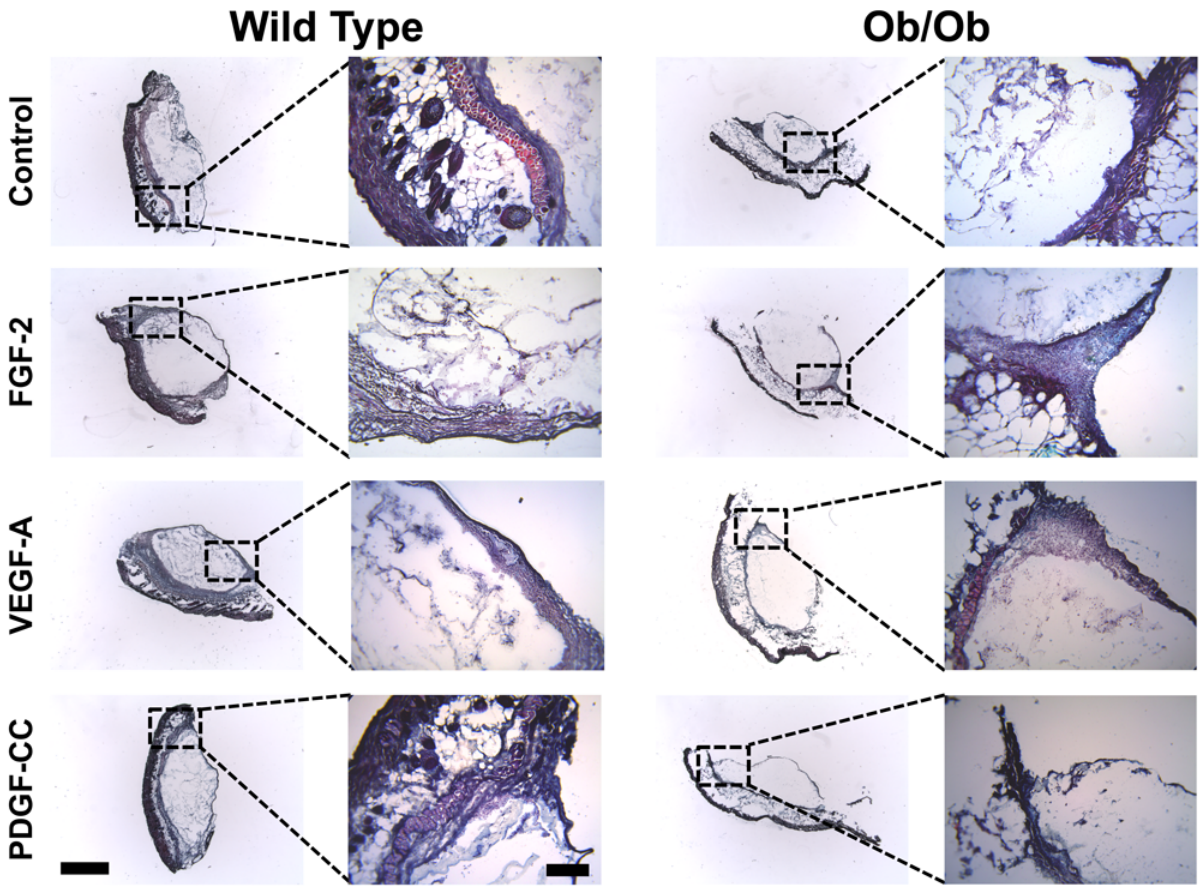
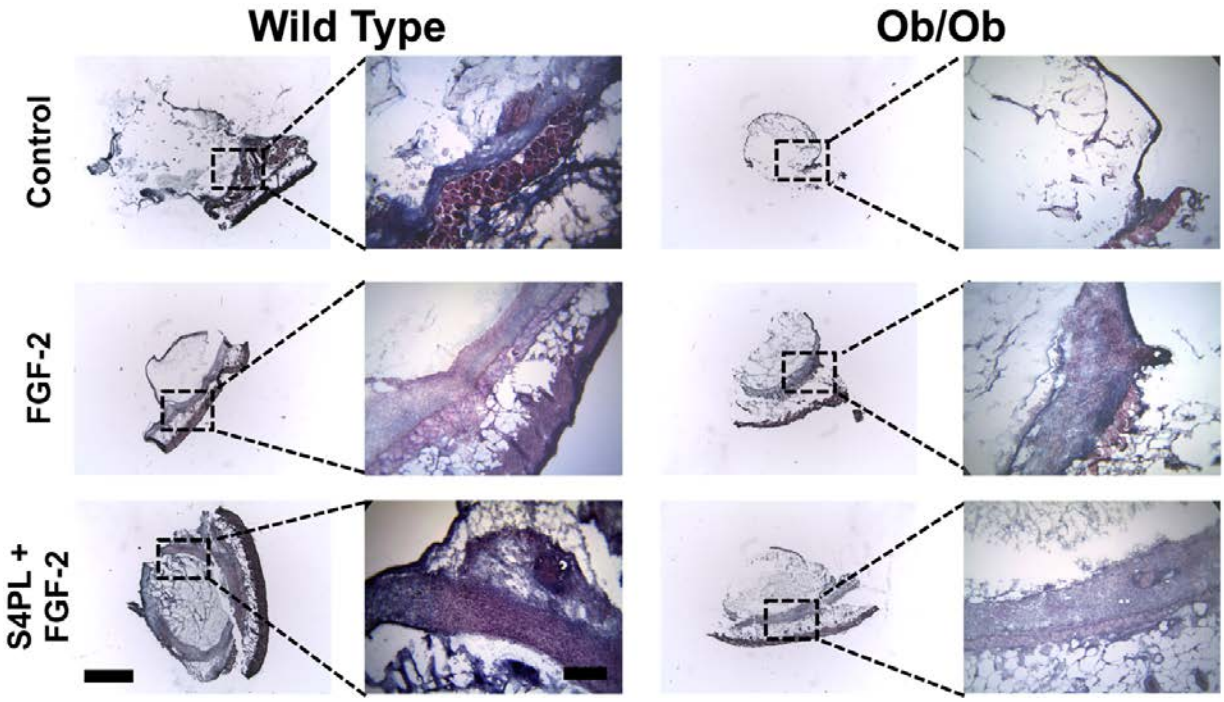
Supplementary Figures



Supplementary Figure S1. Movat's Pentachrome staining of the sections of subcutaneously implanted alginate gels with growth factors. Alginate gels containing PBS, FGF-2, VEGF-A and PDGF-CC were subcutaneously implanted on the back of mice. The gels were harvested after seven days frozen, sectioned and stained as shown here. Size bar = 1mm. Mag. size bar = 250μm.



Supplementary Figure S2. Movat's Pentachrome staining of the sections of subcutaneously implanted alginate gels with PBS, FGF-2 and syndecan-4 proteoliposomes with FGF-2. The gels were harvested after seven days frozen, sectioned and stained as shown here. Size bar = 1mm. Mag. size bar = 250μm.

Supplementary Tables

Supplementary Table S1. *Summary of Gene Expression Relative to WT mice with Normal Diet*

Tissue	**Heart**			**Muscle**		
Strain	WT	Ob/Ob	Ob/Ob	WT	Ob/Ob	Ob/Ob
Diet	HFD	NCD	HFD	HFD	NCD	HFD
Syn-1	ND	+	**+**	ND	+	**+++**
Syn-2	ND	+	**+**	---	-	+
Syn-4	-	+	+	+	ND	**+++**
PDGFR-α	**+**	+	**---**	--	-	ND
PDGFR-β	ND	+	+	ND	-	+
FGFR-1	ND	ND	+	--	**+++**	**++++**
VEGFR-2	-	+	**+**	+	ND	**++**
NRP-1	**++**	**++**	**++**	+++	++	**++++**
HPA	-	+	ND	**++++**	+++	+

Labels: HFD = High Fat Diet, NCD = Normal Chow Diet, ND = No difference,
+ = 1.5-3 fold more, ++ = 3-5 fold more, +++ = 5-10 fold more, ++++ = 10+ fold more
- = 1.5-3 fold less, -- = 3+ fold less, --- = 5-10 fold less, ---- = 10+ fold less
Bold = Statistically significant difference

Supplementary Table S2. *Summary of Protein Expression Relative to WT mice with Normal Diet*

Tissue	**Heart**			**Muscle**		
Strain	WT	Ob/Ob	Ob/Ob	WT	Ob/Ob	Ob/Ob
Diet	HFD	NCD	HFD	HFD	NCD	HFD
Syn-1	**++**	ND	ND	**+**	ND	ND
Syn-2	+	-	-	+	-	-
Syn-4	**+**	ND	ND	**+**	ND	-
PDGFR-α	**+**	ND	ND	**++**	-	--
p-PDGFR-α/PDGFR-α	ND	ND	ND	-	**++**	-
PDGFR-β	**+**	ND	ND	ND	+	-
FGFR-1	**+**	ND	ND	ND	ND	-
VEGFR-2	ND	-	--	ND	ND	-
NRP-1	ND	ND	-	ND	**--**	**---**
HPA	**+++**	+	ND	**+++**	-	---

Labels: HFD = High Fat Diet, NCD = Normal Chow Diet, ND = No difference,

+ = 1.5-3 fold more, ++ = 3-5 fold more, +++ = 5-10 fold more, ++++ = 10+ fold more

- = 1.5-3 fold less, -- = 3+ fold less, --- = 5-10 fold less, ---- = 10+ fold less

Bold = Statistically significant difference

Supplementary Table S3. *Primers used for real time qPCR*

Gene	***Forward Primer***	***Reverse Primer***
FGFR-1	ACCAAGAAGAGCGACTTCCA	AACCAGGAGAACCCCAGAGT
VEGFR-2	TTTGGTTTTGGAAGGTTTGC	AGGAGCAAGCTGCATCATTT
PDGFR-α	ACCACAATGGTGCTGTTGAA	AATCTCTGGGGCAAAGGTCT
PDGFR-β	CCGGAACAAACACACCTTCT	TATCCATGTAGCCACCGTCA
Syndecan-1	AGCCTTCCTCCCTCATGTTT	TCTAGCTGAGTGGCTGAGCA
Syndecan-2	ACATCTCCCCTTGCTGTGAC	TGAGGGGTTCTTTGGTCTTG
Syndecan-4	CTGATCCTGCTGCTGGTGTA	GGAGGAAGCTTCATGCGTAG
Neuropilin-1	GGAGCTACTGGGCTGTGAAG	CCTCCTGTGAGCTGGAAGTC
Heparanase	GGAGCAGGCAACTACCACTT	ACAGGAGCAAACTCCGAGTG
GAPDH	AACTTTGGCATTGTGGAAGG	GGATGCAGGGATGATGTTCT

Abbreviations used were as follows: FGFR-1 = Fibroblast Growth Factor-1; VEGFR-2 = Vascular Endothelial Growth Factor; PDGFR-α = Platelet Derived Growth Factor Alpha; PDGFR-β = Platelet Derived Growth Factor Beta; GAPDH = Glyceraldehyde 3-Phosphate Dehydrogenase.

Supplementary Table S4. *Antibodies used in the studies*

Protein/Label	Antibody	Company	Type
GAPDH	Mouse monoclonal	Santa Cruz	Primary
Syndecan-1	Mouse monoclonal	ABCAM	Primary
Syndecan-2	Rabbit polyclonal	ABCAM	Primary
Syndecan-4	Rabbit polyclonal	ABCAM	Primary
Neuropilin-1	Rabbit monoclonal	ABCAM	Primary
Heparanase	Mouse monoclonal	Cell Sciences	Primary
PDGFR-α	Rabbit polyclonal	ABCAM	Primary
pPDGFR-α	Rabbit monoclonal	Cell Signaling	Primary
PDGFR-β	Rabbit monoclonal	Cell Signaling	Primary
FGFR-1	Rabbit polyclonal	ABCAM	Primary
PECAM	Goat polyclonal	Santa Cruz	Primary
VEGFR2/KDR	Rat monoclonal	Santa Cruz	Primary
AlexaFluor 594	Donkey polyclonal	Life Tech	Secondary
HRP	Donkey polyclonal	Santa Cruz	Secondary