Novel target and mAb candidate for the prevention and treatment of COPD-AE and other respiratory infections

Contact BD&L: Stéphane Thumelin, CBO
Stephane.thumelin@inserm-transfert.fr

BIO13400

Novel target and mAb candidate for the prevention and treatment of COPD-AE and other respiratory infections

In-vivo POC mouse models

Product

Targets: IL20 / IL20R

Product candidate : newly engineered human mAb directed against IL20 Receptor under evaluation

POC:
- Administration of a mouse mAb candidate totally prevent bacterial infection in a model of COPD - Acute Exacerbation (*S. pneumonia challenge* in cigarette smoke induced chronic COPD mouse model) and restores epithelial lung architecture.
- Preliminary clinical data indicate dysregulation of the target in human smokers
- Internal funding program under development for the engineering of human mAb, engineering of alternative products, combination with antibiotics and COPD/COPD-AE related treatments.

Anticipated indications:
- Prevention and acute treatment of respiratory nosocomial infections
- Prevention and acute treatment of bacterial infection, superinfection, COPD-AE

Patent application: WO/2016/083304

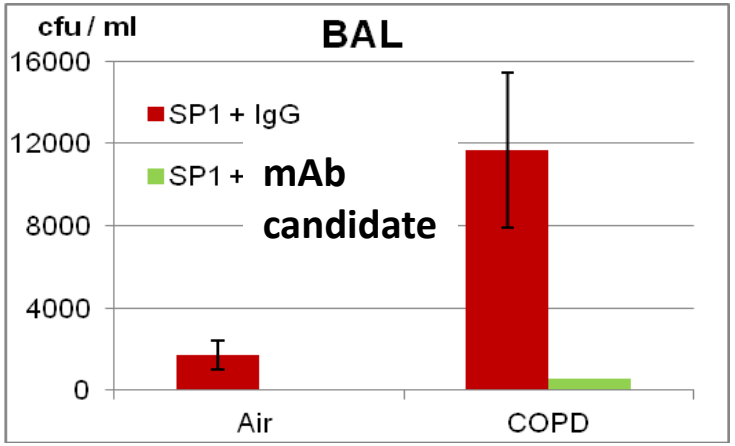
BIO13400

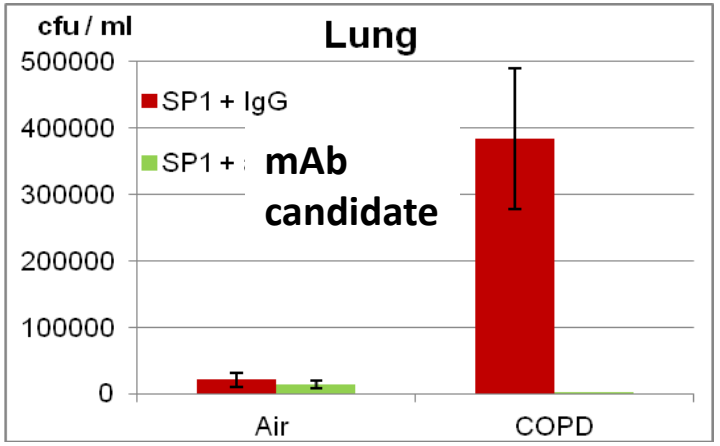
Novel target and mAb candidate for the prevention and treatment of COPD-AE and other respiratory infections

In-vivo POC mouse models

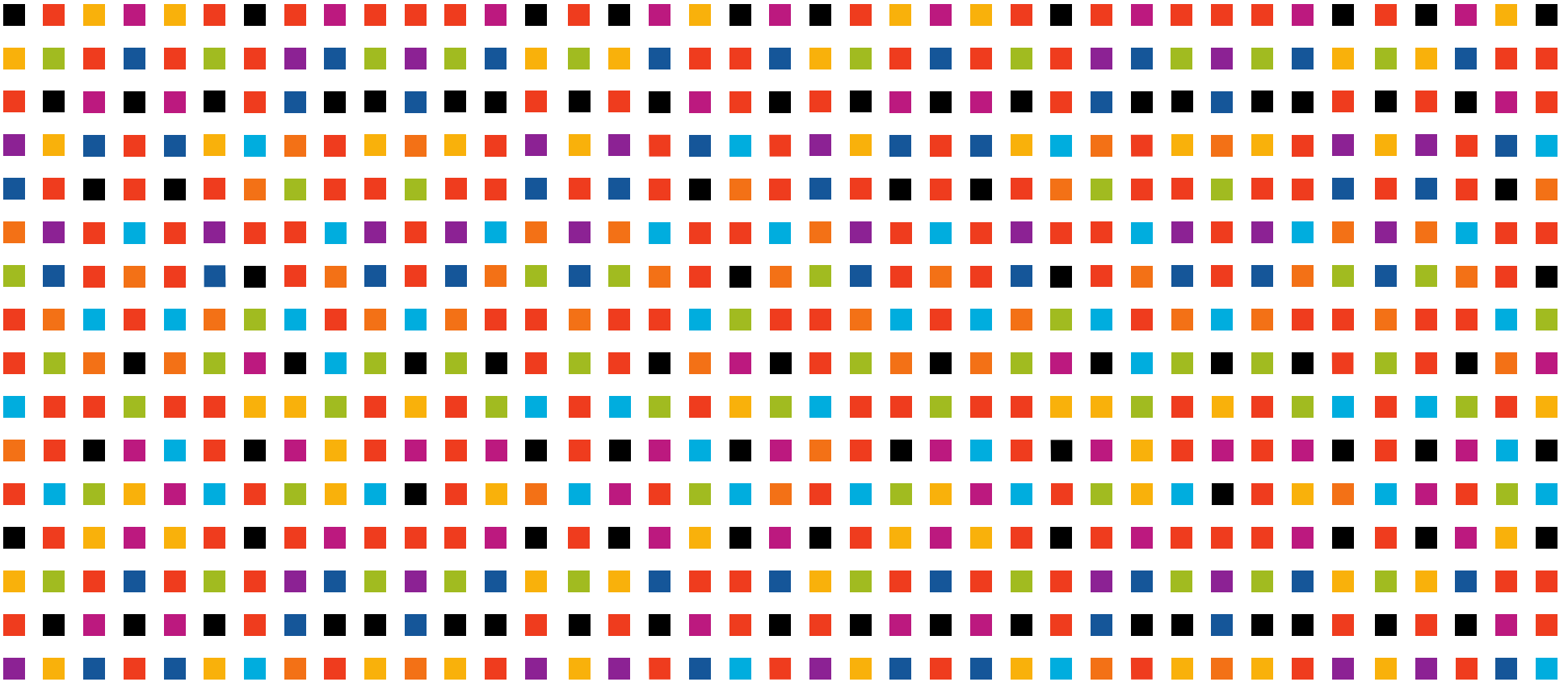
POC

Administration of blocking antibodies directed against the IL20 Receptor (mAb candidate) strongly decreases susceptibility of cigarette smoke induced –COPD mice to bacterial respiratory infection (COPD-AE model)





The mAb candidate or mAb control (IgG) were intraperitoneally administrated (50 µg/injection/mouse) one day before and the day after the infection with *S. pneumoniae* (SP1) to mice previously exposed to cigarette smoke for 5 weeks (COPD). The bacterial load was measured in bronchoalveaolar lavage (BAL) and lung lysates (Lung) at day3 after bacterial infection. Similar experiments were performed in non COPD mice exposed to normal air (Air)



Contact BD&L: Stéphane Thumelin, CBO
Stephane.thumelin@inserm-transfert.fr