

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 7127

**Publication Number:** P3996

**Abstract Group:** 6.2. Occupational and Environmental Health

**Keyword 1:** Air pollution **Keyword 2:** Inflammation **Keyword 3:** Occupation

**Title:** Inflammation in traffic professional from Sao Paulo after pollutants emission control implementation

Prof. Dr Maria Lucia 1576 Bueno Garcia gajugu@terra.com.br MD <sup>1</sup>, Dr. Lourdes 1582 Conceição Martins lourdesc@usp.br <sup>1</sup>, Prof. Dr Alfesio 1583 Braga alfesio@gmail.com MD <sup>1</sup>, Dr. Miriam 1586 Lemos mirlemos@usp.br <sup>1</sup>, Dr. Luis 1584 Pereira luiz.aa.pereira@uol.com.br MD <sup>1</sup>, Dr. Paulo 1585 Afonso pauloafonso@lim05.fm.usp.br <sup>1</sup>, Prof. Dr Paulo 1588 Saldiva pepino@usp.br MD <sup>1</sup> and Dr. Paula Santos 1581 Ubiratan pneubiratan@incor.usp.br MD <sup>1</sup>. <sup>1</sup> Laboratory of Atmospheric Pollution, Faculdade de Medician da USP, Sao Paolo, SP, Brazil, 01246-903 .

**Body:** In the last decade, ambient particles have decreased from 150ug/m<sup>3</sup> to 40ug/m<sup>3</sup> in São Paulo city (SP) because of public policies to control fuel emissions Traffic professional are more exposed to air pollution. We tested if ambient air from SP is still deleterious to traffic professionals. Non or ex-smokers (≥1 year) cab drivers (N=46) and traffic controllers (N=23) were evaluated 4 times. We checked clinical symptoms and blood inflammatory markers (HDL/LDL/total cholesterol, triglycerides, blood cell counting, clot tests, ultra sensitive c reactive protein- us CRP and erythrocyte sedimentation rate-ESR) on the day after workshift. Pollutants were collected during 24h exposure by individual samplers for fine particles (reflectance) and NO<sub>2</sub>(colorimetry). Clinical and blood data were tested against pollutants by linear regression model for repeated measures through generalized estimated equation (GEE). Alpha was 5%. PM<sub>2.5</sub> was 40,33±20.83ug/m<sup>3</sup> and NO<sub>2</sub> 197±43,47ugm<sup>3</sup>. Traffic professional referred cough (19%), coryza (21,4%), sneezing (35,6%), nasal stuffiness (34,5%)and itch(28,6%), rhinitis (35,6%), wheezing (14,3%), dyspnea (10,7%) which improved during non working periods (60,7%)(holidays or weekends). ESR, clot tests (prothrombin INR, activated partial thromboplastin time and thromboplastin time), LDL chol and mononuclear cells in blood were associated to both PM<sub>2.5</sub> (p<0.05). There was no correlation of usCRP to inflammation and fibrinogen to pollutants. We conclude that urban pollutants exposure in SP city is still associated with clinical upper respiratory, vascular and systemic inflammation, hypercoagulability and lymphocytes and monocytes increment in traffic professional.