

Supplementary Table S1:

Summary of examples of interventional and observational studies evaluating clinical epigenetics in pulmonary diseases

Epigenetic player	Conditions	Sample size/type of study	Aim	Phase/Status	ID
Observational					
DNA methylation	Asthma	200 participants, Case-control	To evaluate DNA methylation patterns in PBMCs isolated from the persistent asthmatics and non-atopic healthy controls	NA/Completed	NCT01382836 [26]
miRNAs	COPD	195 participants, Case-control	To evaluate the role of miRNAs as diagnostic biomarkers in COPD patients	NA/Completed	NCT02633280 [27]
miRNA	COPD	739 participants, Case-control	To evaluate miRNA derived from nasal epithelial cells, leukocytes and sputum with clinical outcomes in COPD, smokers, ex-smokers vs never smoking	NA/Completed	NCT01780298 [28]
Interventional					
miRNAs	Pulmonary hypertension	22 patients, Randomized	To evaluate baseline levels of miRNAs from patients with and without right ventricular dysfunction	Phase 4/Completed	NCT01839110 [29]
DNA methylation, miRNAs	Asthma	40 participants, Non-Randomized	To compare the efficacy of different treatments in ex-smokers and smokers with asthma by measuring miRNA expression and DNA methylation in nasal brushings	Phase 4/Completed	NCT01741285
DNA methylation, miRNAs	COPD	316 participants, Randomized	To investigate the effectiveness of triple therapy (ICS/LABA/LAMA) in COPD patients by evaluating DNA methylation and miRNAs	Phase 4/Ongoing	EudraCT Number: 2019-003351-11
DNA methylation, histone modifications	COPD	20 participants, Randomized	To analyze the effect of Foster inhalation on histone acetylation and DNA methylation in COPD patients	Phase 4/Completed	EudraCT Number: 2012-000155-14
DNA methylation, miRNAs	Asthma	40 participants, Randomized	To compare the efficacy of extra-fine particle HFA-QVAR to HFA-beclomethasone and HFA-fluticasone in ex-smokers and smokers with asthma by evaluating DNA methylation and miRNAs	Phase 4/Ongoing	EudraCT Number: 2012-005350-39
DNA methylation, miRNAs	COPD	260 participants, Randomized	To investigate whether it is possible to better predict a favorable treatment response to ICS/LABA combination treatment in patients with COPD by analyzing DNA methylation and miRNA expression	Phase 3/Ongoing	EudraCT Number: 2014-001563-12
DNA methylation, miRNAs	COPD	88 participants, Randomized	To study whether vanciclovir is safe in COPD patients by measuring DNA methylation and miRNAs	Phase 2/Ongoing	EudraCT Number: 2017-004686-28

Abbreviations: COPD: Chronic Obstructive Pulmonary Disease; LDCT: Low-Dose Computed Tomography; MiRNAs: Micro-RNAs; NA: Not Available; PAH: Pulmonary Arterial Hypertension; PBMCs: Peripheral Blood Mononuclear Cells.