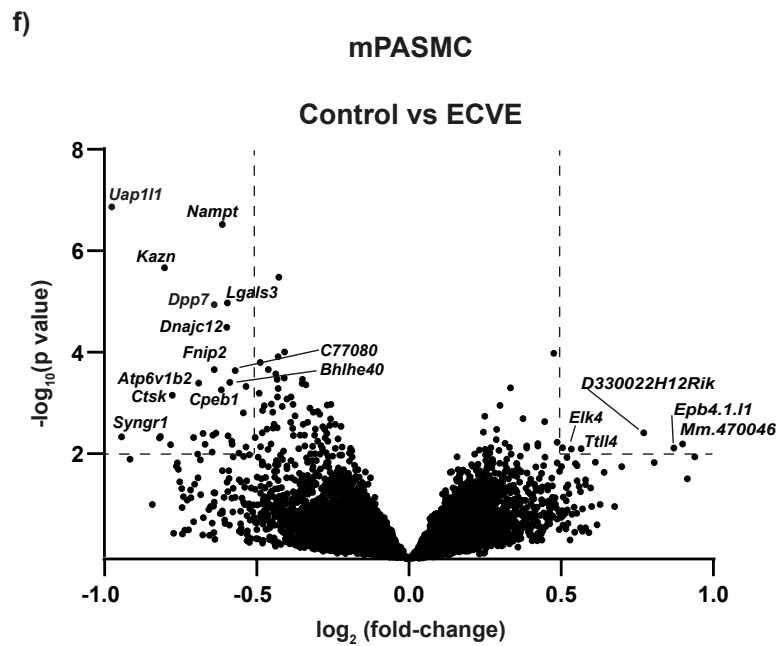
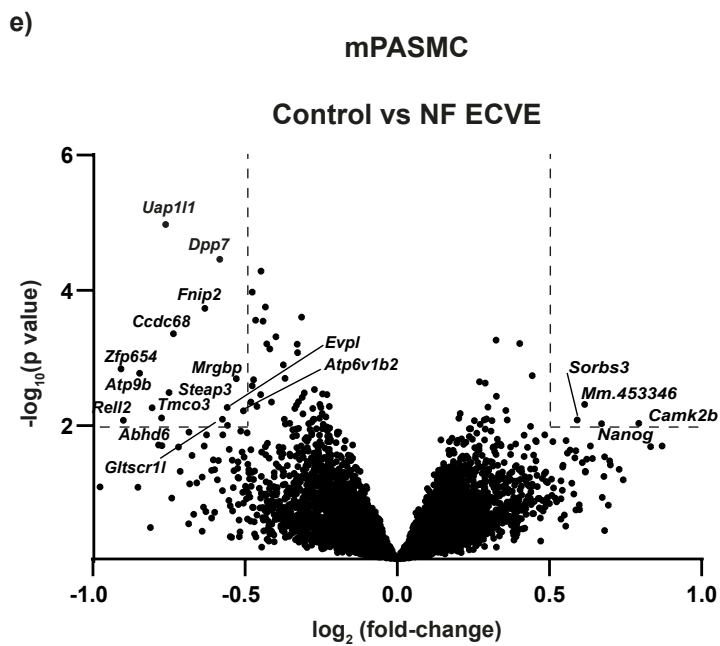
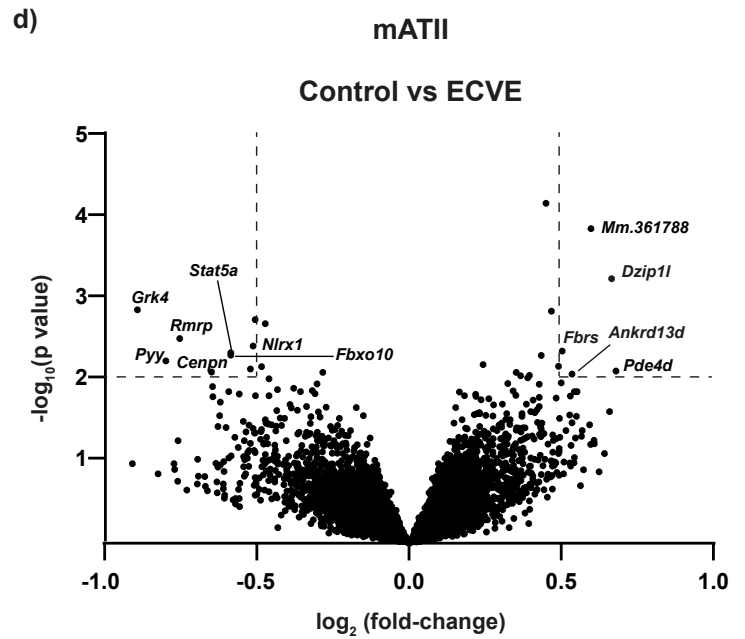
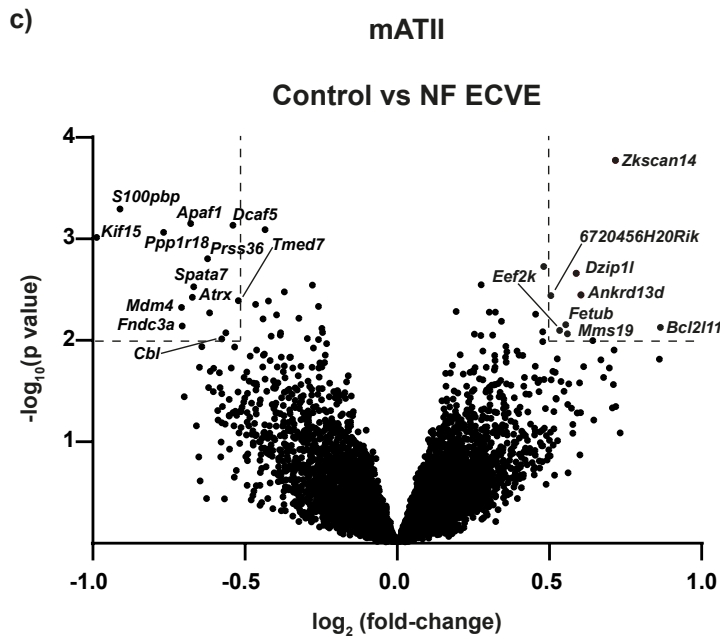
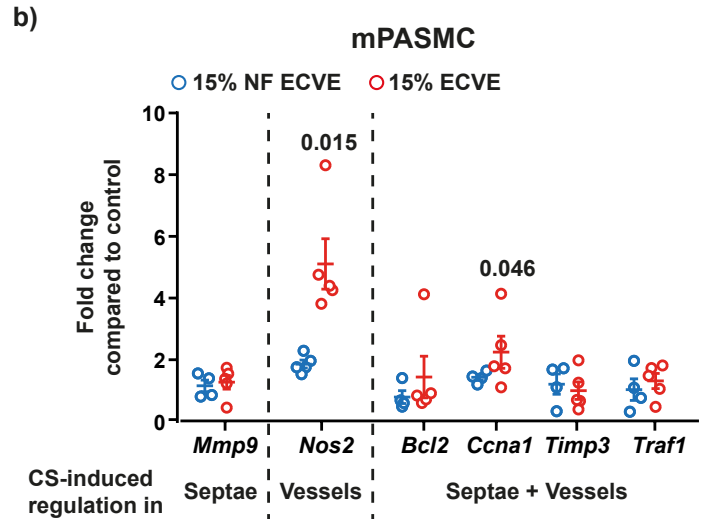
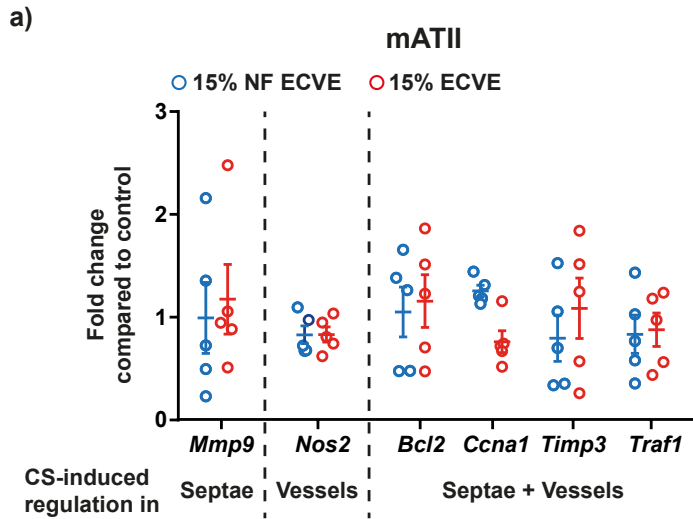


In vitro



Supplementary figure S3. Gene expression patterns of ECVE- or NF ECVE-exposed cells from real-time PCR and microarray analyses.

a, b) Real-time PCR analysis of mRNA expression of *Mmp9*, *Nos2*, *Bcl2*, *Ccna1*, *Timp3* and *Traf1* in primary mouse mATII cells (**a**, n=5) and primary mPASC (b, n=4-5) after exposure to either 15% nicotine-free e-cigarette vapour extract (NF ECVE) or 15% nicotine-containing e-cigarette vapour extract (ECVE). Data are presented as fold change compared to respective untreated controls. Statistical analysis was performed by Student's t-test. Data are presented as mean \pm SEM.

c-f) Volcano plots of microarray analyses from primary mATII cells (**c, d**, n=8) and mPASC (b, n=8) exposed to 15% NF ECVE or 15% ECVE. The y-axis [$-\log_{10}(\text{p value})$] displays the significance level and the x-axis [$\log_2(\text{fold-change})$] the fold change compared to control. Controls were treated with medium without ECVE or NF ECVE. n represents independent cell isolations per group.

Abbreviation: *Abhd6* – abhydrolase domain containing 6; *Ankrd13d* – ankyrin repeat domain 13 family, member D; *Apaf1* – apoptotic peptidase activating factor 1; *Atp6v1b2* – ATPase, H⁺ transporting, lysosomal V1 subunit B2; *Atp9b* – ATPase, class II, type 9B; *Atrx* – alpha thalassemia/mental retardation syndrome X-linked homolog (human); *Bcl-2* – B-cell lymphoma 2; *Bhlhe40* – basic helix-loop-helix family, member e40; *C77080* – expressed sequence C77080; *Camk2b* – calcium/calmodulin-dependent protein kinase II, beta; *Ccdc68* – coiled-coil domain containing 68; *Ccna1* – Cyclin A1; *Cenpn* – centromere protein N; *Cpeb1* – cytoplasmic polyadenylation element binding protein 1; *Ctsk* – cathepsin K; *Dcaf5* – DDB1 and CUL4 associated factor 5; *Dnajc12* – DnaJ (Hsp40) homolog, subfamily C, member 12; *Dpp7* – dipeptidylpeptidase 7; *Dzip11* – DAZ interacting protein 1-like; *Elk4* – ELK4, member of ETS oncogene family; *Evpl* – envoplakin; *Fbrs* – fibrosin; *Fbxo10* – F-box protein 10; *Fndc3a* – fibronectin type III domain containing 3A; *Fnip2* – folliculin interacting protein 2; *Gltscr11* – glioma tumor suppressor candidate region gene 1-like; *Grk4* – G protein-coupled receptor kinase 4; *Kazn* – kazrin, periplakin interacting protein; *Kif15* – kinesin family member 15; *Lgals3* – lectin, galactose binding, soluble 3; *Mdm4* – transformed mouse 3T3 cell double minute 4; *Mmp9* – matrix metalloproteinase 9; *Mrgbp* – MRG/MORF4L binding protein; *Nampt* – nicotinamide phosphoribosyltransferase; *Nanog* – Nanog homeobox; *Nos2* – nitric oxide synthase 2; *Pde4d* – phosphodiesterase 4D, cAMP specific; *Ppp1r18* – protein phosphatase 1, regulatory subunit 18; *Prss36* – protease, serine, 36; *Pyy* – peptide YY; *Rel2* – RELT-like 2; *Rmrp* – RNA component of mitochondrial RNAase P; *S100pbb* – S100P binding protein; *Sorbs3* – sorbin and SH3 domain containing 3; *Spata7* – spermatogenesis associated 7; *Stat5a* – signal transducer and activator of transcription 5A; *Steap3* – STEAP family member 3; *Syng1* – synaptogyrin 1; *Timp3* – tissue inhibitor of metalloproteinase 3; *Tmco3* – transmembrane and coiled-coil domains 3; *Tmed7* – transmembrane emp24 protein transport domain containing 7; *Traf1* – TNF receptor-associated factor 1; *Ttll4* – tubulin tyrosine ligase-like family, member 4; *Uap111* – UDP-N-acetylglucosamine pyrophosphorylase 1-like 1; *Zfp654* – zinc finger protein 654.