pulmonary inflammation and our findings would be consistent with impaired epithelial TGFβ activation in the lungs of these mice. Further studies are required to determine the origin of the cells activating TGFβ in these lungs.

### S124

**MACROPHAGE DELETION OF VHL RESULTS IN ALTERNATIVE ACTIVATION AND ENHANCED LUNG FIBROSIS INDEPENDENT OF HIF-1**

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**Background** Hypoxia-inducible factor (HIF-1) is a master regulator of the cellular hypoxic response and has been implicated in the pathogenesis of inflammatory and fibrotic disease including IPF.

**Aims** To study the role of hypoxia and HIF-1 activation in macrophages in the i.t. bleomycin-induced lung fibrosis model.

**Methods** The i.t. bleomycin model was used to study the effect of HIF-1 manipulation in mice. The primary endpoint was lung collagen content at day 24 post i.t. bleomycin instillation. The HIF-1α inducer dimethyloxallyl glycine (DMOG) was administered i.p. on days 14, 17 and 21. The role of myeloid-HIF-1α activity in lung fibrosis was determined using mice in which either HIF-1α or VHL (the dominant negative-regulator of HIF-1α) was selectively knocked out of lysosome M expressing cells (LysM-Cre-Hif-1 and Cre-LysM- vHL). Lung tissue hypoxia was determined using Hypoxyprobe-1TM administered on day 24. Alternative activation status of HIF-1 null and vHL null macrophages was studied in bone-marrow derived cells from LysM-Cre-Hif-1 and Cre-LysM-vHL mice.

**Results** Pharmacological induction of HIF-1 in the late period of the bleomycin model with i.p. dimethyloxallyl glycine (DMOG) resulted in significantly enhanced lung collagen (mean±s.e. mg/g/lung) on day 24 compared to controls (195±15 vs 152±8, p<0.05, n>7 per gp). Hypoxyprobe-1 staining in the hypoxic-mucin injured lung revealed hypoxic alveolar macrophages even in areas of lung distant to patches if severe fibrosis, implying a role for hypoxic/HIF-1 activating alveolar macrophages in lung fibrosis. However, lung collagen content was identical in myeloid-cell Hif-1 null mice and wild-type litter-mate controls (276±25 vs 277±22, n=8 per gp). In contrast, myeloid-cell vHL-null mice exhibited significantly enhanced lung collagen deposition versus controls (573±36 vs 282±54, p<0.05, n>9 per gp). Isolated vHL-null macrophages exhibited enhanced expression of the alternative activation markers YM-1, mannose receptor, arginase-1 and FIZZ-1.

**Conclusions** VHL deletion in macrophages enhances alternative activation and promotes lung fibrosis independent of HIF-1.

### S126

**MEASURING QUALITY IN PNEUMONIA CARE. THE NORTH WEST ADVANCING QUALITY PROGRAMME 2008–2009**

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As part of an initiative within the North West Strategic Health Authority to improve the quality of care, ‘quality markers’ (QMs) were measured in all adult admissions with pneumonia in all 24 Acute Trusts in the North West Region for 1 year (discharges from October 2008 to September 2009). Only adults who fulfilled a prescribed definition of ‘pneumonia’ were included. QMs were taken from a USA initiative and adapted for UK use. Patient identification was based on clinical coding. Data were recorded in each individual Trust and centrally collated.

**Combined data from all trusts** QMs were recorded with the following frequencies (no in parentheses is number of patients included): Oxygenation assessment within 24 h or prior to hospital arrival 96.9% (11 127), blood culture performed in the A & E prior to initial antibiotic received in hospital 88.5% (3325), smoking cessation advice/counselling given in 38.1% (27 508), initial antibiotic consistent with local CAP guidelines 80.8% (6537) and initial antibiotic received within 6 h of hospital arrival 64.6% (7889). Over the four