Stanford



Shady Younis

Instructor, Medicine - Immunology & Rheumatology

Bio

BIO

Shady Younis, PhD is an instructor at the division of Immunology and Rheumatology at Stanford University. He received his PhD in Medical Sciences from Uppsala University in Sweden. He later joined Dr. William Robinson's Lab at Stanford University as Wallenberg postdoctoral fellow, where he characterized the pathogenic role of cytotoxic CD8+ T cells in rheumatoid arthritis. His current research aimed at elucidating the underlying triggers of pathogenic B cell responses in a spectrum of autoimmune diseases, including systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), and multiple sclerosis (MS). He uses computational methodologies alongside cutting-edge high-throughput sequencing technologies to characterize the autoreactive B and T cells. The overarching research objective of his research is to unravel the mechanistic roles of Epstein-Barr Virus (EBV) reactivation in activating and transforming autoreactive B cells in the development of autoimmunity.

ACADEMIC APPOINTMENTS

- Instructor, Medicine - Immunology & Rheumatology

PROFESSIONAL EDUCATION

- PhD, Faculty of Medicine, Uppsala University , Medical Sciences (2018)
- MSc, Vienna University of Life Sciences , Quantitative Genetics (2011)
- MSc, SLU, Sweden , Molecular Genetics (2011)

PATENTS

- Shady Younis, Wael Kamel, Göran Akuslarvi, Leif Andersson. "Sweden Patent WO2018143874A1 Methods for identifying new therapeutic agents", Jan 30, 2018

Publications

PUBLICATIONS

- **EBV reprograms autoreactive anti-CNS B cells as antigen presenting cells in multiple sclerosis.** *bioRxiv : the preprint server for biology*
  Younis, S., Rasouli, S., Loeffler, J. W., Sattarnezhad, N., Courtney, Y., Moutusy, S. I., Jahanbani, S., Pandit, M., Tomczak, A., Wong, H. H., Sharpe, O., Utz, P. J., Meffre, et al
  2026

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  Younis, S., Moutusy, S. I., Rasouli, S., Jahanbani, S., Pandit, M., Wu, X., Acharya, S., Sharpe, O., Wijeratne, T. U., Harris, M. L., Yang, E. Y., Chaichian, Y., Parsafar, et al
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- **Microbial activation of cytotoxic CD8⁺ T cells promotes skin immunerelated adverse events in patients treated with immune checkpoint inhibitors**
  Younis, S., Acharya, S., Swaminathan, G., Wong, H., Kim, H., Eschholz, A., Hegde, S., McKnight, A., Robinson, W., Zaba, L.
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- **Epstein-Barr virus as a potentiator of autoimmune diseases.** *Nature reviews. Rheumatology*
  Robinson, W. H., Younis, S., Love, Z. Z., Steinman, L., Lanz, T. V.
  2024

- **Memory B Cell Activation and Dysregulation in Systemic Lupus Erythematosus**
  Younis, S., Moutusy, S., Jahanbani, S., Wu, X., Harris, M., Pandit, M., van Dam, L., Sharpe, O., Utz, P., Robinson, W.
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- **The RNA-binding protein ZC3H11A interacts with the nuclear poly(A)-binding protein PABPN1 and alters polyadenylation of viral transcripts.** *The Journal of biological chemistry*
  Kases, K., Schubert, E., Hajikhezri, Z., Larsson, M., Devi, P., Darweesh, M., Andersson, L., Akusjärvi, G., Punga, T., Younis, S.
  2023: 104959

- **Ablation of ZC3H11A causes early embryonic lethality and dysregulation of metabolic processes.** *Proceedings of the National Academy of Sciences of the United States of America*
  Younis, S., Jouneau, A., Larsson, M., Oudin, J., Adenot, P., Omar, J., Brochard, V., Andersson, L.
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- **Cytotoxic CD8+ T cells target citrullinated antigens in rheumatoid arthritis.** *Nature communications*
  Moon, J. S., Younis, S., Ramadoss, N. S., Iyer, R., Sheth, K., Sharpe, O., Rao, N. L., Becart, S., Carman, J. A., James, E. A., Buckner, J. H., Deane, K. D., Holers, et al
  2023; 14 (1): 319

- **ZC3H11A loss of function enhances NF-κB signaling through defective IκBα protein expression.** *Frontiers in immunology*
  Darweesh, M., Younis, S., Hajikhezri, Z., Ali, A., Jin, C., Punga, T., Gupta, S., Essand, M., Andersson, L., Akusjärvi, G.
  2022; 13: 1002823

- **RNA-seq characterization of histamine-releasing mast cells as potential therapeutic target of osteoarthritis.** *Clinical immunology (Orlando, Fla.)*
  Zhao, X., Younis, S., Shi, H., Hu, S., Zia, A., Wong, H. H., Elliott, E. E., Chang, T., Bloom, M. S., Zhang, W., Liu, X., Lanz, T. V., Sharpe, et al
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- **ZBED6 regulates Igf2 expression partially through its regulation of miR483 expression.** *Scientific reports*
  Naboulsi, R., Larsson, M., Andersson, L., Younis, S.
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- **ZBED6 counteracts high-fat diet-induced glucose intolerance by maintaining beta cell area and reducing excess mitochondrial activation.** *Diabetologia*
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  2020

- **Multiple nuclear-replicating viruses require the stress-induced protein ZC3H11A for efficient growth** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Younis, S., Kamel, W., Falkeborn, T., Wang, H., Yu, D., Daniels, R., Essand, M., Hinkula, J., Akusjarvi, G., Andersson, L.
  2018; 115 (16): E3808–E3816

- **The ZBED6-IGF2 axis has a major effect on growth of skeletal muscle and internal organs in placental mammals** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
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- **Persistent postnatal IGF2 expression alters adult skeletal architecture in Igf2 G/A mice.** *Bone reports*
  Younis, S., Shimonty, A., Perez-Menendez, S., You, X., Sridevan, S. M., Ben-Tahar, S., Andrews, H., Shefelbine, S., Andersson, L., Charles, J. F.
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- **Epstein-Barr virus reprograms autoreactive B cells as antigen-presenting cells in systemic lupus erythematosus**
  Younis, S., Moutusy, S., Rasouli, S., Jahanbani, S., Robinson, W.
  OXFORD UNIV PRESS.2026

- **Synovial transcriptional clusters link cartilage degeneration to cell-type-specific gene expression in knee osteoarthritis.** *bioRxiv : the preprint server for biology*
  Mazzucco, M. R., Mehta, B., Ruiz-Ortiz, J., Hale, C., Omi, F., Singh, P., Yuan, R., Lessard, S., Song, E. K., Zhang, M., Younis, S., Robinson, W. H., Ramirez, et al
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- **Cytotoxic T cell recognition of α-synuclein drives pathogenic immune responses in multiple system atrophy.** *Proceedings of the National Academy of Sciences of the United States of America*
  Moon, J. S., Moutusy, S. I., Zhang, M., Ndayisaba, A., Rodriguez, D., El Kodsi, D. N., Kuzkina, A., Younis, S., Jahanbani, S., Dam, L. S., Courtney, Y., Netanel, A., Sharpe, et al
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- **NETosis-derived PADs mediate Citrullination of Oral Bacteria to promote Inflammation in Rheumatoid Arthritis.** *The Journal of rheumatology*
  Acharya, S., Brewer, C., Gomez, A. M., Younis, S., Pandit, M., Jahanbani, S., Sharpe, O., Love, Z. Z., Howard, M. C., Orange, D. E., Robinson, W. H.
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- **Increased Synovial Inflammation, Xist Escape Gene Expression and Knee Pain in Females with Osteoarthritis**
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- **Oxidative stress is a shared characteristic of ME/CFS and Long COVID.** *Proceedings of the National Academy of Sciences of the United States of America*
  Shankar, V., Wilhelmy, J., Curtis, E. J., Michael, B., Cervantes, L., Mallajosyula, V., Davis, R. W., Snyder, M., Younis, S., Robinson, W. H., Shankar, S., Mischel, P. S., Bonilla, et al
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- **WOMEN WITH KNEE OSTEOARTHRITIS EXPERIENCE MORE REST PAIN, SYNOVIAL INFLAMMATION, AND WIDESPREAD CARTILAGE DEGENERATION THAN MEN**
  Mehta, B., Otero, M., Hale, C., Sculco, P., Cushing, S., Sun, D., Frank, M. O., Wu, Y., Mazzucco, M., Maerz, T., Colbath, A., Malfait, A., Younis, et al
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- **Identification of Autoreactive Cytotoxic T Cells in ANCA-Associated Vasculitis**
  van Dam, L., Younis, S., Moon, J., Zhang, M., Parfasar, S., Horomanski, A., Sharpe, O., van Leeuwen, J., Lanz, T., van Kooten, C., Teng, O., Robinson, W.
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- **Oxidative Stress is a shared characteristic of ME/CFS and Long COVID.** *bioRxiv : the preprint server for biology*
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- **Oxidative stress is a shared characteristic of ME/CFS and Long COVID**
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- **Low mutation load in a supergene underpinning alternative male mating strategies in ruff (Calidris pugnax).** *Molecular biology and evolution*

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2023

- **Identification of a Mast Cell-high Synovial Pathotype of Osteoarthritis**
  Younis, S., Bai, A., Wong, H., Love, Z., Wang, Q., Robinson, W.
  WILEY.2023: 1766-1767

- **Clonally Expanded Cytotoxic CD8⁺ T cells Target Citrullinated Antigens In ACPA⁺ Rheumatoid Arthritis**
  Moon, J., Younis, S., Sharpe, O., Rao, N. L., Carman, J. A., James, E. A., Buckner, J. H., Deane, K. D., Holers, V., Donlin, L. T., Davis, M. M., Robinson, W. H.
  AMER ASSOC IMMUNOLOGISTS.2023

- **Clonally Expanded Cytotoxic CD8(+) T Cells Recognize Citrullinated Antigens in ACPA(+) Rheumatoid Arthritis**
  Younis, S., Sharpe, O., Rao, N., Carman, J., James, E., Buckner, J., Deane, K. D., Holers, M., Donlin, L., Davis, M., Robinson, W.
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- **TGFbeta selects for pro-stemness over pro-invasive phenotypes during cancer cell epithelial-mesenchymal transition.** *Molecular oncology*
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- **Imatinib protects against human beta-cell death via inhibition of mitochondrial respiration and activation of AMPK.** *Clinical science (London, England : 1979)*
  Elksnis, A., Schiffer, T. A., Palm, F., Wang, Y., Cen, J., Turpaev, K., Ngamjariyawat, A., Younis, S., Huang, S., Shen, Y., Leng, Y., Bergsten, P., Karlsborn, et al
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- **ZBED6 negatively regulates insulin production, neuronal differentiation, and cell aggregation in MIN6 cells** *FASEB JOURNAL*
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- **ZBED6 Modulates the Transcription of Myogenic Genes in Mouse Myoblast Cells** *PLOS ONE*
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