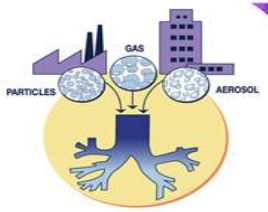


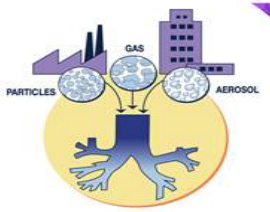
6th Jack Pepys Workshop

Asthma in the Workplace

May 13, 2016, Toronto, Canada

Theme 5 : How does exposure to gas, dust and fumes enhance sensitization and asthma?

- **Evidence for new onset sensitization/asthma?**
  - **Gas: ozone, NOx, sulphur dioxyde**
  - **Dust: PM**
  - **Fumes: traffic related air pollution**
- **Mechanisms**



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  - **Increase epithelial permeability**
  - **Modification of allergens**
  - **Host response to allergens**
    - **Adaptive immunity**
    - **Innate immunity**
    - **Epigenetic changes**
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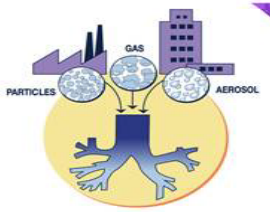

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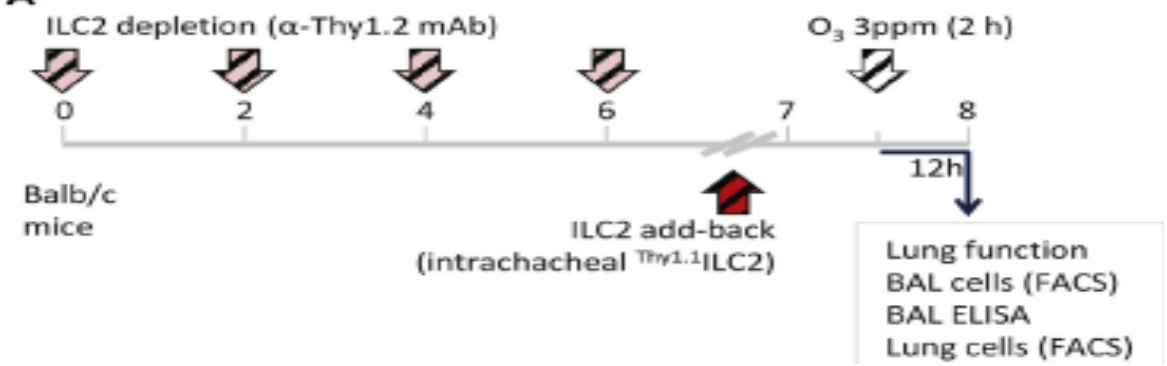
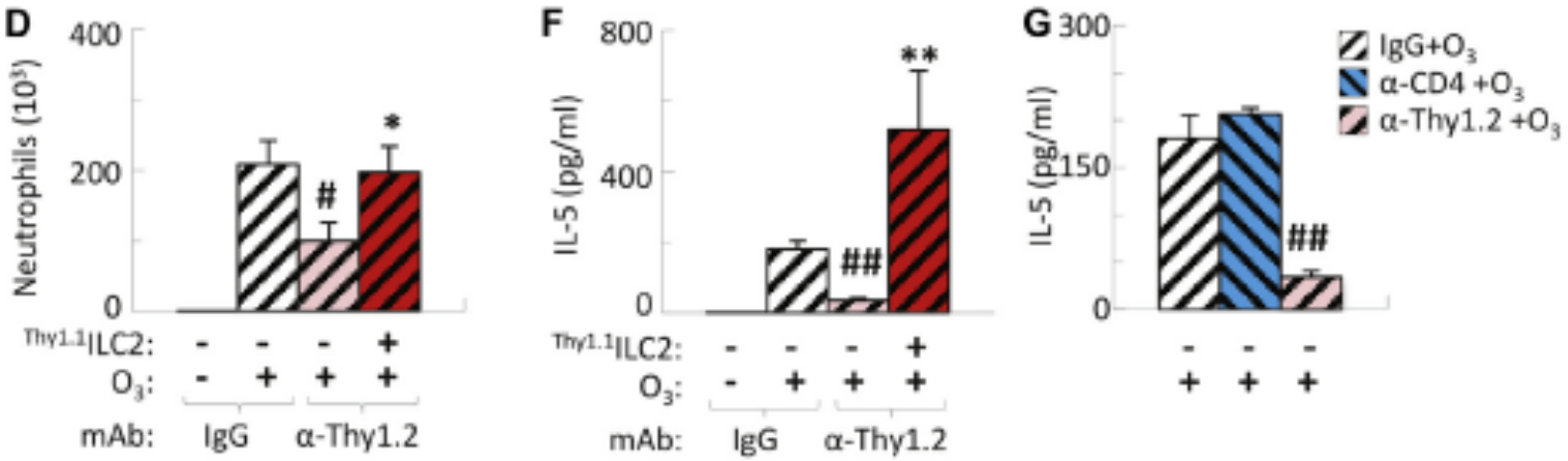
Group 2 innate lymphoid cells mediate ozone-induced airway inflammation and hyperresponsiveness in mice

Qi Yang, PhD,[a,b]* Moyar Q. Ge, PhD,[c,d,e]* Blerina Kokalari, BS,[c] Imre G. Redai, BS,[c] Xinxin Wang, MS,[a] David M. Kemeny, BSc, PhD, FIMLS, FRCPath,[e] Avinash Bhandoola, PhD,[a,b]* and Angela Haczku, MD, PhD[c,d]*
Philadelphia, Pa, Bethesda, Md, Davis, Calif, and Singapore

Mice sensitized i.p. with Aspergillus f.





JACI 2016

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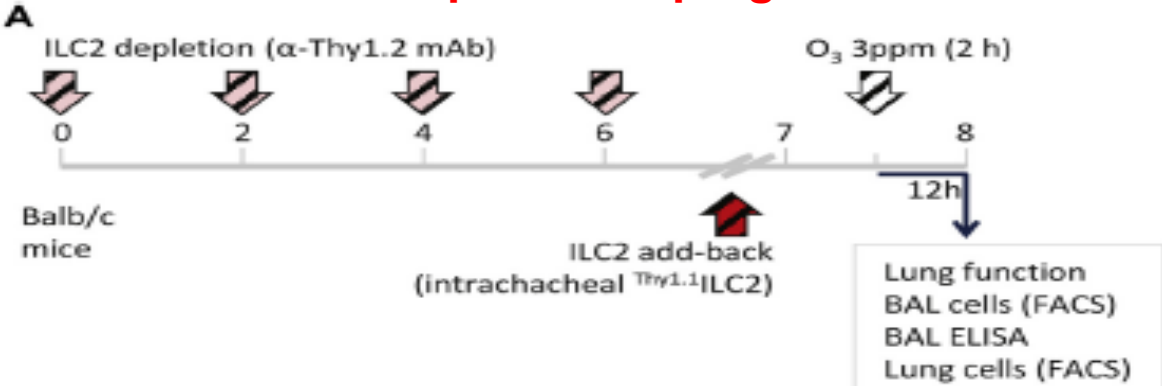
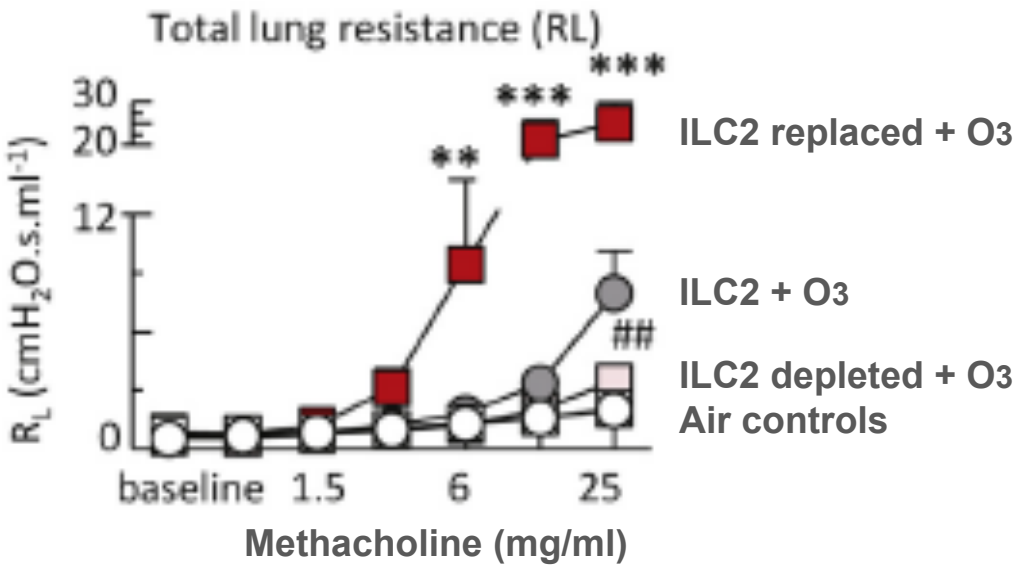


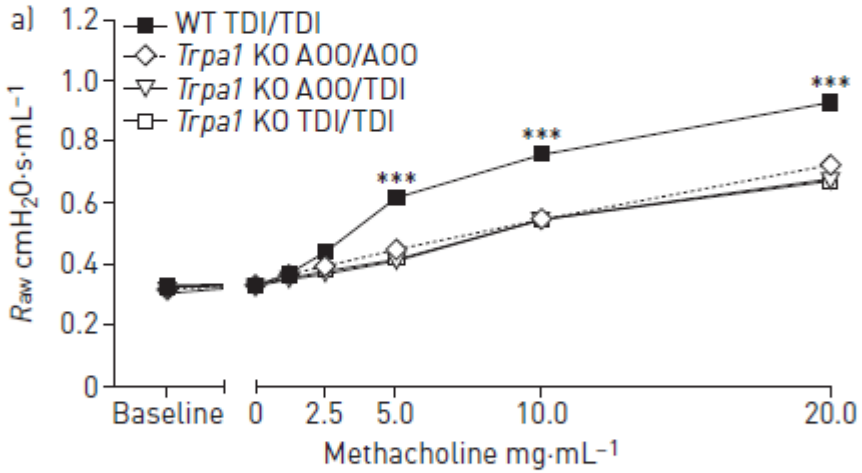


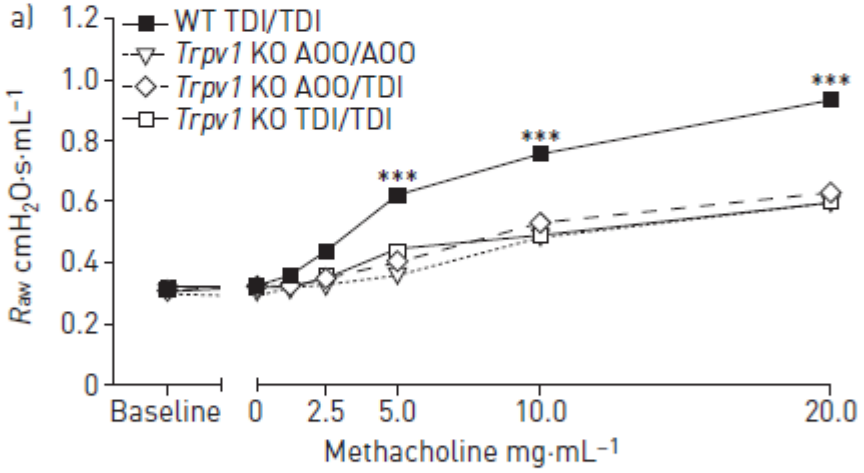
JACI 2016

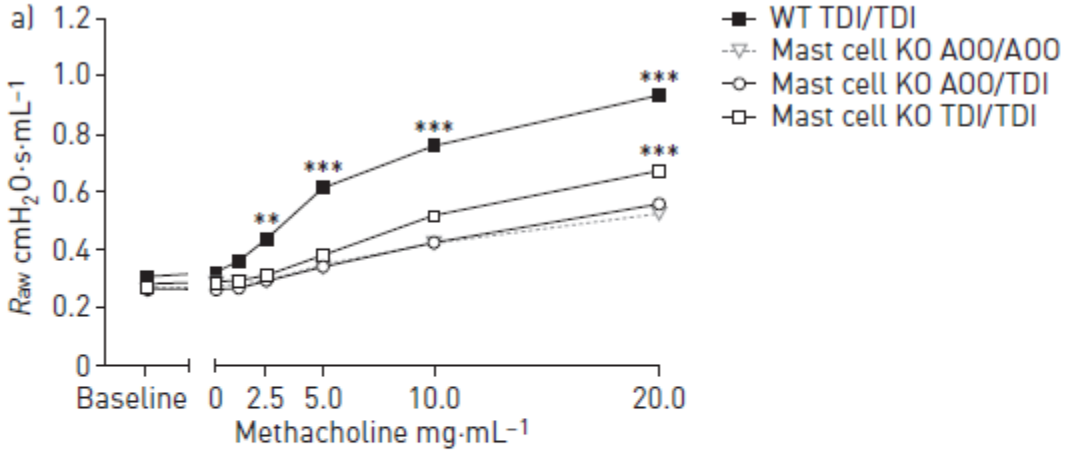
Neuro-immune interactions in chemical-induced airway hyperreactivity

Fien C. Devos[1], Brett Boonen[2], Yeranddy A. Alpizar[2], Tania Maes[3], Valérie Hox[4], Sven Seys[4], Lore Pollaris[1], Adrian Liston[5], Benoit Nemery[1], Karel Talavera[2], Peter H.M. Hoet[1] and Jeroen A.J. Vanoirbeek[1]

TDI/vehicle sensitized mice (day 1 + 8) challenged with TDI/vehicle (day 15)
Methacholine challenge 1 day later





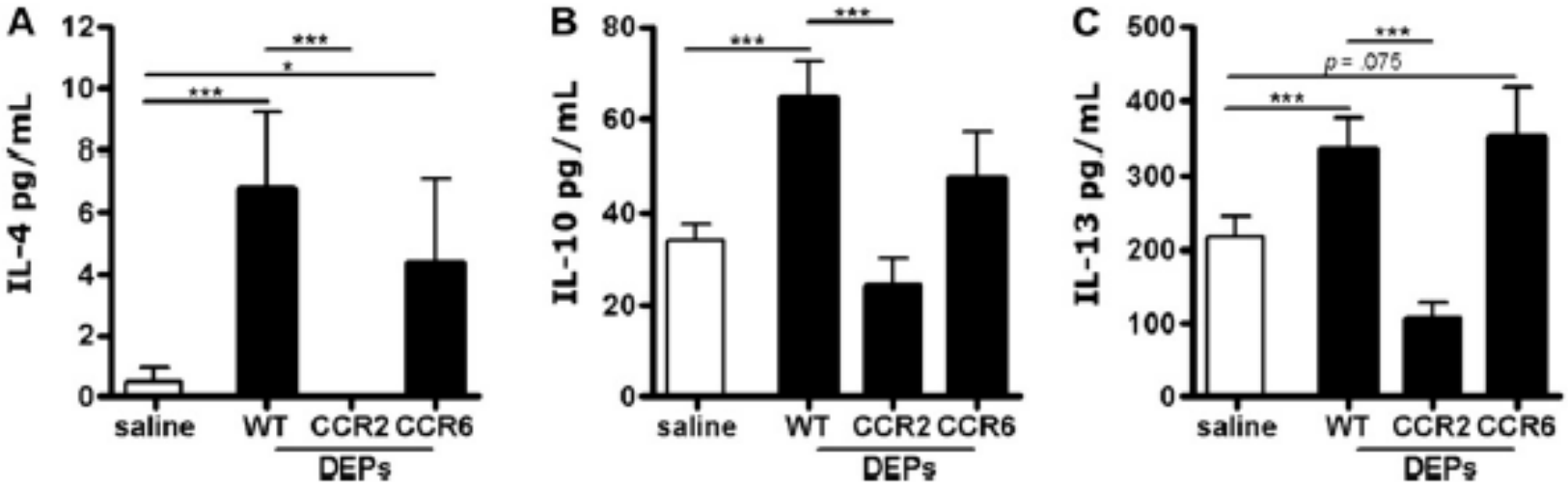


ERJ 2016

Monocyte-derived dendritic cell recruitment and allergic T_H2 responses after exposure to diesel particles are CCR2 dependent

Sharen Provoost, MSc, Tania Maes, PhD, Guy F. Joos, MD, PhD, and Kurt G. Tournoy, MD, PhD *Ghent, Belgium*

Th-2 cytokines production by mediastinal LN cells stimulated OVA in OVA sensitized mice instilled with DEP/saline



JACI 2012