50µl) injected in dermis of right plantar skin. After 1, 2, 6, 24, 96 hours samples of plantar skin obtained respectively. Samples were fixed in formal saline 10%, passaged, and prepared paraffin sections obtained, and hematoxylin-eosin and toluidine blue staining methods were performed. **Results:** Study of mast cells showed that these cells often accumulated around blood vessels and mean distribution of mast cells in superficial regions of dermis were more than the deep regions, and granular mast cells were often more than the degranular cells. This study showed that the mean distribution of mast cells increased significantly ( $P < 0.05$ ) in one and two hours after formalin injection, and then the number of mast cells decreased gradually until 96 hours after