

IMMUNOLOGY, ALLERGY and RHEUMATOLOGY 2018 ANNUAL REPORT

The year 2018 has been a year of transitions and successes that will serve as the foundation for future growth of The Section of Immunology, Allergy and Rheumatology. We are a small faculty, but truly represent the "little engine that could". Our faculty, trainees, and staff make important contributions to the education, research and clinical missions of Baylor College of Medicine, which we herein recognize.

First, I would like to thank Dr. David Corry for his leadership and service to our Section. Dr. Corry has served as Chief of our Section since 2011. Under his leadership, the section has developed a strong foundation of excellence in medial education, research and patient care upon which we will grow in coming years. In February of 2018, Dr. Corry transitioned to the role of Vice-Chair of Immunology in the Department of Pathology, while maintaining many of his commitments to our Section. As such, I was appointed Chief of the Section of Immunology, Allergy and Rheumatology in February of 2018.

In the past year, faculty members in the Section have published 46 peer-reviewed manuscripts. Research programs were supported by 14 grants from the National Institutes of Health, CPRIT, and foundations, including one grant supporting the start of our clinic trials program. Faculty members have also given 12 invited seminars to local, national and international audiences. Finally, our Section is the home of the Biology of Inflammation Center, which provides research and educational support for immune related diseases across the entire College.

I would also like to recognize all of the important contributions that our Section makes in the clinical and educational missions. Our physicians provide outstanding, patient-centered care across all of our clinical pavilions, including the Baylor Clinic, Baylor St. Luke's Medical Center, the Michael E. Debakey VA Medical Center, Texas Children's Hospital, Harris Health Smith Clinic and Ben Taub General Hospital. All levels of trainees, including medical students, graduate students, physician-assistant students, internal medicine residents, postdoctoral fellows and clinical fellows benefit greatly from our commitment to mentoring and teaching. Our clinical fellowship training programs, led by Dr. Agarwal (Rheumatology) and Dr. Corry (Immunology and Allergy), are completely dedicated to the clinical and scholarly development of our fellows and continue to train outstanding physicians.

This report contains some of achievements of the year past. This is our foundation from which we will build the future of Immunology, Allergy and Rheumatology at Baylor College of Medicine. I am honored and excited to lead our Section into a bright future.

Sandeep K. Agarwal, M.D., Ph.D.

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Chief, Section of Immunology, Allergy and Rheumatology

Rheumatology Fellowship Program Director

Director, Biology of Inflammation Center

Cullen Trust for Healthcare Endowed Chair in Immunology

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A. LIST OF FACULTY

(alphabetical)

Sandeep K. Agarwal, M.D., Ph.D., Chief, Section of Immunology, Allergy and Rheumatology Joan Appleyard, M.D.

David B. Corry, M.D., Director of Allergy and Clinical Immunology

Sana Hasan, M.D.

Grace Hsiao-Wei Lo, M.D., M.S.

Rashmi Maganti, M.D.

Donald Marcus, M.D., Professor Emeritus

Marissa Meissner, M.D.

Frank Orson, M.D.

Eun Joo Park, M.D.

Tara Rizvi, M.B.B.S.

Antony Rodriguez, Ph.D.

Roger D. Rossen, M.D.

Tiphanie Vogel, M.D.

Li-Yuan Yu-Lee, Ph.D.

B. PUBLICATIONS

JOURNAL ARTICLES

- 1. Wu M, Baron M, Pedroza C, Salazar G, Ying J, Charles J, **Agarwal SK**, Hudson M, Zhou X, Reveille JD, Fritzler M, Mayes M, Assassi S. CCL-2 in circulation predicts long-term progression of interstitial lung disease in early systemic sclerosis: data from two independent cohorts. **Arthritis and Rheumatology**. 69(9):1871-78, 2017
- 2. **Pedroza M, To S**, Assassi S, Wu M, Tweardy D, **Agarwal SK**. Role of STAT3 in skin fibrosis and TGF-beta signaling. **Rheumatology**. Epub 2017.
- 3. **Pedroza M, Welschhans RL, Agarwal SK**. Targeting of cadherin-11 decreases dermal fibrosis in the tight skin-1 mouse model. **PlosOne**. 12(11): e0187109, 2017.
- 4. Mah AY, Rashidi A, Keppel MP, Saucier N, Moore EK, Alinger JB, Tripathy SK, **Agarwal SK**, Jeng EK, Wong HC, Miller JS, Fehniger TA, Mace EM, French AR, Cooper MA. Glycolytic requirement for NK cell cytotoxicity and cytomegalovirus control. **Journal of Clinical Investigation Insight**. 2(23), pii 95128, 2017.
- 5. Niravath P, Chen B, Gelmon K, Kalari K, Osborne K, Shepherd L, Ingle J, Chapman JA, Pritchard K, Bartlett J, Hilsenbeck S,Goss P,**Agarwal SK**, **Welschhans R**, Bongartz T, Rimawi M. Vitamin D levels, vitamin D receptor polymorphisms, and inflammatory cytokines in aromatase inhibitor-induced arthralgias: An analysis of CCTG MA.27. **Clinical Breast Cancer**. 19(1):78-87, 2018.
- 6. Karmouty-Quintana H, Molina JG, Philip K, Bellocchi C, Gudenkauf B, Wu M, Chen NY, Collum SD, Ko J, **Agarwal SK**, Assassi S, Zhong H, Blackburn, MR, Weng, T. The anti-fibrotic effect of adenosine A2B receptor antagonism in a mouse model of dermal fibrosis. **Arthritis and Rheumatology**, Epub May 2018.
- 7. Hong MJ, Gu BH, Madison, MC, Landers C, Tung HY, Kim M, Yuan X, You R, Machado AA, Gilbert BE, Soroosh P, Elloso M, Song L, Chen M,

- **Corry DB**, Diehl G, Kheradmand F. Protective Role of gd T cells in Cigarette Smoke and Influenza Infection. **Mucosal Immunology** 2017; 11(3):894-908 PMCID: PMC5930147
- 8. Liang D, Tian L, You R, Halpert MM, Konduri V, Baig Y C, Paust S, Kim D, Kim S, Jia F, Huang S, Zhang X, Kheradmand F, **Corry DB**, Gilbert BE, Levitt JM, Decker WK. AIMp1 Potentiates TH1 Polarization and Is Critical for Effective Antitumor and Antiviral Immunity. **Fronteirs Immunology** 2017; 8:1801 PMCID: PMC5775236
- 9. Li E, Tsai C-L, Maskatia ZK, Kakkar E, Porter P, Rossen RD, Perusich S, Knight JM, Kheradmand F, **Corry DB**. Benefits of antifungal therapy in asthma patients with airway mycosis: a retrospective cohort analysis. **Immunology Inflammatory Diseases** 2018; 6:264-275 PMCID: PMC5946149
- 10. You R, DeMayo F, Liu J, Cho S-N, Burt B, Creighton C, Casal R, Lazarus D, Lu W, Tung H-Y, Yuan X, Hill-McAlester A, Kim M, Perusich S, Cornwell L, Rosen D, Song L-Z, Paust S, Diehl G, **Corry DB**, Kheradmand F. IL17A Regulates Tumor Latency and Metastasis in Lung Adeno and Squamous SQ.2b and AD.1 Cancer. **Cancer Immunology Research** 2018; 6:645-657.
- 11.Knight JM, Mandal P, Morlacchi P, Mak G, Li E, Madison M, Landers C, Saxton B, Felix E, Gilbert B, Sederstrom J, Varadhachary A, Singh MM, Chatterjee D, Corry DB, McMurray JS. Small Molecule Targeting of the STAT5/6 Src Homology 2 (SH2) Domains to Inhibit Allergic Airway Disease. Journal Biology Chemistry 2018. doi: 10.1074/jbc.RA117.000567
- 12. Cho M., Lee JE, Lim H, Shin HW, Khalmuratova R, Choi G, Kim HS, Choi WS, Park YJ, Shim I, Kim BS, Kang CY, Kim JO, Tanaka S, Kubo M, Tung HY, Landers CT, **Corry DB**, Kheradmand F, Chung Y. Fibrinogen cleavage products and Toll-like receptor 4 promote the generation of programmed cell death 1 ligand 2-positive dendritic cells in allergic asthma. **Journal Allergy Clinical Immunology** 2018. 142: 530-541.e6
- 13. Tung H-Y, Li E, Landers C, Nguyen A, Kheradmand F, Knight JM, Corry DB. Advances and Evolving Concepts in Allergic Asthma. Seminars Respiratory Critical Care Medicine 2018. 39:64-81.

- 14.Gu B-H, Madison M, Corry DB, Kheradmand, F. Matrix Remodeling in Chronic Lung Diseases. Matrix Biology 2018 pii: S0945-053X(17)30372-4.
- 15. Knight JM, Li E, Tung HY, Landers C, Wheeler J, Kheradmand F., Corry, **DB**. A Fungal Protease Model to Interrogate Allergic Lung Immunity. **Methods Molecular Biology** 2018. 1799: 1-9.
- 16.Li E, Tsai CL, Maskatia ZK, Kakkar E, Porter P, Rossen RD, Perusich S, Knight JM, Kheradmand F, Corry DB. Benefits of antifungal therapy in asthma patients with airway mycosis: A retrospective cohort analysis. Immunology Inflammatory Diseases. 2018 Jun;6(2):264-275. Epub 2018 Mar 25. PMID: 29575717
- 17.**Lo GH**, Strayhorn MT, Driban JB, Price LL, Eaton CB, McAlindon TE. Subjective Crepitus as a Risk Factor for Incident Symptomatic Knee Osteoarthritis: Data from the Osteoarthritis Initiative. **Arthritis Care and Research** (Hoboken). 2018 Jan;70(1):53-60. PMID: 28470832. PMCID: PMC5671376.
- 18.**Lo GH**, Driban JB, Price LL, Eaton CB, McAlindon TE. Systolic and Pulse Pressure Associate with Incident Knee Osteoarthritis: Data from the Osteoarthritis Initiative. **Clinical Rheumatology**. 2017 Sep;36(9):2121-2128 PMID: 28573369. PMCID: PMC5709188.
- 19. Davis JE, Price LL, **Lo GH**, Eaton CB, McAlindon TE, Lu B, Barbe MF, Driban JB. A single recent injury is a potent risk factor for the development of accelerated knee osteoarthritis: data from the osteoarthritis initiative. **Rheumatology International**. 2017 Oct;37(10):1759-1764. PMID: 28831543. PMCID: PMC5693623.
- 20.**Lo GH**, Merchant M, Driban JB, Duryea J, Price LL, Eaton CB, McAlindon TE. Knee Alignment is Quantitatively Related to Periarticular Bone Morphometry and Density, Especially in those with Osteoarthritis. **Arthritis Rheumatology**. 2018 Feb;70(2):212-221. PMID: 28940779.
- 21.Malaty HM, **Lo GH**, Hou JK. Characterization and prevalence of spondyloarthritis and peripheral arthritis among patients with inflammatory bowel disease. **Clinical and Experimental Gastroenterology.** 2017 Sep 27;10:259-263. PMID: 29026327 PMCID: PMC5627736.

- 22. Stout AC, Barbe MF, Eaton CB, Amin M, Al-Eid F, Price LL, Lu B, Lo GH, Zhang M, Pang J, McAlindon TE, Driban JB. Inflammation and glucose homeostasis are associated with specific structural features among adults without knee osteoarthritis: a cross-sectional study from the osteoarthritis initiative. BMC Musculoskeletal Disorders. 2018 Jan 5;19(1):1921-6. PMID: 29304778 PMCID: PMC5755424.
- 23. Lo GH, Schneider E, Driban JB, Price LL, Hunter DJ, Eaton CB, Hochberg MC, Jackson RD, Kwoh CK, Nevitt M, Lynch JA, McAlindon TE. Periarticular Bone Predicts Knee Osteoarthritis Progression Data from the Osteoarthritis Initiative. Seminars of Arthritis and Rheumatism. 2018 Jan 31. E-pub ahead of print.
- 24. Driban JB, McAlindon TE, Amin M, Price LL, Eaton CB, Davis JE, Lu B, Lo GH, Duryea J, Barbe MF. Risk Factors can Classify Individuals who Develop Accelerated Knee Osteoarthritis: Data from the Osteoarthritis Initiative. Journal of Orthopedic Research. 2018 Mar;36(3):876-880. PMID: 28776751
- 25. Davis JE, Harkey MS, Ward RJ, Mackay JW, Lu B, Price LL, Eaton CB, Barbe MF, **Lo GH**, McAlindon TE, Driban JB. Characterizing the distinct structural changes associated with self-reported knee injury among individuals with incident knee osteoarthritis: Data from the osteoarthritis initiative. **Clinical Anatomy**. 2018 Apr;31(3):330-334. PMID: 29380495
- 26. Davis JE, Liu SH, Lapane K, Harkey MS, Price LL, Lu B, **Lo GH**, Eaton CB, Barbe MF, McAlindon TE, Driban JB. Adults with incident accelerated knee osteoarthritis are more likely to receive a knee replacement: data from the Osteoarthritis Initiative. **Clinical Rheumatology.** 2018 Apr;37(4):1115-1118. PMID: 29423719
- 27. MacKay JW, Kapoor G, Driban JB, **Lo GH**, McAlindon TE, Toms AP, McCaskie AW, Gilbert FJ. Association of subchondral bone texture on magnetic resonance imaging with radiographic knee osteoarthritis progression: data from the Osteoarthritis Initiative Bone Ancillary Study. **European Radiology**. 2018 May 2. PMID: 29721684
- 28.**Lo GH**, Musa SM, Driban JB, Kriska AM, McAlindon TE, Souza RB, Petersen NJ, Storti KL, Eaton CB, Hochberg MC, Jackson RD, Kwoh CK,

- Nevitt MC, Suarez-Almazor ME. Running does not increase symptoms or structural progression in people with knee osteoarthritis: data from the osteoarthritis initiative. **Clinical Rheumatology**. 2018 May 4. E-pub ahead of print.
- 29. Harkey MS, Price LL, McAlindon TE, Davis JE, Stout AC, Lu B, Zhang M, Eaton CB, Barbe MF, **Lo GH**, Driban JB. Declining Walking Speed Associates with Increasing Bone Marrow Lesion Volume and Effusion Volume in Individuals with Accelerated Knee Osteoarthritis. **Arthritis Care Res (Hoboken)**. 2018 Jun 8. doi: Epub ahead of print PMID: 29882630
- 30.**Marcus DM**. Acupuncture and sham acupuncture for pain relief. **JAMA** 2017; 318:1502-1503. PMID: 29049648
- 31. Marcus DM. Noninvasive treatments for acute, subacute and chronic low back pain. Annals Internal Medicine 2017; 167:832. PMID: 29204610
- 32. Marcus DM. Chondroitin sulfate for knee osteoarthritis Annals Rheumatic Diseases 2018 Jun;77(6):e27. PMID: 28663310.
- 33.Kadmon CS, Landers CT, Li HS, Watowich SS, **Rodriguez A**, King KY. MicroRNA-22 controls interferon alpha production and erythroid maturation in response to infectious stress in mice. **Experimental Hematology.** 2017;56:7-15. Epub 2017/09/16. doi: 10.1016/j.exphem.2017.09.001. PubMed PMID: 28911907; PMCID: PMC5696003.
- 34. Li E, Tsai CL, Maskatia ZK, Kakkar E, Porter P, Rossen RD, Perusich S, Knight JM, Kheradmand F, Corry DB. Benefits of antifungal therapy in asthma patients with airway mycosis: A retrospective cohort analysis. Immunology Inflammatory Diseases. 2018 Jun;6(2):264-275. Epub 2018 Mar 25. PMID: 29575717
- 35.Orandi AB, **Vogel TP**, Keppel MP, Utterson EC, Cooper MA. Azathioprine-associated complete NK cell deficiency. **Journal of Clinical Immunology** (2017) 37:514.
- 36. Romberg N, Vogel TP, Canna SW. NLRC4 inflammasomopathies. Current Opinion in Allergy and Clinical Immunology (2017) 6:398.

- 37.Xia J, Miller CA, Baty J, Ramesh A, Jotte MRM, Fulton RS, **Vogel TP**, Cooper MA, Walkovich KJ, Makaryan V, Bolyard AA, Dinauer MC, Wilson DB, Vlachos A, Myers KC, Rothbaum RJ, Bertuch AA, Dale DC, Shimamura A, Boxer LA, Link DC. Somatic mutations and clonal hematopoiesis in congenital neutropenia. **Blood** (2018) 131:408.
- 38. Fabre A, Marchal S, Forbes LR, **Vogel TP**, Barlogis V, Triolo V, Rohrlich P-S, Etienne B, Frankel D, Ambrosetti D, Hoflack M, Baque M, Bosdure E, Baravalle M, Carsin A, Dubus J-C, Giovannini-Chami L. STAT3 GOF: a new kid on the block in interstitial lung diseases. **American Journal of Respiratory and Critical Care Medicine(** 2018) 197:e22.
- 39.Zeng H, Ortiz A, Shen P-F, Cheng C-J, Lee Y-C, Yu G, Lin S-C, **Yu-Lee L-Y** and Lin S-H (2017). Angiomotin regulates prostate cancer cell proliferation by signaling through Hippo-YAP pathway. **Oncotarget**: 8:10145-10160. PMID: 28052036
- 40.Lin S-C, Lee Y-C, Yu G, Zhou X, Chu K, Murshed M, Le N-T, Abe J-I, Fujiwara K, Gallick GE, deCrombrugghe B, **Yu-Lee L-Y**, Maity SN, and Lin S-H (2017). Endothelial-to-osteoblast conversion generates osteoblastic metastasis of prostate cancer. **Developmental Cell** 41:467-480. PMID: 28586644
- 41.Bilen M, Pan T, Lee Y-C, Lin S-C, Yu G, Pan J, Vykoukal J, Gray K, Satcher R, Gallick G, **Yu-Lee L-Y** and Lin S-H. Proteomics profiling of exosomes from primary mouse osteoblasts under proliferation versus mineralization conditions and characterization of their uptake into prostate cancer cells (2017). **Journal of Proteome Research** 16:2709-2728. PMID: 28675788
- 42.Lockyer P, Mao H, Fan Q, Li L, **Yu-Lee L-Y**, Eissa NT, Patterson C, Xie L and Pi X (2017). LRP1-dependent BMPER signaling regulates lipopolysaccharide-induced vascular inflammation. Arteriosclerosis **Thrombosis and Vascular Biology** 37:467-480. PMID: 28596374
- 43. Yu K-J, Li JK, Lee Y-C, Yu G, Lin S-C, Pan T, Satcher RL, Titus MA, Yu-Lee L-Y, Weng WH, Gallick GE and Lin S-H (2017). Cabozantinib-induced osteoblast secretome promotes survival and migration of metastatic prostate cancer cells in bone. **Oncotarget** 8:74987-75006. PMID: 29088840

- 44.Pan T, Yu K-J, Bird J, Satcher R, Moon B, Gallick GE, Lin S-C, Jonasch E, Lewis V, Yu G, Wood C, **Yu-Lee L-Y**, Song J, Tannir N, Lin P, and Lin S-H (2018). BIGH3 promotes osteolytic lesions in renal cell carcinoma bone metastasis by inhibiting osteoblast differentiation. **Neoplasia** 20:32-43. PMID: 29190493
- 45. Yu G, Cheng C-J, Lin S-C, Lee Y-C, Frigo D, **Yu-Lee L-Y**, Gallick GE, Titus M, Nutt L, and Lin S-H (2018). Organelle-derived acetyl-CoA promotes prostate cancer cell survival, migration, and metastasis via activation of calmodulin kinase II. **Cancer Research** 78:2490-2502. PMID: 29535221
- 46. **Yu-Lee L-Y**, Yu G, Lee Y-C, Lin S-C, Pan J, Pan T, Yu K-J, Liu B, Creighton CJ, Rodriguez JC, Villalobos PA, Wistuba II, de Nadal E, Posas F, Gallick GE and Lin S-H (2018). Osteoblast-secreted factors mediate dormancy of metastatic prostate cancer in the bone via activation of the TGFβRIII-p38MAPK-pS249/T252RB pathway. **Cancer Research** 78:2911-2924. PMID: 29514796

BOOKS, BOOK CHAPTERS, and VIDEOS

- 1. Kivitz SJ, **Agarwal SK**, Sebba A. Solving the problem of choice in rheumatoid arthritis therapy selection. Online CME. March 2018. https://primeinc.org/cme/online/1541/Solving_the_Problem_of_Choice_in_Rheumatoid_Arthritis_Therapy_Selection
- 2. **Corry DB**, Kheradmand F, Luong A, Pandit L. 41. Immunological mechanisms of airway diseases and pathways to therapy. In: Clinical Immunology. Ed: Rich RR, Fleisher TA, Shearer WT, Schroeder HW, Frew AJ, Weyand CM. Elsevier, London, UK, 2018, pp. 491-505

C. PRESENTATIONS AND SEMINARS

Sandeep K. Agarwal, M.D., Ph.D.

- 1. "Joint Pain and Arthritis", Weekley YMCA Silver Sneakers Seminar, Houston, TX. October 2017
- 2. "Case Based Problem Solving in Psoriatic Disease and Atopic Dermatitis" PRIME Federal Seminar Series, Orlando, FL. October 2017
- 3. "Case Based Problem Solving in Psoriatic Disease and Atopic Dermatitis" PRIME Federal Seminar Series, Chicago, IL. October 2017
- 4. "Autoimmune interstitial lung disease", BCM Pulmonary Seminar, Houston, TX. December 2017
- 5. "Update on Psoriatic Arthritis", Northwest Houston Medical Center Grand Rounds. Houston, TX. April 2018.

Joan Appleyard, M.D.

1. "Perioperative management of anti-rheumatic medications", Michael E. DeBakey Veterans Administration Medical Center Grand Rounds. May 2018.

David Corry, M.D.

- 1. Airway mycosis and allergic airway disease, Aberdeen Scotlan, January 2018.
- 2. The coagulation-immune nexus in allergic inflammation, Suzhou, China, December 2017

Tiphanie Vogel, M.D.

- 1. "Periodic and Recurrent Fevers" American Academy of Pediatrics National Conference and Exhibition. Chicago, Illinois. September 2017.
- 2. "Introduction to Tissue Culture." Developing Investigative Scholars Program Lecture Series. Texas Children's Hospital, Houston, Texas. July 2017.
- 3. "STAT3 GOF syndrome: Searching for Broad Insight using a Rare Disease." Texas Children's Research Seminars, Houston, Texas. November 2017.
- 4. "Autoinflammation." Adult Rheumatology Fellows' Research Conference. Baylor College of Medicine, Houston, Texas. December 2017.

D. HONORS AND AWARDS

Sandeep K. Agarwal, M.D., Ph.D.

- 1. Appointed Chief, Section of Immunology, Allergy and Rheumatology
- 2. Cullen Trust for Healthcare Endowed Chair in Immunology (2018- current)
- 3. Rheumatology Research Foundation Study Section C, Chairman
- 4. Scleroderma Foundation, Grant Review Study Section, Chairman
- 5. Serving as a Faculty Senator in the Baylor College of Medicine Faculty Senate

Joan Appleyard, M.D.

1. Invited to join Spondyloarthritis research and treatment network (SPARTAN)

David Corry, M.D.

- 1. Clarence and Irene H. Fulbright Chair in Pathology (March, 2018- current)
- 2. Appointed Vice Chair for Immunology, Department of Pathology & Immunology
- 3. Serving as Executive Director, Baylor Scott and White Research Institute-Baylor College of Medicine Affiliation

Grace Lo, M.D., M.S.

1. Editorial board member for Osteoarthritis and Cartilage

Rashmi Maganti, M.D.

1. Appointed Medical Director of Rheumatology Clinic at the Baylor College of Medicine Faculty Group Practice

Antony Rodriguez, Ph.D.

1. Gillson Longenbaugh Foundation Award

Tiphanie Vogel, M.D., Ph.D.

- 1. Thrasher Early Career Award
- 2. The Kelly Award for Juvenile Arthritis Research
- 3. Arthritis National Research Foundation Scholar
- 4. Editorial board member, Frontiers in Immunology, Primary Immunodeficiencies
- 5. Editorial board member, Frontiers in Pediatrics, Pediatric Immunology

E. PROFESSIONAL ORGANIZATIONS

Sandeep K. Agarwal, M.D., Ph.D.

- 1. American Association of Immunology Member
- 2. American College of Rheumatology Member
- 3. American Thoracic Society Member

Joan Appleyard, M.D.

- 1. American College of Rheumatology Member
- 2. Spondylitis Research and Treatment Network (SPARTAN) Member

David Corry, M.D.

- 1. American Association of Allergy, Asthma, and Immunology Member
- 2. American Clinical and Climatological Association Member
- 3. American Society for Clinical Investigation Member
- 4. Association of American Physicians Member
- 5. Society for Mucosal Immunology Member

Sana Hasan, M.D.

- 1. Allergy, Asthma & Immunology Society
- 2. The Greater Houston Allergy, Asthma & Immunology Society

Onome Ifoeze (Whiteru), M.D.

- 1. Alliance for Academic Internal Medicine Member
- 2. American College of Physicians Member
- 3. American College of Rheumatology Member
- 4. S.L.E. Lupus Foundation Member

Grace Lo, M.D., M.S.

- 1. American College of Rheumatology Member
- 2. Osteoarthritis Research Society International Member

Rashmi Maganti, M.D.

1. American College of Rheumatology – Member

Donald Marcus, M.D.

2. American College of Rheumatology - Master

Antony Rodriguez, Ph.D..

3. Genetics Society - Member

Tiphanie Vogel, M.D., Ph.D.

- 1. American Academy of Pediatrics—Member
- 2. American College of Rheumatology—Member
 - a. AMIGO Mentorship Program—Mentor and Mentee
- 3. American Association of Immunologists--Member
- 4. Childhood Arthritis and Rheumatology Research Alliance—Member
 - a. Scientific Advisory Committee—Member
- 5. Clinical Immunology Society—Member
- 6. Federation of Clinical Immunology Societies—Member

F. MEDIA RELEASES

Sandeep K. Agarwal, M.D., Ph.D.

1. NIH-NIAMS Spotlight on Research. Interview by NIH-NIAMS regarding publication in Arthritis and Rheumatology. https://www.niams.nih.gov/newsroom/spotlight-on-research/researchers-identify-potential-biomarker-serious-scleroderma

David Corry, M.D.

1. "David vs Goliath: how small molecule can defeat asthma attacks" Baylor College of Medicine, From the Labs https://blogs.bcm.edu/2018/06/12/david-vs-goliath-how-a-small-molecule-can-defeat-asthma-attacks/

Grace Lo, M.D., M.S.

- 1. Online report by Helio.com summarizing and highlighting publication in Arthritis Care and Research on crepitus and symptomatic knee osteoarthritis. https://www.healio.com/rheumatology/osteoporosis-and-bone-disorders/news/online/%7Bb40c17a6-5591-4a17-a901-57fabc25308f%7D/creaky-knees-can-predict-symptomatic-oa
- 2. Online video by Arthritis Care and Research highlighting publication in Arthritis Care and Research on crepitus and symptomatic knee osteoarthritis. https://vimeo.com/246493963

G. GRANTS

Sandeep K. Agarwal, M.D., Ph.D.

1. Cadherin-11 Regulation of Dermal Fibrosis and Macrophage Function Funding Agency: NIH/NIAMS, R01, 1R01AR062056-01A1

Role: Principal Investigator

2. Targeting STAT3 in systemic sclerosis and dermal fibrosis

Established Investigator Award

Funding Agency: Scleroderma Foundation

Role: Principal Investigator

David Corry, M.D.

1. Fungal Pathogenesis of Moderate to Severe Asthma

Funding Agency: NIH; R01, AI135803

Role: Principal Investigator

2. Immunology Scientist Training Grant

Funding agency: NIH/NIAID, T32, AI053831

Role: Principal Investigator

3. Mechanism and function of Let-7, a novel modulator of Th17-dependent emphysema

Funding agency: NIH/NHLBI, R01 HL140398

Role: Principal Investigator

Grace Lo, M.D., M.S.

1. Feasibility of a Novel Approach to Studying Early Knee Osteoarthritis: an Offspring Study

Funding Agency: NIH/NIAMS, R03 AR069323

Role: Principal Investigator

2. Modifiable Risk Factors for Incident and Progressive Early Knee Osteoarthritis (Lo)

Funding Agency: NIH/NIAMS, K32, 1K23AR062127-01

Role: Principal Investigator

Rashmi Maganti, M.D.

1. A randomized, double-blind, placebo controlled multicenter phase 2 doseranging study to assess the safety and efficacy of multiple VA736 doses administered subcutaneously in patients with moderate to severe primary Sjogren's syndrome

Funding Agency: Novartis Pharmaceuticals

Role: Site Principal Investigator

Antony Rodriguez, Ph.D.

1. Role of let-7 microRNA in chronic obstructive pulmonary disease Funding Agency: Gillson Longenbaugh Foundation Award Role: Principal Investigator

2. Mechanism and function of let-7, a novel modulator of Th17-dependent emphysema

Funding agency: NIH/NHLBI, R01 HL140398

Role: Co-Investigator

Tiphanie Vogel, M.D., Ph.D.

1. BRIDGE, Baylor Rheumatology Initiative: Developing and Guiding Engagement

Funding Agency: Rheumatology Research Foundation Medical Student

Preceptorship

Role: Principal Investigator

2. Undiagnosed Diseases Network (UDN)

Funding Agency: NIH, 1 U01 HG007709-01 (Brendan Lee, PI)

Role: Co-Investigator

3. A Targeted Approach to Cytokine Blockade in Juvenile Arthritis (Vogel) Funding Agency: Thrasher Research Fund

Role: Principal Investigator

4. Validating STAT3 as a Therapeutic Target in Arthritis (Vogel) Funding Agency: Arthritis National Research Foundation Grant

Role: Principal Investigator

Li-yuan Yu-Lee, Ph.D.

1. Endothelial-to-osteoblast conversion in prostate cancer bone metastasis Funding Agency: NIH Multi-PI RO1; CA174798-06A1

Role: Principal Investigator

2. Polo-like Kinase 1 as a Novel Molecular Target for the Treatment of Asthma Funding Agency: Biology of Inflammation Center

Role: Principal Investigator

3. Regulation of Dormancy of Metastatic Prostate Cancer Cells by Bone Microenvironment

Funding Agency: Cancer Prevention and Research Institute of Texas

Role: Co-Investigator