



JBC Monthly Newsletter

November 2021

JBC UPDATES

- Next **JBC Data Club** meeting will be on Thursday November 18 at 3pm focused on TCR sequencing analysis, with two presenters: Garrett Dunlap from the Rao lab, and Janice Lam from the Henderson lab. The next JBC Data Club will be Thursday December 9 at the same time. Please email Maria.Gutierrez-Arcelus@childrens.harvard.edu if you want to be added to the JBC Data Club email list, and if you want to present, please provide dates that work for you.
- Next **JBC Synergy Meeting** will be on Friday November 19th, 12:30-1:30 p.m. Eastern Time via Zoom.
 - Talk 1: Dr. Sara Tedeschi (BWH), “Cardiovascular events in patients with calcium pyrophosphate deposition (CPPD) disease: do traditional risk factors explain it all?”
 - Talk 2: Dr. Margaret Chang (BCH), “The joint-specific memory of arthritis flares”
- Next **JBC Aims Review Committee meeting** will be on December 6th, 12-1 p.m. Eastern Time via Zoom. If you have Aims to discuss, or are not on the ARC email list and wish to be, please email peter.nigrovic@childrens.harvard.edu.
- We are delighted to announce the **7 JBC Microgrant** awardees for the October 2021 cycle:
 - **Sun, Bo** (BWH), Transcriptomic analysis of PAD2-deficient B cells
 - **Chen, Pei-Yu** (Yale), siRNA nanoparticle targeting endothelial cell TGFβ signaling for the treatment of lupus associated pulmonary artery hypertension
 - **Jones, Morgan** (BWH), Analysis of synovial tissue from a surgical patient with meniscal tear and osteoarthritis
 - **MacLauchlan, Susan** (BWH), Assessment of the DNA methylome in osteoclast formation
 - **Bhamidipati, Kartik** (BWH), Targeting angiocrine morphogens in rheumatoid arthritis
 - **Wauford, Brian** (BCH), Determining the role of Il-1ra in Systemic Juvenile idiopathic arthritis associated lung disease via CyTOF analysis
 - **Chang, Margaret** (BCH), Generation of synovial resident memory T cells in human organoid system

The JBC Team:

- Peter Nigrovic, M.D.
Director (BCH & BWH)
- Elizabeth Karlson, M.D.
Director

Human Biosamples Core:

- Elizabeth Karlson, M.D.
Director
- Jeffrey Sparks, M.D., M.M.Sc.
Associate Director BWH
- Lauren Henderson, M.D., M.M.Sc.
Associate Director BCH
- Deepak Rao, MD, PhD
Associate Director

Cellular Systems Core:

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

JBC MEMBER NEWS

- **Maria Gutierrez-Arcelus** (BCH) was awarded the Lupus Innovation Award by the Lupus Research Alliance, for the proposal entitled “Insights into lupus heterogeneity by single-cell profiling of B cell activation.”

JBC MEMBER PUBLICATIONS

Huang FY*, **Cunin P***, **Radtke FA**, **Darbousset R**, **Grieshaber-Bouyer R**, **Nigrovic PA**. Neutrophil transit time and localization within the megakaryocyte define morphologically distinct forms of emperipolesis. *Blood Advances* 2021 in press.

Dirikgil E, Jonker JT, **Tas SW**, Verburgh CA, Soonawala D, Hak AE, Remmelts HHF, IJpelaar D, Laverman GD, Rutgers A, van Laar JM, Moen HJB, Verhoeven PMJ, Rabelink TJ, Bos WJW, Teng YKO; Arthritis Research & Collaboration Hub (ARCH) study group. Clinical Practice Audit on the Management of Antineutrophil Cytoplasmic Antibody-Associated Vasculitis in the Netherlands. *Kidney Int Rep.* 2021 Aug 10;6(10):2671-2678. doi: 10.1016/j.ekir.2021.08.002. PMID: 34622106; PMCID: PMC8484125.

Alunno A, Najm A, Machado PM, Bertheussen H, Burmester GR, Carubbi F, De Marco G, Giacomelli R, Hermine O, Isaacs JD, Koné-Paut I, Magro-Checa C, McInnes IB, Meroni PL, Quartuccio L, Ramanan AV, Ramos-Casals M, Rodríguez Carrio J, Schulze-Koops H, Stamm TA, **Tas SW**, Terrier B, McGonagle DG, Mariette X. 2021 update of the EULAR points to consider on the use of immunomodulatory therapies in COVID-19. *Ann Rheum Dis.* 2021 Oct 7;annrheumdis-2021-221366. doi: 10.1136/annrheumdis-2021-221366. Epub ahead of print. PMID: 34620584; PMCID: PMC8507408.

Anang, D. C., Balzaretto, G., van Kampen, A., de Vries, N., & Klarenbeek, P. L. (2021). The Germinal Center Milieu in Rheumatoid Arthritis: The Immunological Drummer or Dancer? *Int. J. Mol. Sci.* 2021, 22(19), 10514; doi.org/10.3390/ijms221910514

Kronzer VL, Huang W, Zaccardelli A, Crowson CS, Davis JM III, Vassallo R, Doyle TJ, Losina E, **Sparks JA**. Association of sinusitis and upper respiratory tract diseases with incident rheumatoid arthritis: A case-control study. *J Rheumatol.* 2021 Oct 15;jrheum.210580. doi: 10.3899/jrheum.210580. Online ahead of print.

Conway R, Grimshaw AA, Konig MF, Putman M, Duarte-Garcia A, Tseng LY, Cabrera DM, Chock YPE, Degirmenci HB, Duff E, Egeli BH, Graef ER, Gupta A, Harkins P, Boyer BF, Jayatilleke A, Jun S, Kasia C, Khilnani A, Kilian A, Kim AHJ, Lin CMA, Low C, Proulx L, Sattiu SE, Singh N, **Sparks JA**, Tam H, Ugarte-Gil MF, Ung N, Wang K, Wise LM, Yang Z, Young KJ, Liew JW, Grainger R, Wallace ZS, Hsieh E. SARS-CoV-2 infection and COVID-19 outcomes in rheumatic disease: A systematic literature review and meta-analysis. *Arthritis Rheumatol.* 2021 (In Press).

Friedrich M, Pohin M, Jackson MA, Korsunsky I, Bullers SJ, Rue-Albrecht K, Christoforidou Z, Sathananthan D, Thomas T, Ravindran R, Tandon R, Peres RS, Sharpe H, **Wei K**, Watts GFM, Mann EH, Geremia A, Attar M; Oxford IBD Cohort Investigators; Roche Fibroblast Network Consortium, McCuaig S, Thomas L, Collantes E, Uhlig HH, Sansom SN, Easton A, **Raychaudhuri S**, Travis SP, Powrie FM. IL-1-driven stromal-neutrophil interactions define a subset of patients with inflammatory bowel disease that does not respond to therapies. *Nat Med.* 2021 Oct 21. doi: 10.1038/s41591-021-01520-5. Epub ahead of print. PMID: 34675383.

Wei K, Nguyen HN, **Brenner MB**. Fibroblast pathology in inflammatory diseases. *J Clin Invest*. 2021 Oct 15;131(20):e149538. doi: 10.1172/JCI149538. PMID: 34651581; PMCID: PMC8516469.

Klouda, T., Hao, Y., Kim, H., Kim, J., Olenjik J., Hume AJ, Ayappan S., Hong Z., Melero-Martin JM, Fang, Y, Wang, Q., Zhou, X., Mühlberger E., Jia, H., Padera RF Jr., Raby, BA., **Yuan, K**. Interferon-alpha or -beta facilitates SARS-CoV-2 pulmonary vascular infection by inducing ACE2. *Angiogenesis* (2021).

<https://doi.org/10.1007/s10456-021-09823-4>

OPEN POSITIONS

The **Nigrovic lab** (Brigham and Women's Hospital/Boston Children's Hospital) has postdoctoral position open in the areas of megakaryocyte biology and human genetics.