

**Dr. Hu Huang's Publications:** (\*Corresponding author)

1. **Huang H\***, Saddala MS, Mukwaya, A, Mohan RR, Lennikov A. Association of placental growth factor and angiopoietin in human retinal endothelial cell-pericyte co-cultures and iPSC-derived vascular organoids. *Cur Eye Res.* 2022. 2022 Dec 2;1-15. doi: 10.1080/02713683.2022.2149808.
2. Yang X, Diaz V, **Huang H\***. The role of interferon regulatory factor 1 in regulating microglial activation and retinal inflammation. *Int J Mol Sci.* 2022. 23(23),14664. <http://doi.org/10.3390/ijms232314664>.
3. Balne PK, Gupta S, Keele L, Landon KM, Sinha NR, Hoffman AC, Hauser N, Sinha PR, **Huang H**, Kempuraj D, Mohan RR. Characterization of C-X-C chemokine receptor type 5 (CXCR5) in the cornea and role in the inflammatory response after corneal injury. *Exp Eye Res.* doi:10.1016/j.exer.2022.109312. PMID: 36400287.
4. Saddala MS, Yang X, Tang S, **Huang H\***. Transcriptome-wide analysis reveals core sets of transcription factors of retinal microglial sensome and inflammatory genes in retinal microglia. *Genomics.* 2021, 113:3058-3071.
5. Saddala MS, Lennikov A, Mukwaya A, Yang X, Tang S, **Huang H\***. Data mining and network analysis reveal C-X-C chemokine receptor type 5 is involved in the pathophysiology of age-related macular degeneration. *J Biomol Struct Dyn.* 2021. Jul 9:1-10. Doi: 10.1080/07391102.2021.1949391. PMID: 34243690.
6. Hikage F, Lennikov A, Mukwaya A, Lachota M, Ida Y, Utheim TP, Chen D-F, **Huang H**, Ohguro H. NF- $\kappa$ B activation in retinal microglia is involved in the inflammatory and neovascularization signaling in laser-induced choroidal neovascularization in mice. *Exp Cell Res.* 2021. 403:112581. doi:10.1016/j.yexcr.2021.12581. PMID: 33811906.
7. Lennikov A, Mukwaya A, Saddala MS, Fan L, Sandro D, **Huang H\***. Synergistic interactions of PlGF and VEGF contribute to blood-retinal barrier breakdown through canonical NF $\kappa$ B activation. *Exp Cell Res.* 2020. 397(2):112347. PMID: 33130176. DOI: 10.1016/j.yexcr.2020.112347.
8. **Huang H\***. Pericyte-Endothelial Interaction in the Retinal Microvasculature. *Int. J. Mol. Sci.* 2020, 21(19), 7413; doi: 103390/ijms21197413. (Review)
9. Lennikov A, Mukwaya A, Saddala MS, Mukwaya A, **Huang H\***. Deficiency of C-X-C chemokine receptor type 5 (CXCR5) gene causes dysfunction of retinal pigment epithelium cells. *Lab Invest.* 2020. PMID: 3299482. DOI: 10.1038/s41374-020-00491-4.

10. **Huang H\***, Saddala M, Lennikov A, Mukwaya, A., Fan F. RNA-seq reveals placental growth factor regulates the human retinal endothelial cell barrier integrity by transforming growth factor (TGF- $\beta$ ) signaling. *Mol Cell Biochem*. 2020. PMID: 32813141. DOI: 10.1007/s11010-020-03862-z
11. Saddala MS, Lennikov A, **Huang H\***. RNA-seq data from C-X-C chemokine receptor type 5 (CXCR5) gene knockout aged mice with retinal degeneration phenotype. *Bata Brief*. 2020. 31:105915. PMID: 32642521. DOI: 10.1016/j.dib.2020.105915.
12. Saddala MS, Lennikov A, Mukwaya, A. **Huang H\***. Transcriptome-wide analysis of CXCR5 deficient retinal pigment epithelial (RPE) cells reveals molecular signatures of RPE homeostasis. *Biomedicines*. 2020. 8(6),147. DOI: 10.3390/biomedicines8060147.
13. **Huang H\***, Lennikov A. CXCR5/NRF2 double knockout mice develop age-related macular degeneration-like phenotypic features at early ages. *Exp. Eye Res*. 2020. 196:108061. DOI: 10.1016/j.exer.2020.108061.
14. Saddala MS, Lennikov A, Mukwaya A, Yang Y, Hill MA, Lagali N, **Huang H\***. Discovery of novel L-type voltage-gated calcium channel blockers and application for the prevention of inflammation and angiogenesis. *J. Neuroinflammation*. 2020. 17:132. PMDI: 32334630. Doi: 10.1186/s12974-020-01801-9.
15. Saddala MS, Lennikov A, **Huang H\***. Placental Growth Factor Regulates the Pentose Phosphate Pathway and Antioxidant Defense Systems in Human Retinal Endothelial Cells. *J. Proteomics*. 2020:10;217:103682.
16. Saddala MS, Lennikov A, **Huang H\***. Discovery of Small-Molecule Activators for Glucose-6-Phosphate Dehydrogenase (G6PD) Using Machine Learning Approaches. *Int J Mol Sci*. 2020 Feb 23;21(4). doi: 10.3390/ijms21041523. PMID: 32102234; PMC7073180.
17. Saddala MS, Lennikov A, **Huang H\***. RNA-Seq reveals expression profile of genes involved in retinal degeneration in Pde6c mutant *Danio rerio*. *BMC Genomics*. 2020. 21(1). DOI:10.1186/s12864-020-6550-z.
18. **Huang H\***, Lennikov A, Saddala M, Grab JD, Gozal, D, Khalyfa, A, Fan F. Placental growth factor negatively regulates endothelial cell barrier function through suppression of glucose-6-phosphate dehydrogenase and anti-oxidant defense systems. *FASEB Journal*. 2019: 33(12). DOI: 10.1096/fj.201901353.
19. Lennikov A, Saddala MS, Mukwaya A, Tang S, **Huang H\***. Autoimmune-mediated retinopathy in CXCR5-deficient mice as the result of accumulation of age-related macular degeneration associated proteins. *Front Immunol*. 2019:10:1903. doi: 10.3389/fimmu.2019.01903.

20. Saddala MS, **Huang H\***. Identification of novel inhibitors for TNF- $\alpha$ , TNF receptor-1 and TNF- $\alpha$ , TNF receptor-1 complex using pharmacophore-based approaches. *J Transl Med.* 2019; 17(1):215.
21. Cao X, Li W, Liu Y, **Huang H\***, Ye C\*. The anti-inflammatory effects of Cxcr5 in the mouse retina following acute ocular hypertension. *Biomed Res Int.* 2019; 3487607. doi: 10.1155/2019/3487607.
22. Saddala MS, Lennikov A, Anthony M, **Huang H\***. Transcriptome-wide analysis of differentially expressed chemokine receptors, SNPs and SSRs in the age-related macular degeneration. *Human Genomics.* 2019.13:15.
23. Saddala MS, Lennikov A, Grab DJ, Liu G, Tang S, **Huang H\***. Proteomics reveals ablation of PlGF increases antioxidant and neuroprotective proteins in the diabetic mouse retina. *Sic Rep.* 2018. 8(1):16728. doi: 10.1038/s41598-018-34955-x.
24. Bee YS, Chen J, Tsai P, Sheu S, Lin H, **Huang H**, Liu G and Tai M. Inhibition of experimental choroidal neovascularization by a novel peptide derived from calreticulin anti-angiogenic domain. *Int. J. Mol. Sci.* 2018, 19, 2993; doi:10.3390/ijms19102993.
25. Tsai CH, Wang PY, Lin IC, **Huang H**, Liu GS, Tseng CL. Ocular Drug Delivery: Role of Degradable Polymeric Nanocarriers for Ophthalmic Application. *Int. J. Mol. Sci.* 2018,19,2830; doi:10.3390/ijms19092830.
26. **Huang H\***, Liu Y, Wang L, Li W. Age-related macular degeneration phenotypes are associated with increased tumor necrosis-alpha and subretinal immune cells in aged Cxcr5 knockout mice. *Plos One.* 2017;12(3):e0173716. doi: 10.1371/journal.pone.0173716.
27. Liu Y<sup>#</sup>, **Huang H<sup>#</sup>**, Sun G, et al. Gene expression profile of extracellular matrix and adhesion molecules in the normal corneal stroma. *Curr Eye Res.* 2016; 21:1-8. (#: Co-first Author)
28. **Huang H\***, He J, Johnson D, et al. Deletion of placental growth factor prevents diabetic retinopathy and is associated with Akt activation and HIF1 $\alpha$ -VEGF pathway inhibition. *Diabetes.* 2015; 64(1):200-12.
29. He J, Wang H, Liu Y, Li W, Kim D, **Huang H\***. Blockade of vascular endothelial growth factor receptor 1 prevents retinal inflammation and vascular leakage in diabetic retinopathy. *J Ophthalmol.* 2015; 605946.
30. **Huang H\***, Li W, He J, Barnabie P, et al. Blockade of tumor necrosis factor alpha prevents complications of diabetic retinopathy. *J Clin Exp Ophthalmol.* 2014; 5:6.
31. Semba R, **Huang H**, Luttly GA, et al. The Role of O-GlcNAc Signaling in the Pathogenesis of Diabetic Retinopathy. *Proteomics-Clinical Applications.* 2014; 8(3-4):218-31.
32. **Huang H\***, Parlier R, Shen J, et al. VEGF Receptor blockade markedly reduces retinal microglia/macrophage infiltration into laser-Induced CNV. *Plos One.* 2013; 8(8): e71808.

33. Xu Z, Wei Y, Gong J, Cho H, Park JK, Sung E, **Huang H**, et al. Nrf2 plays a protective role in diabetic retinopathy in mice. *Diabetologia*. 2013; 57:204-13.
34. **Huang H**, Shen J and Vinore SA. Blockade of VEGFR1 and 2 suppresses pathological angiogenesis and vascular leakage in the eye. *Plos One*. 2011; 6:e21411.
35. **Huang H**, Van de Veire S, Dalal M, et al. Reduced retinal neovascularization, vascular permeability, and apoptosis in ischemic retinopathy in the absence of prolyl hydroxylase-1 due to the prevention of hyperoxia-induced vascular obliteration. *Invest Ophthalmol Vis Sci*. 2011; 52:7565-7573.
36. Chronopoulos A, Trudeau KM, Roy S, **Huang H**, et al. High glucose alters basement membrane composition and structure and increases trans-endothelial. *Curr Eye Res*. 2011; 36:747-753.
37. Zhong X, **Huang H**, Shen J, et al. Overexpression of VEGF-B promotes ocular neovascularization, but does not affect inflammation or the blood-retinal barrier. *Mol Vis*. 2011; 17:492-507.
38. **Huang H**, Gandhi JK, Zhong X, and Vinore SA. TNF $\alpha$  is required for late BRB breakdown in diabetic retinopathy and its inhibition prevents leukostasis and protects vessels and neurons from apoptosis. *Invest Ophthalmol Vis Sci*. 2010; 52:1336-1344.
39. **Huang H**, Vasilakis P, Zhong X, et al. Parstatin suppresses ocular neovascularization and inflammation. *Invest Ophthalmol Vis Sci*. 2010; 51:5825-32.
40. Canto-Soler V, **Huang H**, Romero S, Adler R. CTCF and Pax6 have complementary expression domains during retinal cell differentiation. *Dev Dynamics*. 2008; 237:758-67.
41. **Huang H**, Whalin KJ, McNally M, et al. Developmental regulation of Muscleblind-like (MBNL) gene expression in the chicken embryo retina. *Dev Dynamics*. 2008; 237:286-96.
42. Wahlin KJ, Moreira E, **Huang H**, et al. Molecular dynamics of photoreceptor synaptogenesis formation in the developing chick retina. *J Comp Neurol*. 2007; 506:822-837.
43. **Huang H**, Barton Frank M, Dozmorov I, et al. Identification of mouse retinal genes differentially regulated by dim and bright cyclic light rearing. *Exp Eye Res*. 2005; 80:727-739.
44. Yu X, Tang Y, Li F, Barton Frank M, **Huang H**, et al. Protection against hydrogen peroxide-induced cell death in cultured human retinal pigment epithelial cells by 17 $\beta$ -estradiol: a differential gene expression profile. *Mech Ageing Dev*. 2005; 126:1135-45.
45. **Huang H**, Alvarez RA, Ash JD, and Anderson RE. Down regulation of ATP synthase subunit-6, cytochrome c oxidase-III, and NADH dehydrogenase-3 by bright cyclic light in the rat retina. *Invest Ophthalmol Vis Sci*. 2004; 45:2489-96.
46. Káldi I, Martin RE, **Huang H**, et al. Bright Cyclic Rearing Protects Albino Mouse Retina Against Acute Light-Induced Apoptosis. *Mol Vis*. 2003; 30:337-44.
47. Liu RS, **Huang H**, Yang Q, Liu WY. Purification of alpha-sarcin and an antifungal protein from mold

(*Aspergillus giganteus*) by chitin affinity chromatography. *Prot Expr Purif*. 2002; 25: 50-58.

48. **Huang H**, Xu JF and Gong ZZ. Characterization of a new antifungal protein from leaves of *Ginkgo biloba*. *Prot and pep letters*. 2001; 8:209-16.
49. **Huang H**, Zou Z, Xie WJ, Gong ZZ. Isolation, purification and identification of an antifungal protein from leaves of *Ginkgo biloba* L. *Jiangsu J Agricultural Sci*. 2001; 17:77-81.
50. **Huang H**, Gong CD, Li JD, et al. Expression and antifungal activity of ATLP-3 gene in transgenic tobacco plants. *Jiangsu J Agricultural Sci*. 2000; 16:217-21.
51. Liu P, **Huang H**, Ge DZ. Studies on reaction process and mechanism of leaf protein flocculated by lactic fermentation acid. *Hunan J Agricultural Sci*. 1999; 25:127-32.
52. **Huang H**, Ge DZ. The detection of electronic point of chlorophyll-protein in three kinds of fresh forage. *China feed*. 1997; 6:35-36.

#### **Dr. Hu Huang's Patents**

1. **Huang H**, Saddala M, Lennikov A. SMALL MOLECULES TREATMENT FOR THE L-VGCC MEDIATED MICROGLIA-RELATED OCULAR INFLAMMATION AND ANGIOGENESIS DISEASES. Patent No: 19UMC048. University of Missouri. 2019.
2. **Huang H**, Saddala M, Lennikov A. Novel inhibitors of TNF alpha, TNF alpha, and TNF alpha-TNFR1. Patent No: 19UMC072. University of Missouri. 2019.

#### **Dr. Hu Huang's Bibliography in NCBI:**

<https://www.ncbi.nlm.nih.gov/myncbi/1bWQbV2T0oJsSR/bibliography/public/>

#### **Dr. Hu Huang's Google Scholar:**

[https://scholar.google.com/citations?hl=en&user=ShWpv60AAAAJ&view\\_op=list\\_works](https://scholar.google.com/citations?hl=en&user=ShWpv60AAAAJ&view_op=list_works)