

Dong-Ming Su, PhD  
Graduate School of Biomedical Sciences  
Microbiology, Immunology & Genetics  
Email: DongMing.Su@unthsc.edu



## Area of Expertise

The strength of our research projects is using and generating genetically-engineered animal models in understanding genetic and epigenetic regulation of the T-cell immune system and its microenvironment during aging. Our aim is to determine mechanistic insights into poor (immunosenescence) and harmful (autoimmune) T-cell immunity in the elderly for developing rejuvenation strategies to combat age-related chronic inflammatory diseases and cancer recurrence. Our current NIH- & AAI-funded and potentially NIH-funded projects include: "Balance of thymic negative selection vs. Treg cell generation in the elderly (NIH-funded R01)"; "Biased Treg TCR specificity and its impact on immunity in the elderly (Potential NIH R01)"; and "Role of the central immune organ in cancer chemoimmunotherapy (AAI-funded fellowship).

## Qualifications

PhD in Molecular Biology & Immunology, Kyushu University  
MS in Infectious Immunology, Lanzhou Medical College

## Recent Publications

### Atrophied thymus, a tumor reservoir for harboring melanoma cells

Sizova, O., Kuriatnikov, D., Liu, Y. & Su, D. M., 1 Nov 2018, In : Molecular Cancer Research. 16, 11, p. 1652-1664 13 p.

### Extracellular vesicles extracted from young donor serum attenuate inflammaging via partially rejuvenating aged T-cell immunotolerance

Wang, W., Wang, L., Ruan, L., Oh, J., Dong, X., Zhuge, Q. & Su, D. M., 1 Nov 2018, In : FASEB Journal. 32, 11, p. 5899-5912 14 p.

### Capacity of tTreg generation is not impaired in the atrophied thymus

Oh, J., Wang, W., Thomas, R. & Su, D. M., 8 Nov 2017, In : PLoS Biology. 15, 11, e2003352.

### Impact of aging immune system on neurodegeneration and potential immunotherapies

Liang, Z., Zhao, Y., Ruan, L., Zhu, L., Jin, K., Zhuge, Q., Su, D. M. & Zhao, Y., 1 Oct 2017, In : Progress in Neurobiology. 157, p. 2-28 27 p.

### A fine-tune role of Mir-125a-5p on Foxn1 during age-associated changes in the thymus

Xu, M., Sizova, O., Wang, L. & Su, D. M., 1 Jan 2017, In : Aging and Disease. 8, 3, p. 277-286 10 p.

### Friend or foe: The dichotomous impact of T cells on neuro-de/ re-generation during aging

Coder, B., Wang, W., Wang, L., Wu, Z., Zhuge, Q. & Su, D. M., 1 Jan 2017, In : Oncotarget. 8, 4, p. 7116-7137 22 p.

### Immune senescence: significance of the stromal microenvironment

Masters, A. R., Haynes, L., Su, D. M. & Palmer, D. B., 1 Jan 2017, In : Clinical and Experimental Immunology. 187, 1, p. 6-15 10 p.

### MicroRNAs Regulate Thymic Epithelium in Age-Related Thymic Involution via Down-or Upregulation of Transcription Factors

Xu, M., Zhang, X., Hong, R., Su, D. M. & Wang, L., 1 Jan 2017, In : Journal of Immunology Research. 2017, 2528957.

### Soluble antigens from the neurotropic pathogen *Angiostrongylus cantonensis* directly induce thymus atrophy in a mouse model

Liu, Z., Su, D. M., Yu, Z. L., Wu, F., Liu, R. F., Luo, S. Q., Lv, Z. Y., Zeng, X., Sun, X. & Wu, Z. D., 1 Jan 2017, In : Oncotarget. 8, 30, p. 48575-48590 16 p.

**Cross-talk between human neural stem/progenitor cells and peripheral blood mononuclear cells in an allogeneic co-culture model**

Zhang, H., Shao, B., Zhuge, Q., Wang, P., Zheng, C., Huang, W., Yang, C., Wang, B., Su, D. M. & Jin, K., 6 Feb 2015, In : PLoS ONE. 10, 2, e0117432.

## **Sponsored Projects**

**Balance of Thymic Negative Selection vs. Treg Cell Generation in the Elderly**

Su, D.

NIAID: Allergy and Infectious Diseases

1/12/15 → 30/11/20

**Establish PCR Condition to determine p53 gene conditional deletion (For: Chandani Patel)**

Su, D.

Intramural Research(UNTHSC)

5/06/17 → 31/05/18

**Genotyping of FF/FC conditional knock-out mice (For: Bunnarack Kuch)**

Su, D.

Intramural Research(UNTHSC)

5/06/17 → 31/05/18

**Lymphostromal Interactions in the Thymic Aging**

Su, D.

NIA: National Institute on Aging

1/10/10 → 30/11/11

**Molecular Basis for Age-Related Thymic Involution and Rejuvenation**

Su, D.

NIAID: Allergy and Infectious Diseases

1/10/10 → 28/02/14

**Molecular Basis for Age-Related Thymic Involution and Rejuvenation**

Su, D.

NIAID: Allergy and Infectious Diseases

9/08/12 → 28/02/13

**Molecular Basis for Age-Related Thymic Involution and Rejuvenation for Moshiur Rahman**

Su, D.

NIAID: Allergy and Infectious Diseases

1/10/10 → 30/06/11

**Molecular basis for age-related thymic involution and rejuvenation (R01AI081995)**

Su, D.

NIAID: Allergy and Infectious Diseases

1/03/13 → 28/02/14

**mTOR Signaling and Immunomodulation after Ischemic Stroke**

Jin, K. & Su, D.

Intramural Research(UNTHSC)

1/10/13 → 1/03/16

**Pro-inflammatory Condition-induced Tumor Dormancy in a Pre-metastatic Reservoir: Thymus**

Su, D.

American Association of Immunologists

1/09/17 → 31/08/18

**Thymic Involution Perturbs Negative Selection Leading to Autoreactive T Cells That Induce Chronic Age-related Inflammation (For: Brandon Coder)**

Su, D.

Intramural Research(UNTHSC)

1/01/15 → 31/08/16