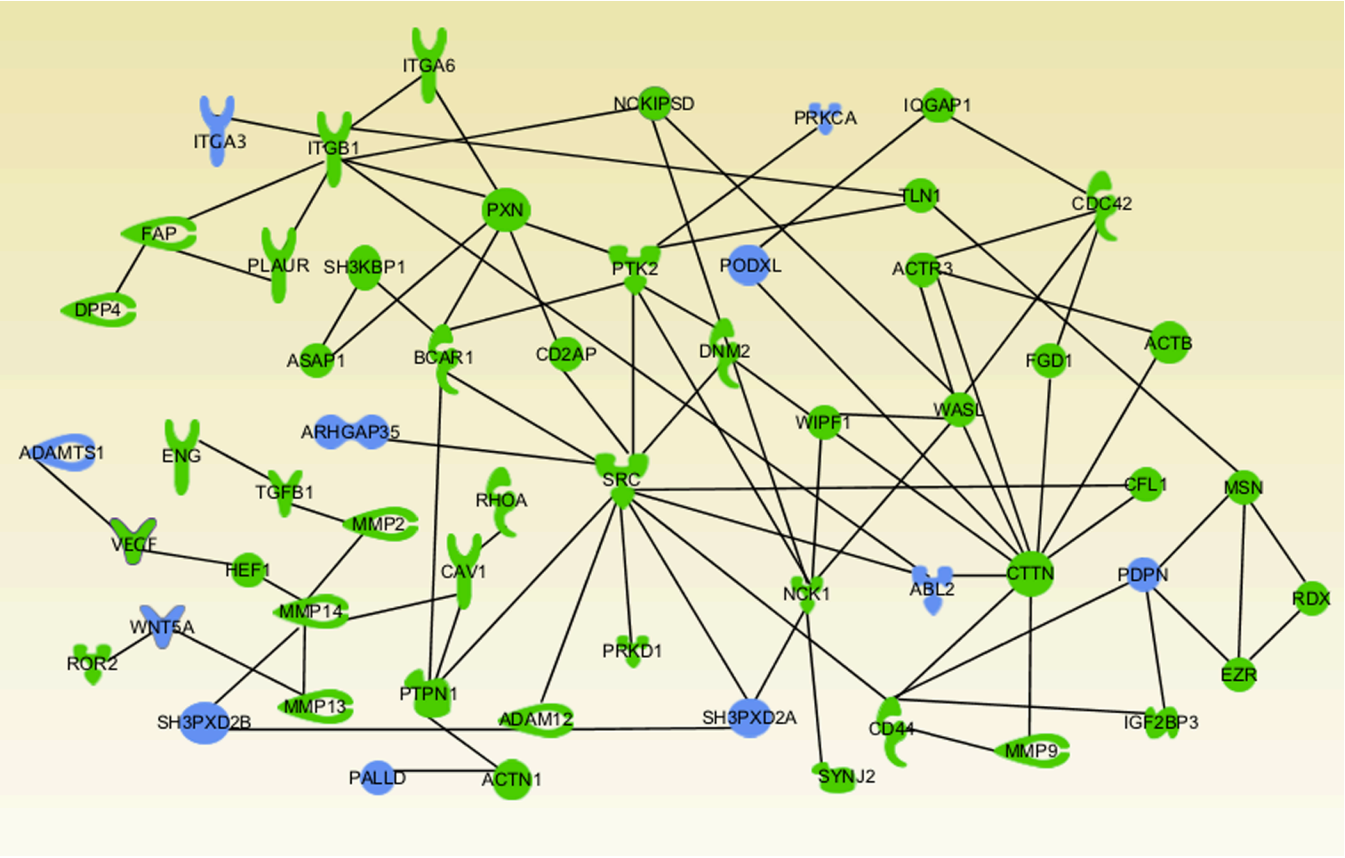
Supplemental Table 1

Function	*P*	# Molecules	Molecules
Cellular Movement	< .001	357	ABHD2, **ABL2**, ACKR2, ACSL4, ACVRL1, **ADAMTS1**, ADCYAP1, AGT, AGTR1, AHR, ALOX5AP, AMOT, AMOTL1, APBB2, APOB, AQP4, ARHGAP24, ARHGEF12, ARHGEF6, ARID5B, ARRB1, ARRDC3, ASAP2, ASCL1, ATM, B3GAT1, BACH2, BAG4, BCAT1, BCL10, BCL11B, BDNF, BMPR2, C1GALT1, C1QBP, CACNA1E, CADM1, CAST, CBL, CCL28, CD24, CD36, CDK14, CDK5R1, CDK6, CHL1, CLCA2, CLEC5A, CLU, CNR1, CNTN2, CNTNAP2, COL18A1, COL4A3, CR1, CREB1, CTBP2, CTGF, CUL5, CUX1, CX3CR1, CXADR, CXCL1, CXCL12, CXCR1, CXCR2, CYP1A1, DAB2, DCLK1, DCX, DEK, DGKD, DIAPH2, DICER1, DIDO1, DISC1, DMD, DOCK8, DPYSL2, DPYSL3, DRAM1, DUSP6, E2F3, EBF2, EBF3, EDIL3, EFEMP1, EFNB2, **EGFR**, ELMO2, **ENAH**, ENTPD1, EPHA4, ERBB2, ERBB4, ESR1, FBXL19, FBXO45, FCGR2A, FCGR3A/FCGR3B, FERMT2, FGF1, FGF2, FGF7, FLRT2, FMR1, FN1, FNDC3B, FOXF1, FOXO3, FPR2, FRMD6, FUT7, FUT8, FZD4, GAB1, GAB2, GAD1, GADD45A, GALNT1, GATA6, GCNT1, GNAO1, GPR116, GRIA3, HABP2, HARS, HAS2, HAS3, HEY1, HIPK2, HOXB9, ICOSLG/LOC102723996, IFIT2, IFNAR1, IGF1, IGF1R, IGFBP4, IL1R1, IL1RL1, IL4R, INSR, IRS1, IRS2, **ITGA3**, ITGB8, ITK, ITPR1, JAK2, JMJD6, KAL1, KALRN, KCNK2, KCNN3, KCNN4, KDR, KIAA0319, KIT, KLF4, KLF5, KLF8, KLHL20, KMT2A, LAMC1, LGALS8, LIF, LIN28B, LOX, LPP, LRP5, LRP8, LTBP2, MAGI1, MAP3K2, MAP3K5, MAP3K7, MAP4K4, MAPK14, MATN2, MBP, MIB1, MITF, MLLT4, MMP19, MST1R, MTDH, MTOR, MXD1, MYD88, MYH11, MYO5B, MYOCD, NCAM1, NEUROD4, NEXN, NF1, NFAT5, NFIA, NFIX, NKX2-1, NKX2-3, NOG, NOS1, NOTCH2, NOX4, NT5E, NTRK2, NUS1, OCLN, OLR1, PAFAH1B1, **PALLD**, PAQR3, PARVA, PAX2, PAX6, PCSK6, PDE4B, PDE4DIP, PDGFA, PDGFD, PDGFRA, PDK1, PDPK1, **PDPN**, PEAK1, PGR, PHACTR1, PHF6, PIP5K1C, PLXNA2, **PODXL**, POU3F2, POU4F1, PPAP2B, PPARA, PPBP, PPIF, PPM1A, PPP1R9A, PPP3CC, PRDM1, PRDX1, PRKAA2, **PRKCA**, PRKCB, PRKD1, PRKG1, PRKX, PRLR, PRMT2, PROS1, PSEN1, PTGER3, PTP4A2, PTPN14, PTPRK, PTPRM, PTPRO, RAB21, RAPGEF1, RAPGEF3, REPS2, REST, RET, RGS1, RGS16, RGS4, RNF144A, RNF20, ROBO1, ROBO2, RPRD1A, RUNX1, RUNX2, S1PR5, SCAI, SCN2B, SEMA3A, SEMA3D, SEMA3E, SEMA5A, SEMA6A, SEMA6D, SFRP4, SFTPA1, SH2B3, **SH3PXD2A, SH3PXD2B**, SHC1, SIX4, SKI, SLC12A2, SLC12A6, SLC1A2, SLC8A1, SNAI2, SOCS4, SP1, SP100, SPAG6, SPAG9, SPATA13, SPN, SPOCK3, SSH1, ST3GAL5, ST8SIA2, ST8SIA4, STARD13, STX6, SULF1, SYNJ2BP, TACR1, TBR1, TBX21, TCF12, TET2,

Supplemental Table 1 (cont'd)

Function	*P*	# Molecules	Molecules
Cellular Movement (cont'd)			TFF3, TGFBR2, THBS2, THRB, TLR7, TMEM30A, TMOD3, TNFRSF9, TNN, TNS1, TNS3, TP53BP2, TPM1, TPR, TRAF6, TREM1, TREML2, **TRIO**, TRPV1, TSC1, UHMK1, USP14, USP9X, VAMP7, VAX1, VEGFB, VHL, **WASF3**, WHSC1, **WNT5A**, WWC1, XDH, XIAP, YAP1, YBX1, YWHAZ, ZFAND5
Formation of Cellular Protrusions	< .001	174	ABI2, **ABL2**, ACTN2, ADAM22, ADCY1, ADCYAP1, AGT, AHR, ALMS1, ALS2, ARHGAP24, ARHGEF6, ARHGEF9, ASCL1, ATG7, ATXN1, BBS10, BCL11B, BDNF, BLOC1S6, C1QBP, CAST, CD2AP, CD44, CDK5R1, CHL1, CIT, CLU, CNR1, CNTN2, CNTNAP2, CREB1, CTGF, CXCL12, CXCR1, CXCR2, DBNL, DCLK1, DCX, DGKG, DIAPH2, DICER1, DPYSL2, DPYSL3, DYRK1A, DZIP1, EFNB2, **EGFR**, EGR3, EIF4G3, **ENAH**, ENC1, EPHA4, ERBB2, ERBB4, FGF1, FGF2, FGF7, FMR1, FN1, FUT8, FUZ, GAB1, GAP43, GDA, GNAO1, GPR116, GRIN3A, HDAC2, IFT20, IGF1, IGF1R, IL1R1, IL1RAP, INSR, **ITGA3**, ITGB8, ITPR1, KALRN, KDR, KIF3B, KIT, KLF5, KLHL41, LAMC1, LGALS8, LOX, LRP8, MAP3K7, MATN2, MBP, MEF2A, MID1, MTMR12, MTOR, MYD88, MYO5B, MYO6, NCAM1, NF1, NFIA, NFIB, NFIX, NLGN1, NLGN3, NOS1, NPHP4, NTRK2, ODF2, OPA1, OPHN1, PACSIN1, PAK7, **PALLD**, PARVA, PAX2, PAX6, PCDH15, PDGFA, PDGFRA, PIP5K1C, PKHD1, PLK4, PLXNA4, POU3F2, POU4F1, POU4F2, PPP1R9A, PRICKLE2, PRKACB, **PRKCA**, PRKG1, PSEN1, PTPRE, PTPRK, PTPRM, RAB11A, RET, RFX4, RHOQ, RIMS1, RIT1, ROBO1, ROBO2, RYR2, SDK2, SEMA3A, SEMA3D, SEMA3E, SHC1, SLC11A2, SLITRK3, SNAP91, SPATA13, SRGAP3, ST8SIA1, STK38L, STRN, SULF1, SYNE1, TENM4, TLR7, TNN, TRAF6, TSC1, UBE3A, UHMK1, ULK2, **VAMP7**, VAPA, VHL, **WASF3**, **WNT5A**
Organization of Actin Cytoskeleton	< .001	55	**ABL2,** ACVRL1, AKAP2, AMOT, ARHGDIA, ARRB1, BCL6, CLU, CXADR, CXCL1, CXCL12, DLG3, DPYSL2, **EGFR**, EHD2, **ENAH**, EPB41, EPB41L2, EPHA4, ERBB2, FAM101B, FGF2, FGF7, FN1, HAS2, IGF1, KALRN, KIT, MAPK14, MST1R, MTOR, NF1, OPHN1, PAFAH1B1, PARVA, PCDH15, PDGFA, PDGFD, PDPK1, PHACTR1, PIP5K1C, PKHD1, PPARGC1B, PPP1R9A, PRKG1, RBBP4, RET, RHOQ, SHC1, SHROOM3, SSH1, TF, TMOD2, **TRIO**, TSC1

Bold= Invadopodia-associated proteins



Supplemental Figure 1. Theoretical miR-375 targets in the invadopodia network. The interactions of invadopodia-associated proteins are shown. Green shapes are invadopodia-associated proteins that are not theoretical miR-375 targets. Blue shapes are invadopodia-associated proteins that are theoretical miR-375 targets. Lines indicate binding interactions. This invadopodia network has been adapted from Hoshino D, Jourquin J, Emmons SW, Goldgof M, Costello K, Tyson DR, Brown B, Lu Y, Prasad NK, Zhang B, Mills GB, Yarbrough WG, Quaranta V, Seiki M, Weaver AM. Network analysis of the focal adhesion to invadopodia transition identifies a PI3K-PKCalpha invasive signaling axis. *Science signaling.* 2012;5(241):ra66. Reprinted with permission from AAAS.

Abbreviations- ABL2: abelson tyrosine-protein kinase 2 (also known as Arg), ACTB: beta actin, ACTN1: actinin alpha1, ACTR3: actin-related protein 3, ADAM12: a disintegrin and etalloproteinase (ADAM) 12, ADAMTS1: ADAM with thrombospondin motif 1, ARHGAP35: Rho GTPase activating protein 35, ASAP1: ADP-ribosylation factor GTPase-activating protein with SH3 domain ankyrin repeat and PH domain 1, BCAR1: breast cancer anti-estrogen resistance 1, CAV1: caveolin 1, CD2AP: CD2-associated protein, CD44: cluster of differentiation 44, CDC42: cell division cycle 42, CFL1: cofilin, CTTN: cortactin, DNM2: dynamin 2, DPP4: dipeptidyl-peptidase 4, ENG: endoglin, EZR: ezrin, FAP: fibroblast activation protein alpha, FGD1: faciogenital dysplasia

1 protein, HEF1: human enhancer of filamentation, IGF2BP3: insulin-like growth factor 2 mRNA binding protein 3, IQGAP1: IQ motif containing GTPase activating protein 1, ITGA3: integrin alpha 3, ITGA6: integrin alpha 6, ITGB1: integrin beta 1, MMP2: matrix metalloproteinase 2, MMP9: matrix metalloproteinase 9, MMP13: matrix metalloproteinase 13, MMP14: membrane type 1 metalloprotease, MSN: moesin, NCK1: non-catalytic region of tyrosine kinase 1, NCKIPSD: NCK interacting protein with SH3 domain, PALLD: palladin, PDPN: podoplanin, PLAUR: plasminogen activator, urokinase receptor, PODXL: podocalyxin-Like Protein, PRKCA: protein kinase C alpha, PRKD1: protein kinase D1, PTK2: protein tyrosine kinase 2, PTPN1: protein tyrosine phosphatase non-receptor type 1, PXN: paxillin, RDX: radixin, RHOA: Ras homolog family member A, ROR2: receptor tyrosine kinase-like orphan receptor 2, SH3KBP1: SH3-domain kinase binding protein 1, SH3PXD2A: tyrosine kinase substrate with dive SH3 domains (Tks5), SH3PXD2B: tyrosine kinase substrate with four SH3 domains (Tks4), SRC: proto-oncogene tyrosine-protein kinase Src, SYNJ2: synaptojanin 2, TGFB1: transforming growth factor beta 1, TLN1: Talin, VEGF: vascular endothelial growth factor, WASL: neural Wiskott-Aldrich Syndrome protein, WIPIF1: Wiskott-Aldrich Syndrome protein Interacting protein family member 1, WNT5A: wingless-type mouse mammary tumor virus (MMTV) integration site family, member 5A.