Supplementary Figure 1: Experimental design of ovalbumin induced obesity asthmatic mice and metformin treatment.

Supplementary Table 1: Primer sequences applied for gene expression analyses in BALF cells and spleen.

| Gene   | Forward primer 5’-3’        | Reverse primer 5’-3’                     |
|--------|-----------------------------|------------------------------------------|
| IL-4   | GGTCTCAACCCCCAGCTAGT        | GCCGATGATCTCTCTCTCAAGTGAT                |
| IL-10  | GCTGGACAACATACTGCTAACC      | ATTTCCGATAAGGCTTGGCA                    |
| TNF-α  | CAGGCGGTGCCTATGTCTC         | CGATCACCCCGAAGTTCAGTAG                  |
| INF-γ  | ACAGCAAGGCGAAAAGGATG        | TGGTGACCACCTCGGATGA                     |
| Foxp3  | ACCATTGGTTTACTCGCATGT       | TCCACTCGCACAAGCACTT                     |
| STAT5  | CTGGGCATGTCCCGAGATG         | GAGGGGTCTTGACCACCTGG                    |
| β-actin| GAAATCGTGCGTGACATCAAAG      | TGTAGTTTCATGGATGCCACAG                  |
Supplementary Figure 2:

A. Body weight (g) vs. NCD vs. HFD
B. Blood glucose (mmol/L) vs. NCD vs. HFD
C. Abdominal fat (g) vs. NCD vs. HFD
D. Inflammatory score vs. NCD vs. HFD
E. Relative IL-10 expression vs. NCD vs. HFD
F. Plasma IL-10 (pg/ml) vs. NCD vs. HFD
G. HDL-C (mmol/L) vs. NCD vs. HFD
H. BALF IFN-γ (pg/ml) vs. NCD vs. HFD

* ns
** ns
*** ns