

**Supplementary Table 3.** Differentially expressed genes from the top 5 canonical pathways found by IPA analysis for tunica albuginea versus stroma (interstitial stroma and pre-theca).

Gene symbol	Entrez Gene Name	p-value	Fold change*
<b>Hepatic Fibrosis / Hepatic Stellate Cell Activation</b>			
<i>COL8A2</i>	collagen type VIII alpha 2 chain	0.000000192	5.5
<i>COL1A1</i>	collagen type I alpha 1 chain	0.000107	3.5
<i>COL8A1</i>	collagen type VIII alpha 1 chain	0.0000533	2.9
<i>VEGFC</i>	vascular endothelial growth factor C	0.000134	2.8
<i>TNFRSF11B</i>	TNF receptor superfamily member 11b	0.0000191	2.8
<i>HGF</i>	hepatocyte growth factor	0.00311	2.7
<i>COL1A2</i>	collagen type I alpha 2 chain	0.000186	2.7
<i>PDGFD</i>	platelet derived growth factor D	0.0000499	2.1
<i>CCL5</i>	C-C motif chemokine ligand 5	0.00304	2.0
<i>IGF1</i>	insulin like growth factor 1	0.000157	-5.4
<i>KDR</i>	kinase insert domain receptor	0.000333	-3.1
<i>EDNRA</i>	endothelin receptor type A	0.000903	-2.9
<i>MET</i>	MET proto-oncogene, receptor tyrosine kinase	0.00457	-2.4
<i>AGTR1</i>	angiotensin II receptor type 1	0.00454	-2.3
<i>EDNRB</i>	endothelin receptor type B	0.00233	-2.3
<i>BCL2</i>	BCL2, apoptosis regulator	0.000174	-2.2
<b>G-protein Coupled Receptor Signaling</b>			
<i>HTR1D</i>	5-hydroxytryptamine receptor 1D	0.0000049	6.7
<i>ENPP6</i>	ectonucleotide pyrophosphatase/phosphodiesterase 6	0.0000225	4.7
<i>RGS16</i>	regulator of G protein signaling 16	0.0000175	3.3
<i>PTGER2</i>	prostaglandin E receptor 2	0.0000681	3.3
<i>PDE2A</i>	phosphodiesterase 2A	0.00000993	2.8
<i>CHRM2</i>	cholinergic receptor muscarinic 2	0.00249	2.6
<i>PDE5A</i>	phosphodiesterase 5A	0.0000205	2.2
<i>ADRA2A</i>	adrenoceptor alpha 2A	0.00338	2.1
<i>GNAI1</i>	G protein subunit alpha i1	0.000498	2.1
<i>PRKCB</i>	protein kinase C beta	0.00147	2.0
<i>GNAO1</i>	G protein subunit alpha o1	0.00176	-2.7
<i>AGTR1</i>	angiotensin II receptor type 1	0.00454	-2.3
<i>PDE8B</i>	phosphodiesterase 8B	0.00338	-2.2
<i>ADCY5</i>	adenylate cyclase 5	0.0018	-2.2
<i>PDE1A</i>	phosphodiesterase 1A	0.00313	-2.1

<b>cAMP Mediated Signaling</b>			
<i>HTR1D</i>	5-hydroxytryptamine receptor 1D	0.0000049	6.7
<i>ENPP6</i>	ectonucleotide pyrophosphatase/phosphodiesterase 6	0.0000225	4.7
<i>PTGER2</i>	prostaglandin E receptor 2	0.0000681	3.3
<i>PDE2A</i>	phosphodiesterase 2A	0.00000993	2.8
<i>CHRM2</i>	cholinergic receptor muscarinic 2	0.00249	2.6
<i>PDE5A</i>	phosphodiesterase 5A	0.0000205	2.2
<i>ADRA2A</i>	adrenoceptor alpha 2A	0.00338	2.1
<i>GNAI1</i>	G protein subunit alpha i1	0.000498	2.1
<i>GNAO1</i>	G protein subunit alpha o1	0.00176	-2.7
<i>AGTR1</i>	angiotensin II receptor type 1	0.00454	-2.3
<i>PDE8B</i>	phosphodiesterase 8B	0.00338	-2.2
<i>ADCY5</i>	adenylate cyclase 5	0.0018	2.2
<i>PDE1A</i>	phosphodiesterase 1A	0.00313	2.1
<b>Granulocyte Adhesion and Diapedesis</b>			
<i>IL18</i>	interleukin 18	0.00282	3.7
<i>CXCL16</i>	C-X-C motif chemokine ligand 16	0.000336	2.8
<i>TNFRSF11B</i>	TNF receptor superfamily member 11b	1.91E-05	2.8
<i>CX3CL1</i>	C-X3-C motif chemokine ligand 1	0.000719	2.5
<i>THY1</i>	Thy-1 cell surface antigen	7.88E-06	2.2
<i>GNAI1</i>	G protein subunit alpha i1	0.000498	2.1
<i>ITGB3</i>	integrin subunit beta 3	0.00146	2.1
<i>CCL5</i>	C-C motif chemokine ligand 5	0.00304	2.0
<i>CLDN5</i>	claudin 5	0.0019	-2.3
<i>PECAM1</i>	platelet and endothelial cell adhesion molecule 1	0.00185	-2.3
<b>Cardiac <math>\beta</math>-Adrenergic Signaling</b>			
<i>PPP1R14C</i>	protein phosphatase 1 regulatory inhibitor subunit 14C	0.000224	6.0
<i>ENPP6</i>	ectonucleotide pyrophosphatase/phosphodiesterase 6	0.0000225	4.7
<i>PDE2A</i>	phosphodiesterase 2A	0.00000993	2.8
<i>RYR2</i>	ryanodine receptor 2	0.00278	2.4
<i>PDE5A</i>	phosphodiesterase 5A	0.0000205	2.2
<i>GNG2</i>	G protein subunit gamma 2	0.000334	2.0
<i>PDE8B</i>	phosphodiesterase 8B	0.00338	-2.2
<i>ADCY5</i>	adenylate cyclase 5	0.0018	-2.2
<i>PDE1A</i>	phosphodiesterase 1A	0.00313	-2.1

\*A positive value indicates upregulation and a negative value indicates downregulation in the tunica albuginea.