

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 199

**Publication Number:** P2328

**Abstract Group:** 5.3. Allergy and Immunology

**Keyword 1:** Dendritic cell **Keyword 2:** Immunosuppression **Keyword 3:** Infections

**Title:** Helminth extract from *opisthorchis felinus* suppresses allergic inflammation through modulation of dendritic cells phenotype

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**Body:** Background. Recent epidemiological and experimental reports have suggested that helminth infection could induce suppression of allergic Th2 responses [Jeong Y. et al., 2011]. Opisthorchiasis caused by *Opisthorchis felinus* (O.f.) is the major public health problems of Western Siberia in Russian Federation. Dendritic cells (DCs) are critical for controlling the immune response to various types of antigens so we established them to study the effects of O.f. on the development of airway inflammation. Aim and objectives. To investigate DC immune phenotype during the treatment with O. f. extract in patients with bronchial asthma (BA). Methods. Mature DCs were cultured from peripheral blood monocytes of healthy control (n=17) and asthmatic patients (mild BA, n=19; severe BA, n=24) using IL-4 and GM-CSF during 6 days. DCs were stimulated with O.f. extract and LPS on 4 day of incubation. After culturing DCs were harvested and labeled for CD86, CD83, CD209 and analyzed using flow cytometry. Results. O. f. inhibited the expression of co-stimulatory molecules as CD86 in mature DCs. Number of CD86+CD209+ DC was significantly decreased in different severity of BA compared to healthy donors. Patients with mild and severe BA had increased levels of CD209+ DCs compared to control. Conclusions. Our findings suggest that levels of co-stimulatory molecules expression on DC are important in immune response balancing and polarization. Increased levels of co-stimulatory molecules as CD86 on DC after helminth stimulation with O.f. might suppress airway inflammation in BA.