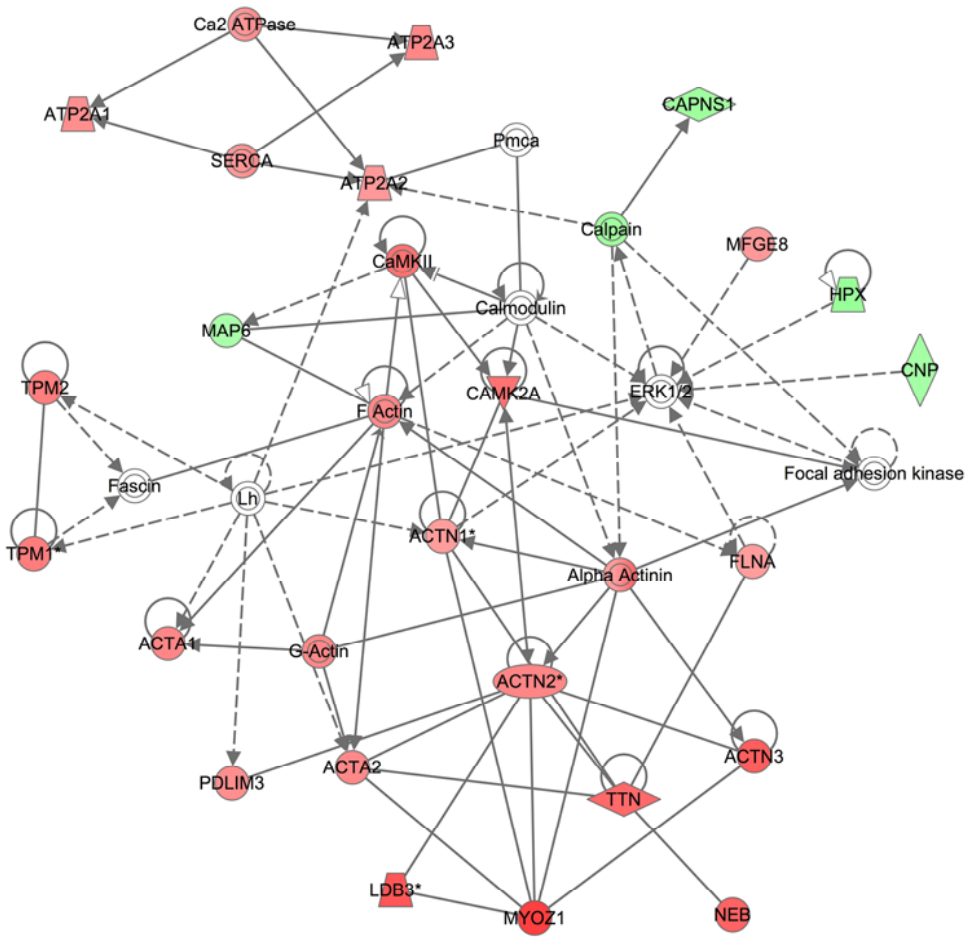
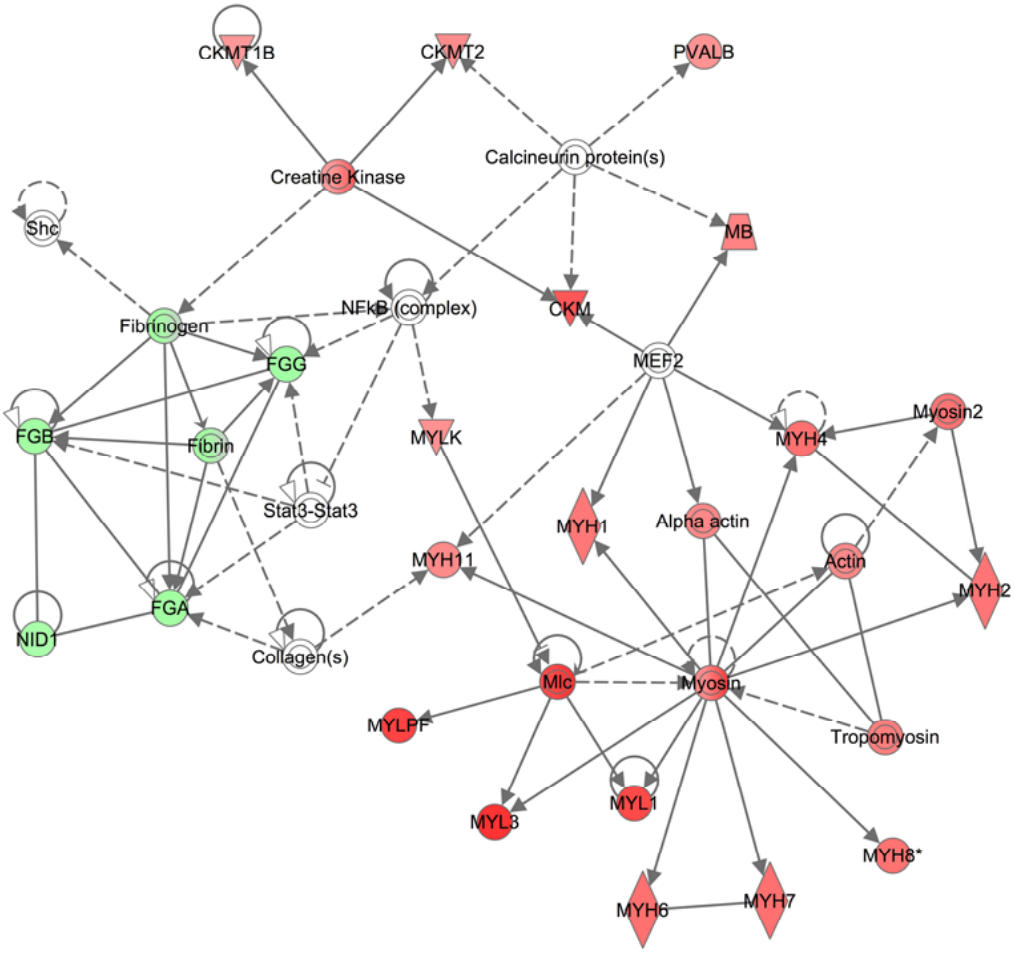
Comley et al – Supplementary Figure 4

A



B



Supplementary figure 4. Systems level analysis reveals potential apoE genotype-dependent modification of protein interaction pathways in regenerating tibial nerves 3 weeks after nerve crush injury. A: Ingenuity Pathway Analysis generated protein interaction network involved in actin-based regulation of tissue and cell morphology modified in apoE4 regenerating peripheral nerves compared to apoE3 tissue (green = up in apoE4 vs apoE3; red = down in apoE4 vs apoE3; grey = unchanged). Solid connecting lines indicate the presence of a direct interaction and dashed connecting lines indicate an

indirect interaction. B: Ingenuity Pathway Analysis generated protein interaction network involved in actin/myosin-based regulation of tissue and cell morphology modified in apoE4 regenerating peripheral nerves compared to apoE3 tissue (green = up in apoE4 vs apoE3; red = down in apoE4 vs apoE3; grey = unchanged). A: ACTA1 - actin, alpha 1, skeletal muscle; ACTA2 - alpha 2 actin; ACTN1* - actinin, alpha 1; ACTN2* - actinin alpha 2; ACTN3 - actinin alpha 3; Alpha Actinin - Actinin alpha 2; ATP2A1 - ATPase, Ca++ transporting, cardiac muscle, fast twitch 1, isoform CRA_c; ATP2A2 - ATPase, Ca++ transporting, slow twitch 2 isoform a; ATP2A3 - ATPase, Ca++ transporting, ubiquitous; Ca2 ATPase; Calmodulin; Calpain; CaMKII; CAMK2A - calcium/calmodulin-dependent protein kinase II alpha isoform 1; CAPNS1 - calpain small subunit; CNP - 2',3'-cyclic nucleotide 3' phosphodiesterase isoform 2; ERK1/2 - extracellular signal-regulated kinase; F Actin; Fascin; FLNA - filamin, alpha; Focal adhesion kinase; G-Actin; HPX- hemopexin precursor; LDB3* - LIM domain binding 3 isoform b; MAP6 - microtubule-associated protein 6 isoform 1; MFGE8 - milk fat globule-EGF factor 8 protein isoform 2; MYOZ1 - myozenin 1; NEB – nebulin; PDLIM3 - PDZ and LIM domain protein 3; Pmca - plasma membrane Ca2+ ATPase; SERCA; TPM1* - tropomyosin 1, alpha isoform I; TPM2 - tropomyosin 1, alpha, isoform CRA_b; TTN – titin. B: Actin; Alpha actin - actin, alpha 1, skeletal muscle; calcineurin proteins; CKM - muscle creatine kinase; CKMT1B - creatine kinase, mitochondrial 1, ubiquitous, isoform CRA_c; CKMT2; Collagen(s); Creatine Kinase; FGA - fibrinogen, alpha polypeptide, isoform CRA_b; FGB - fibrinogen beta chain precursor; FGG - fibrinogen, gamma polypeptide; Fibrin; Fibrinogen; MB – myoglobin; MEF2 - myocyte enhancer factor 2; MYH1 - myosin, heavy polypeptide 1, skeletal muscle, adult; MYH2 - myosin heavy chain IIa; MYH4 - myosin, heavy polypeptide 4, skeletal muscle; MYH6 - myosin, heavy polypeptide 6, skeletal muscle; MYH7 - Myh7 protein; MYH8* - myosin, heavy polypeptide 8, skeletal muscle, perinatal; MYH11 - myosin, heavy polypeptide 11, skeletal muscle; MYL1 - myosin, light polypeptide 1; MYL3 - myosin, light polypeptide 3, isoform CRA_a; MYLK - Myosin, light polypeptide kinase; MYLPF - myosin light chain, phosphorylatable, fast skeletal muscle; Myosin; Myosin2; NFkB (complex) - nuclear factor of kappa light polypeptide gene enhancer in B-cells; NID1 – nidogen 1 precursor; PVALB – parvalbumin; Shc - Src homology 2 domain

containing) transforming protein 1; Stat3-Stat3 - signal transducer and activator of transcription 3; Tropomyosin - tropomyosin 1, alpha isoform I.