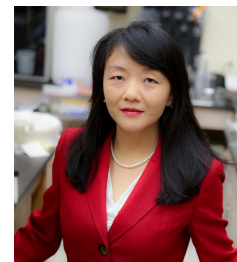


Hongli (Catherine) Wu, PhD
North Texas Eye Research Institute
Pharmaceutical Sciences
UNT System College of Pharmacy
Email: Hongli.Wu@unthsc.edu



Area of Expertise

Areas of research and interests include:

- 1) examining how retinal redox imbalance leads to age-related macular degeneration (AMD) pathogenesis;
- 2) characterizing glutaredoxin 2 (Grx2) knockout mice as a new animal model for AMD;
- 3) identifying/screening Grx2 inducers from natural products for AMD treatment.

Qualifications

PhD in Pharmacology, Peking University
BS in Pharmacy, Xinjiang Medical University
MS in Pharmacy, Xinjiang Medical University

Recent Publications

A macrocyclic molecule with multiple antioxidative activities protects the lens from oxidative damage

Zhang, J., Yu, Y., Mekhail, M. A., Wu, H. & Green, K. N., 28 Oct 2022, In: *Frontiers in Chemistry*. 10, 996604.

Mitotic Activation around Wound Edges and Epithelialization Repair in UVB-Induced Capsular Cataracts

Wei, Z., Hao, C., Srinivasagan, R., Wu, H., Chen, J. K. & Fan, X., Dec 2021, In: *Investigative Ophthalmology and Visual Science*. 62, 15, 29.

Enhancement of the Antioxidant Activity and Neurotherapeutic Features through Pyridol Addition to Tetraazamacrocyclic Molecules

Johnston, H. M., Pota, K., Barnett, M. M., Kinsinger, O., Braden, P., Schwartz, T. M., Hoffer, E., Sadagopan, N., Nguyen, N., Yu, Y., Gonzalez, P., Tircsó, G., Wu, H., Akkaraju, G., Chumley, M. J. & Green, K. N., 16 Dec 2019, In: *Inorganic Chemistry*. 58, 24, p. 16771-16784 14 p.

Cataract preventive role of isolated phytoconstituents: Findings from a decade of research

Lim, V., Schneider, E., Wu, H. & Pang, I. H., Nov 2018, In: *Nutrients*. 10, 11, 1580.

Involvement of Nrf2 in ocular diseases

Batliwala, S., Xavier, C., Liu, Y., Wu, H. & Pang, I-H., 2017, In: *Oxidative Medicine and Cellular Longevity*. 2017, 1703810.

Salvianolic acid B (Sal B) protects retinal pigment epithelial cells from oxidative stress-induced cell death by activating glutaredoxin 1 (Grx1)

Liu, X., Xavier, C., Jann, J. & Wu, H., 3 Nov 2016, In: *International journal of molecular sciences*. 17, 11, 1835.

The novel triterpenoid RTA 408 protects human retinal pigment epithelial cells against H₂O₂-induced cell injury via NF-E2-related factor 2 (Nrf2) activation

Liu, X., Ward, K., Xavier, C., Jann, J., Clark, A. F., Pang, I-H. & Wu, H., 1 Aug 2016, In: *Redox Biology*. 8, p. 98-109 12 p.

Expression and distribution of thiol-regulating enzyme glutaredoxin 2 (GRX2) in porcine ocular tissues

Upadhyaya, B., Tian, X., Wu, H. & Lou, M. F., 1 Jan 2015, In: *Experimental eye research*. 130, p. 58-65 8 p.

Glutaredoxin 1 (Grx1) protects human retinal pigment epithelial cells from oxidative damage by preventing AKT glutathionylation

Liu, X., Jann, J., Xavier, C. & Wu, H., 2015, In: *Investigative Ophthalmology and Visual Science*. 56, 5, p. 2821-2832 12 p.

Glutaredoxin 2 (Grx2) gene deletion induces early onset of age-dependent cataracts in mice

Wu, H., Yu, Y., David, L., Ho, Y. S. & Lou, M. F., 26 Dec 2014, In: Journal of Biological Chemistry. 289, 52, p. 36125-36139 15 p.

Sponsored Projects

Assessment of Efficacy of Reata Compound in Retinal Oxidative Injury Models

Clark, A. & Wu, H.
Reata Pharmaceuticals, Inc.
12/09/13 → 1/03/17

Assessment the Effect of Femtosecond Laser-based Device on Biochemical Parameters in the Lens

Wu, H.
Lensar, Inc.
24/10/17 → 23/10/18

Effect of Glutaredoxin 2 (Grx2) siRNA on Drug Resistance of Hepatocellular Carcinoma Cells to Doxorubicin

Wu, H. & Prokai, L.
Intramural Research(UNTHSC)
1/09/13 → 31/08/15

Evaluate NACA and diNACA in Cone Cells +/- Oxidative Stress

Wu, H.
Nacuity Pharmaceuticals, Inc.
7/10/19 → 6/10/20

Evaluate NACA and diNACA in Preventing Oxidative Stress-Induced Cataract Formation: Ex Vivo Study

Wu, H.
Nacuity Pharmaceuticals, Inc.
7/10/19 → 6/10/20

Evaluation of NAC, NACA and diNACA in Cultured RPE Cells and in Cultured Corneal Endothelial Cells (CECs) +/- Oxidative Stress

Clark, A. & Wu, H.
Nacuity Pharmaceuticals, Inc.
18/02/19 → 4/06/20

Goal: Using ATP Level as a Marker for Laser Setting Optimization

Wu, H.
Lensar, Inc.
1/07/19 → 30/06/20

Protein-Thiol Mixed Disulfide in Cataractogenesis

Wu, H.
University of Nebraska - Lincoln
1/09/13 → 31/07/15

Shared Instrumentation Grant for the High Resolution Slit Lamp Imaging System

Wu, H.
Intramural Research(UNTHSC)
1/10/16 → 30/09/17

The Role of Glutaredoxin 2 (Grx2), a Thiol Antioxidant Enzyme, in Age-related Macular Degeneration

Wu, H.
BrightFocus Foundation

1/07/15 → 30/06/18

To evaluate the oxidative efficacy of L2 and L4 compounds in PC12 cells

Wu, H.

Texas Christian University

22/01/19 → 21/01/20

Using Grapes as a Magic Bullet to Fight against Free Radicals in the Eye: Application to Cataract Prevention

Wu, H.

California Table Grape Commission

22/08/16 → 31/07/18