Obtain peripheral blood from control volunteers and severe asthmatics

Monocyte separation

+ rh IL-4
+ rhGM-CSF

7 days

Monocyte differentiation into immature moDC

Obtain endobronchial biopsy from control volunteers and severe asthmatics

After isolation of HBEC, culture and differentiation in air/liquid interface (ALI)

Pseudostratified ciliated epithelium producing mucus

Jet exhaust particles

Jet exhaust particles