



JBC Monthly Newsletter

April/May 2024

JBC UPDATES

- The JBC Synergy Meeting returns this month on May 24th with speakers:
 - **Dr. Ricardo Grieshaber-Bouyer** (FAU Erlangen-Nuremberg)
“Breaking treatment resistance in rheumatoid arthritis”
 - **Gonzalo Borrego Yaniz, PhD Candidate** (Spanish National Research Council)
“Novel risk loci involved in giant cell arteritis by a genome-wide association study”

JBC MEMBER NEWS

- Congratulations to **Dr. Ellen Gravalles** and **Dr. Branch Moody** were elected to the **Association of American Physicians!** Election to the AAP is an honor extended to physicians with outstanding credentials in basic or translational biomedical research. The Association of American Physicians (AAP) is an honorary medical society founded in 1885 by the Canadian physician Sir William Osler and six other distinguished physicians of his era for “the advancement of scientific and practical medicine”
- **Dr. Michele Robinette** (BWH) received the Rheumatology Research Foundation Scientist Development Award and EvansMDS Young Investigator Award which will both start in July of 2024.
- **Dr. Julia Charles** (BWH) received two grant awards for her work on fibrous dysplasia: An R21 titled “Osteoclasts or RANKL: Which is the critical target in treatment of fibrous dysplasia bone lesions?” and a Orphan Disease Center Million Dollar Bike Ride pilot grant titled “Spatial transcriptomics to elucidate the mechanism of anti-RANKL inhibition of fibrous dysplasia bone lesions.”
- **Dr. Sander Tas** (Amsterdam UMC) received a 245k€ grant award from the Dutch Arthritis Foundation FOCUS program titled “Towards personalized treatment of early rheumatoid arthritis: patient-derived synovial tissue organoids to predict therapy response.”

The JBC Team:

- Peter Nigrovic, M.D.
Director (BCH & BWH)
- Jeffrey Sparks, M.D., M.M.Sc.
Multi-PI, Associate Director
- Elizabeth Karlson, M.D., M.S.
Associate Director

Human Biosamples Core:

- Jeffrey Sparks, M.D., M.M.Sc.
Director
- Lauren Henderson, M.D., M.M.Sc.
Associate Director BCH
- Deepak Rao, M.D., Ph.D.
Associate Director

Cellular Systems Core:

- Jim Lederer, Ph.D.
Director
- Kevin Wei, M.D., Ph.D.
Associate Director
- Maria Gutierrez-Arcelus, Ph.D.
Associate Director

JBC MEMBER PUBLICATIONS

- Bucci L, Hagen M, Rothe T, Raimondo MG, Fagni F, Tur C, Wirsching A, Wacker J, Wilhelm A, Auger JP, Pachowsky M, Eckstein M, Alivernini S, Zoli A, Krönke G, Uderhardt S, Bozec A, D'Agostino MA, Schett G, **Grieshaber-Bouyer R**. Bispecific T cell engager therapy for refractory rheumatoid arthritis. *Nature Medicine* 2024 <https://doi.org/10.1038/s41591-024-02964-1>
- **Robinette, M. L.**, Weeks, L. D., Kramer, R. J., Agrawal, M., Gibson, C. J., Yu, Z., Sekar, A., Mehta, A., Niroula, A., Brown, J. T., McDermott, G. C., Reshef, E. R., Lu, J. E., Liou, V. D., Chiou, C. A., Natarajan, P., Freitag, S. K., **Rao, D. A.**, & Ebert, B. L. Association of Somatic TET2 Mutations With Giant Cell Arteritis. *Arthritis Rheumatol.* 2024;76(3):438-443. <https://doi.org/10.1002/art.42738>
- Keijzer S, Oskam N, Ooijevaar-de Heer P, Steenhuis M, Keijser JBD, Wieske L, van Dam KPJ, Stalman EW, Kummer LYL, Boekel L, Kuijpers TW, Ten Brinke A, van Ham SM, Eftimov F, **Tas SW**, Wolbink GJ, Rispens T. Longitudinal rheumatoid factor autoantibody responses after SARS-CoV-2 vaccination or infection. *Front Immunol.* 2024 Feb 29;15:1314507. doi: 10.3389/fimmu.2024.1314507. PMID: 38487524; PMCID: PMC10937420.
- Valk AM, Keijser JBD, van Dam KPJ, Stalman EW, Wieske L, Steenhuis M, Kummer LYL, Spuls PI, Bekkenk MW, Musters AH, Post NF, Bosma AL, Horváth B, Hijnen DJ, Schreurs CRG, van Kempen ZLE, Killestein J, Volkers AG, **Tas SW**, Boekel L, Wolbink GJ, Keijzer S, Derksen NIL, van Deelen M, van Mierlo G, Kuijpers TW, Eftimov F, van Ham SM, Ten Brinke A, Rispens T; T2B! Immunity against SARS-CoV-2 study group. Suppressed IgG4 class switching in dupilumab- and TNF inhibitor-treated patients after mRNA vaccination. *Allergy.* 2024 Mar 4. doi: 10.1111/all.16089. Epub ahead of print. PMID: 38439527.
- Nagy NA, Hafkamp FMJ, Sparrius R, Bas R, Lozano Vigario F, van Capel TMM, van Ree R, Geijtenbeek TBH, Slütter B, **Tas SW**, de Jong EC. Retinoic acid-loaded liposomes induce human mucosal CD103+ dendritic cells that inhibit Th17 cells and drive regulatory T-cell development in vitro. *Eur J Immunol.* 2024 Mar 2:e2350839. doi: 10.1002/eji.202350839. Epub ahead of print. PMID: 38430190.
- Schenning LCM, Ottevanger R, Quint KD, **Tas SW**. An ulcerating skin tumour in a patient with rheumatoid arthritis. *Ann Rheum Dis.* 2024 Feb 5:ard-2023-225436. doi: 10.1136/ard-2023-225436. Epub ahead of print. PMID: 38316532.
- Schuitema A, Anjie SI, van Eeghen AM, **Tas SW**, Löwenberg M. Symptomatic creatine phosphokinase elevation in a Crohn's disease patient caused by upadacitinib. *Clin Case Rep.* 2024 Jan 19;12(1):e8227. doi: 10.1002/ccr3.8227. PMID: 38250091; PMCID: PMC10799215.
- Besten YR, Boekel L, Steenhuis M, Hooijberg F, Atiqi S, Leeuw M, Vogelzang EH, Keijser J, Keijzer S, Loeff FC, Gerritsen M, **Tas SW**, Nurmohamed MT, Rispens T, Wolbink G. Patient-perspective and feasibility of home finger-prick testing to complement and facilitate large-scale research in rheumatology. *RMD Open.* 2024 Apr 19;10(2):e003933. doi: 10.1136/rmdopen-2023-003933. PMID: 38642927; PMCID: PMC11033664.
- **Leite CBG**, Ormsby RT, Mekhail J, **Charles JF**, Gortz S, Merkley G, **Lattermann C**. Culturing Osteochondral Explants Under Rotatory Shaking or After Removing Bone Marrow Elements Increase Explant Cellular Viability. *AmJSports*, in press.

- Kvacskay P, **Merkt W**. CD19.CAR-T cells versus Obinutuzumab-Who will win the race on deep B cell depletion in systemic autoimmunity?. *Rheumatology (Oxford)*. Published online March 9, 2024. doi:10.1093/rheumatology/keae144
- Verstegen NJM, Hagen RR, Kreher C, Kuijper LH, Dijssel JVD, Ashhurst T, Kummer LYL, Palomares Cabeza V, Steenhuis M, Duurland MC, Jongh R, Schoot CEV, Konijn VAL, Mul E, Kedzierska K, van Dam KPJ, Stalman EW, Boekel L, Wolbink G, **Tas SW**, Killestein J, Rispens T, Wieske L, Kuijpers TW, Eftimov F, van Kempen ZLE, van Ham SM, Ten Brinke A, van de Sandt CE; T2B! immunity against SARS-CoV-2 study group. T cell activation markers CD38 and HLA-DR indicative of non-seroconversion in anti-CD20-treated patients with multiple sclerosis following SARS-CoV-2 mRNA vaccination. *J Neurol Neurosurg Psychiatry*. 2024 Mar 28:jnnp-2023-332224. doi: 10.1136/jnnp-2023-332224. Epub ahead of print. PMID: 38548324.
- Besten YR, Boekel L, Steenhuis M, Hooijberg F, Atiqi S, Leeuw M, Vogelzang EH, Keijser J, Keijzer S, Loeff FC, Gerritsen M, **Tas SW**, Nurmohamed MT, Rispens T, Wolbink G. Patient-perspective and feasibility of home finger-prick testing to complement and facilitate large-scale research in rheumatology. *RMD Open*. 2024 Apr 19;10(2):e003933. doi: 10.1136/rmdopen-2023-003933. PMID: 38642927; PMCID: PMC11033664.
- Singh N, Shahane A, **Sparks JA**, Bitoun S, Cappelli LC. Inflammatory arthritis due to immune checkpoint inhibitors: Current approaches to management. *Rheum Dis Clin*. 2024 May;50(2):269-79.
- **Juge PA, Sparks JA**, Gazal S, Borie R, Debray MP, Kannengiesser C, **McDermott GC, Cui J**, Hayashi K, **Doyle T**, van Moorsel CHM, Knevel R, Heckert Sl, Boxma-de Klerk BM, Vasarmidi E, Antoniou K, van der Helm AHM, Boileau C, Crestani B, Dieudé P. RPA3-UMAD1 rs12702634 and rheumatoid arthritis-associated interstitial lung disease in European ancestry. *Rheumatol Adv Pract*. 2024 (In Press).
- **Chang MH**, Fuhlbrigge RC, **Nigrovic PA**. Joint-specific memory, resident memory T cells, and the rolling window of opportunity in arthritis. *Nat Rev Rheumatol*. 2024 May;20(5):258-271.

OPEN POSITIONS

The Nigrovic lab (BCH) is seeking new postdoctoral fellows in the fields of (1) non-coding genetic variants in human autoimmunity and (2) megakaryocyte-neutrophil emperipolesis using 2-photon microscopy and other methods. Please direct inquiries to peter.nigrovic@childrens.harvard.edu.

The Chang Lab is hiring for a postdoctoral position in the areas of T cell biology and human and animal models of arthritis. Please direct inquiries to margaret.chang@childrens.harvard.edu.

Please let us know if you would like your open positions posted here!