



# ARCTIC HEALTH

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## Contribution of intercellular-adhesion molecule-1 in allergen-induced airway hyperresponsiveness and inflammation in sensitised brown-Norway rats.

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Abstract: We investigated the potential role of intercellular-adhesion molecule-1 (ICAM-1) in allergen-induced bronchial hyperresponsiveness (BHR) and inflammation in sensitised Brown-Norway rats. Rats were sensitised with ovalbumin (OA) intraperitoneally and 21 days later they were either exposed to 0.9% NaCl or 1% OA aerosol for 15 min. Rats exposed to OA aerosol were pretreated either with ICAM-1 antibody (3 mg/kg i.p. and i.v., 45 min prior to OA exposure) or with the diluent for the antibody. Eighteen to twenty-four hours after OA or 0.9% NaCl exposure, rats were anaesthetised, tracheostomised and mechanically ventilated, and airway responsiveness to acetylcholine (ACh) aerosol was measured as the provocative concentration of ACh needed to increase pulmonary resistance by 100% (PC100). Mean -log PC100 was increased in rats exposed to OA but pretreated with diluent (2.75 +/- 0.06) compared to rats treated with ICAM-1 antibody (2.51 +/- 0.08;

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