

## Supplementary file

### **Sputum proteomics and airway cell transcripts of current and ex-smokers with severe asthma in U-BIOPRED: an exploratory analysis**

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### **1. Inclusion criteria of severe asthma patients:**

Participants with asthma had either airflow reversibility (increase in forced expiratory volume in 1s (FEV<sub>1</sub>) >12% predicted and 200 mL following inhalation of 400 µg salbutamol), airway hyperresponsiveness (methacholine provocative concentration causing a 20% fall in FEV<sub>1</sub> <8 mg/mL, or diurnal peak expiratory flow amplitude >8% of mean), or a decrease in FEV<sub>1</sub> of 12% predicted or 200 mL within 4 weeks after tapering maintenance treatment. Severe asthma was defined as asthma with uncontrolled symptoms according to Global Initiative for Asthma (GINA) guidelines and/or frequent exacerbations (more than two per year) despite high-dose inhaled corticosteroids ( $\geq$ 1000 µg fluticasone propionate per day or equivalent dose) plus additional controller therapy.

### **2. Bronchoscopy exclusion criteria**

Bronchoscopy exclusion criteria included the subjects who had a severe exacerbation of asthma requiring the new administration of oral corticosteroids or a doubling of their usual oral corticosteroid dose within the last three months, a  $\geq$ 10% decrease in forced expiratory volume in 1s (FEV<sub>1</sub>) after inhalation of 0.9% saline during sputum induction, increase use of rescue short acting  $\beta$ -agonist by six or more puffs/day over and above usual use during the last three days, severe bronchoconstriction or other adverse reactions at previous attempts to perform bronchoscopy, a post-bronchodilator FEV<sub>1</sub><40% predicted, a transcutaneous oxygen saturation by pulse-oximetry of <90%, a heart rate >130 beats/minutes to pre-medication, known serious ventricular heart rhythm disturbances or treatment with warfarin or other anticoagulants.