

Shaohua Yang, MD, PhD  
Graduate School of Biomedical Sciences  
Institute for Healthy Aging  
Pharmacology & Neuroscience  
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## Area of Expertise

My laboratory is interested in understanding the mechanism of brain disorders and the discovery of novel therapy for ischemic stroke, neurodegenerative diseases, and brain tumor. Our research has been focusing on the brain metabolism and using animal and cell culture models of ischemic stroke, neurodegenerative diseases, and brain tumor to address these issues.

## Qualifications

MD, Peking University  
PhD in Neuroscience, UNT Health Science Center

## Recent Publications

### **Four Decades of Ischemic Penumbra and Its Implication for Ischemic Stroke**

Yang, S. H. & Liu, R., Dec 2021, In: Translational Stroke Research. 12, 6, p. 937-945 9 p.

### **Modulation of astrocyte phenotype in response to T-cell interaction**

Hersh, J., Prah, J., Winters, A., Liu, R. & Yang, S. H., 15 Feb 2021, In: Journal of Neuroimmunology. 351, 577455.

### **Early loss of cerebellar Purkinje cells in human and a transgenic mouse model of Alzheimer's disease**

Chaudhari, K., Wang, L., Kruse, J., Winters, A., Sumien, N., Shetty, R., Prah, J., Liu, R., Shi, J., Forster, M. & Yang, S. H., 2021, In: Neurological Research. 43, 7, p. 570-581 12 p.

### **Endothelin-1 Mediated Decrease in Mitochondrial Gene Expression and Bioenergetics Contribute to Neurodegeneration of Retinal Ganglion Cells**

Chaphalkar, R. M., Stankowska, D. L., He, S., Kodati, B., Phillips, N., Prah, J., Yang, S. & Krishnamoorthy, R. R., 1 Dec 2020, In: Scientific Reports. 10, 1, 3571.

### **Determination of metformin bio-distribution by LC-MS/MS in mice treated with a clinically relevant paradigm**

Chaudhari, K., Wang, J., Xu, Y., Winters, A., Wang, L., Dong, X., Cheng, E. Y., Liu, R. & Yang, S. H., Jun 2020, In: PLoS ONE. 15, 6, e0234571.

### **Metformin and cognition from the perspectives of sex, age, and disease**

Chaudhari, K., Reynolds, C. D. & Yang, S. H., 1 Feb 2020, In: GeroScience. 42, 1, p. 97-116 20 p.

### **Effects of dietary 5-methoxyindole-2-carboxylic acid on brain functional recovery after ischemic stroke**

Sumien, N., Huang, R., Chen, Z., Vann, P. H., Wong, J. M., Li, W., Yang, S., Forster, M. J. & Yan, L. J., 27 Jan 2020, In: Behavioural Brain Research. 378, 112278.

### **Cholesterol sulfate alters astrocyte metabolism and provides protection against oxidative stress**

Prah, J., Winters, A., Chaudhari, K., Hersh, J., Liu, R. & Yang, S. H., 15 Nov 2019, In: Brain Research. 1723, 146378.

### **Experimental ischemic stroke induces long-term T cell activation in the brain**

Xie, L., Li, W., Hersh, J., Liu, R. & Yang, S. H., 1 Nov 2019, In: Journal of Cerebral Blood Flow and Metabolism. 39, 11, p. 2268-2276 9 p.

### **The Prognostic Value of Serum Cytokines in Patients with Acute Ischemic Stroke**

Li, X., Lin, S., Chen, X., Huang, W., Li, Q., Zhang, H., Chen, X., Yang, S., Jin, K. & Shao, B., 28 May 2019, In: Aging and Disease. 10, 3, p. 544-556 13 p.

## **Sponsored Projects**

### **AMPK and Cerebellar Aging**

Yang, S. & Sumien, N.

William & Ella Owens Med Research Foun

1/12/16 → 31/12/18

### **Anti-Neuropilin Conjugated Theranostic Hybrid Nanoparticles Co-Encapsulating Curcumin and Methylene Blue for Combinatorial Therapy of Glioblastoma**

Ranjan, A. & Yang, S.

Intramural Research(UNTHSC)

1/09/13 → 31/08/15

### **Assessment of the Dose Dependent Effects of Nestle Purina Diets on Ischemic Stroke Outcome in Ovariectomized Female Rats**

Yang, S.

Nestle Purina

1/09/13 → 31/12/14

### **Assessment of the Effects of Nestle Diets in an Alzheimer's Disease Model in Female (Phase 5A) and Male Mouse (Phase 5B)**

Yang, S.

Nestle Purina

28/01/10 → 1/07/12

### **Assessment of the Effects of Novel Nestle Diets on balance (Phase I) and cognitive function (Phase II) in Female 5XFAD Transgenic Mice (Project VII)**

Yang, S. & Liu, R.

Nestle Purina

18/10/16 → 18/10/18

### **Brain Targeted RNAi Therapy for Alzheimer's Disease**

Raut, S. & Yang, S.

Alzheimer's Disease Program

22/08/18 → 31/08/20

### **Cocaine-induced Stroke Susceptibility: Brain Function and Metabolism Signaling Pathways**

Sumien, N., Forster, M. & Yang, S.

Intramural Research(UNTHSC)

1/05/16 → 31/08/18

### **Dietary Targeting of Dihydropyridine Dehydrogenase for Stroke Tolerance**

Yan, L. & Yang, S.

NINDS: Neurological Disorders & Stroke

1/04/13 → 31/03/18

### **Direct Reprogramming of Reactive Astrocytes in Ischemic Brain**

Jin, K., Yang, S. & Uteshev, V.

Intramural Research(UNTHSC)

1/07/16 → 31/12/17

### **Establishment of inducible astrocyte specific p38 MAPK knockout mouse line**

Yang, S.

National Institute of Neurological Disorders and Stroke  
15/09/14 → 28/02/18

**Establishment of Inducible Astrocyte Specific p38 MAPK Knockout Mouse Line**

Yang, S. & Liu, R.  
NINDS: Neurological Disorders & Stroke  
15/09/14 → 28/02/18

**Interaction of Estrogen and Tissue Plasminogen Activator**

Yang, S.  
National Institute of Neurological Disorders and Stroke  
15/12/07 → 30/11/12

**Metformin and Cognition**

Liu, R., Huang, R., Yang, S. & Sumien, N.  
Intramural Research(UNTHSC)  
1/05/16 → 31/08/17

**Metformin and Vascular Cognitive Impairment (For: Kiran Chaudhari)**

Yang, S.  
American Heart Association  
1/07/17 → 30/06/19

**Methylene Blue for Ischemic Stroke Therapy**

Liu, R., Huang, R. & Yang, S.  
American Heart Association  
12/06/13 → 30/06/17

**Modulation of GABA-A Receptor Function as a Potential Therapeutic Intervention for Cognitive Impairment after Stroke**

Huang, R. & Yang, S.  
Intramural Research(UNTHSC)  
15/01/12 → 14/04/13

**Nanomotors for Thrombolytic Therapy after Stroke**

Jin, K. & Yang, S.  
NINDS: Neurological Disorders & Stroke  
1/03/14 → 28/02/17

**Neuroglobin: Cell Membrane and Neuroprotection**

Yang, S., Liu, R. & Jin, K.  
NINDS: Neurological Disorders & Stroke  
1/07/14 → 31/05/19

**Neuroglobin: cell metabolism and neuroprotection**

Yang, S. & YANG, S.  
National Institute of Neurological Disorders and Stroke  
1/07/14 → 30/04/20

**Neuroglobin, Neuron Metabolism and Neuroprotection**

Yang, S. & Jin, K.  
Intramural Research(UNTHSC)  
1/04/14 → 31/08/15

**Novel Mechanistic Targets of Steroid Hormones in the Brain - Core B**

Forster, M., Shetty, R., Yang, S., Liu, R. & Sumien, N.  
NIA: National Institute on Aging

1/12/12 → 30/11/18

**Oxidative stress and neuroprotection (For: Irfath Kahn)**

Yang, S.

Intramural Research(UNTHSC)

5/06/17 → 31/05/18

**Post Stroke Cognitive Impairment: Mechanism and Therapy**

Yang, S., Liu, R., Sumien, N. & Jin, K.

NINDS: Neurological Disorders & Stroke

1/02/19 → 31/01/24

**Pyruvate: Powerful Brain Protection after Cardiac Arrest**

Mallet, R., Yurvati, A., Yurvati, A., Simecka, J. & Yang, S.

NINDS: Neurological Disorders & Stroke

1/08/11 → 31/07/16

**Pyruvate: Powerful Brain Protection after Cardiac Arrest (For: Dr. Gary Scott)**

Mallet, R. & Yang, S.

NINDS: Neurological Disorders & Stroke

1/02/13 → 31/07/16

**Role of p38MAPK in Reactive Astrogliosis and Glial Scar Formation after Ischemic Stroke (For: Gourav Choudhury)**

Yang, S.

Intramural Research(UNTHSC)

1/09/13 → 31/08/14

**Susceptibility of Cerebellar Purkinje Cells to Oxidative Stress**

Huang, R. & Yang, S.

William & Ella Owens Med Research Foun

1/10/17 → 31/12/18

**To Determine the Mechanisms Underlying the Protection of Nestle Diet in AD Mice**

Yang, S. & Liu, R.

Nestle Purina

5/05/12 → 30/09/13

**Transient Focal Ischemia Induces Long-Term Cognitive Impairments: Disease Mechanism and Treatment**

Yang, S.

American Heart Association - SouthWest

1/07/15 → 30/06/17

**Vascular Cognitive Impairment Induced by Ischemic Stroke: mechanism and therapy**

Yang, S.

National Institute of Neurological Disorders and Stroke

15/02/08 → 31/01/14