

Supplementary data

Table S1. Demographics and clinical history of human *postmortem* retinal donors.

Donors	Experimental Group	Age	Sex	Significant Medical Conditions	Ocular History
P-1	Control/non-diabetic	51	M	HTN, non-invasive eye surgery	
P-2	Control/non-diabetic	38	M		
P-3	Control/non-diabetic	52	M	HTN, high cholesterol	
P-4	Control/non-diabetic	52	M		
P-5	Control/non-diabetic	56	F		
P-6	Control/non-diabetic	56	M	HTN, lupus	
P-7	Control/non-diabetic	48	F	Obesity, CAD	
P-8	Control/non-diabetic	68	M	Coronary artery bypass graft, HTN	
P-9	Diabetic	62	F	Dialysis, HTN, stroke	DR
P-10	Diabetic	60	F	Obesity	DR, laser OS
P-11	Diabetic	67	M	IDDM 10 yrs, toe amputation, dialysis	DR, laser OS
P-12	Diabetic	71	M	IDDM, dialysis, Parkinson's Disease, altered mental state	DR, glaucoma
P-13	Diabetic	57	F	ESRD, IDDM 10yrs, obesity	DR
P-14	Diabetic	49	M	Leg amputation	DR
P-15	Diabetic	52	M	Dialysis	DR
P-16	Diabetic	68	F	Alzheimer's, right lung mass	DR

CAD, coronary artery disease

DR, diabetic retinopathy

HTN, hypertension

IDDM, insulin-dependent diabetes mellitus

NDDM, noninsulin-dependent diabetes mellitus

ESRD, end-stage renal disease

OS, oculus sinister (left eye)

Table S2. Biochemical parameters measured in the experimental rat groups.

Experimental Groups	Body weight (g)	Blood Glucose (mg/dl)	HbA1c (mmol/mol)	ALT (U/L)	AST (U/L)
Control	298±5.0	87.6±6.9	4.1±0.1	56±6	115±5.6
DB	217.8±17.8**	492±76.4**	9±0.6*	101±13.8*	234±16.9*
DB + TS	251.2±14.3 [#]	447.8±67.1	7.8±0.5	79.6±9.9 [#]	118.6±29 [#]

*p<0.001 and **p<0.0001 vs. control and #p<0.05 vs. DB; n=6

HbA1c, Hemoglobin A1c

ALT , Alanine aminotransferase

AST, Aspartate aminotransferase

Table S3. Primer sequences used in the study.

Genes	Forward	Reverse
<i>Rattus norvegicus</i>		
HDAC6	GGA AAA GGT CGC CAG AAA CTT	GGC CGG TTG AGG TCA TAG TT
GCLC	GCCGTCTTACAGGGGATGTT	ACGCCTTCCTTCCCATTGAT
GCLM	GTGGGCACAGGTAAAACCCAA	ACTTGCCTCAGAGAGCAGTTC
NQO 1	TGGCCAATTCAGAGTGGCATT	AGAGTGGTGACTCCTCCCAG
HO-1	CTGCTAGCCTGGTTCAAGATACT	TAAATTCCCCTGACCACGGT
HPRT-1	TGGATACAGGCCAGACTTTGT	TGCCCGCTGTCTTTTAGGCT
<i>Homo sapiens</i>		
HDAC6	GGAAAAGGTCGCCAGAACTT	GGCCGGTTGAGGTCATAGTT
18s	GGCCCTGTAATTGGAATGAGTC	CCAAGATCCAACACTACGAGCTT

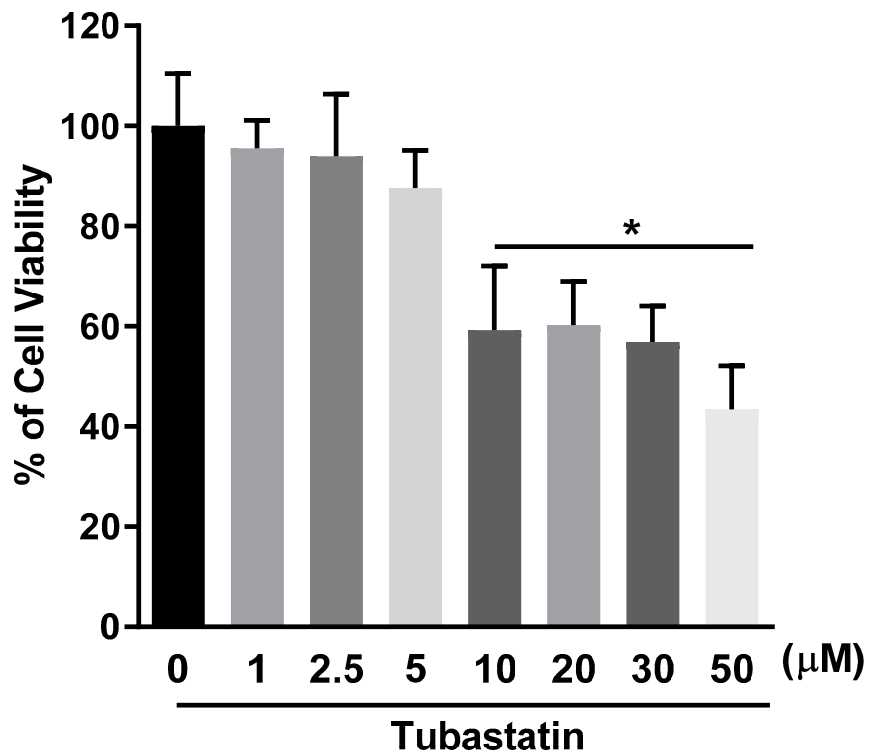


Figure S1. MTT Assay was performed to assess viability of HuREC cells in response to different concentrations of Tubastatin A (1-50 μM). Values are mean ± SEM for n=6. *p<0.05 vs. 0 μM.