



JBC Monthly Newsletter

May 2022

JBC UPDATES

- There will be no **JBC Synergy Meeting** in May. The next JBC Synergy Meeting will be June 24th, 12:30-1:30 p.m. Eastern Time via Zoom (titles TBD).
Talk 1: Vanessa Kronzer (Mayo Clinic)
Talk 2: Pei-Yu Chen (Yale)
- Next **JBC Aims Review Committee meeting** will be Thursday May 26 12:30-1:30. Zoom link to follow. If you have aims to discuss, please email peter.nigrovic@childrens.harvard.edu.
- Next **JBC Data Club** meeting will be on May 26th. 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.
- We are delighted to announce the **11 JBC Microgrant** awardees for the April 2022 cycle:
 - **Todd, Marc** (BCH), Elucidating the role of JunB neutrophil differentiation and arthritis via CITE-seq
 - **Darbousset, Roxane** (BCH), Profiling neutrophils in murine systemic sclerosis
 - **Wallace, Zachary** (MGH), Circulating biomarkers of post-acute sequelae of COVID-19 (PASC) in rheumatoid arthritis
 - **Sim, Sangwan** (BCH), Determining the role of PU.1 in neutrophil differentiation and arthritis via CITE-seq analysis.
 - **Rezende da Costa Aguiar, Vitor** (BCH), Single-cell profiling of B cell activation pathways to decipher lupus pathogenesis and heterogeneity
 - **Ghose, Subhoshree** (BWH), Identifying epigenetic regulation of fibroblast subset differentiation in Rheumatoid arthritis.
 - **Presti, Sonia** (BWH), Transcriptional regulation of normal synovial lining fibroblast differentiation
 - **Brodeur, Kailey** (BCH), Validation of a flow cytometry assay to assess the interferon signature of peripheral blood
 - **Chen, Liang** (BCH), Single cell transcriptomic analysis of asymptomatic individuals with deficiency of adenosine deaminase 2
 - **Kim, Hyunbum** (BCH), Overexpressing of HIF2 α in pericytes contributes to vascular remodeling
 - **Hsu, Tiffany** (BWH), Uncovering the pathogenicity of MDA5 autoantibodies in anti-MDA5 dermatomyositis

The JBC Team:

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

- **Joerg Ermann** was elected Chair of SPARTAN (Spondyloarthritis Research and Treatment Network) for a 2-year term.
- The **Ho Lab** has been awarded a NIH RO1 grant titled “Regulatory roles of peptidylarginine deiminase in elastogenesis”
- **Ke Yuan** (BCH) received a Pulmonary Hypertension Bayer Award titled “Pericyte plasticity and its role in vascular inflammation in CTD-PAH”
- **Roxane Darbousset** (BCH) received a Year 2 grant from the Arthritis National Research Foundation for her proposal “Platelets as neutrophil amplifier in systemic sclerosis”
- **Maria Gutierrez-Arcelus** (BCH) received a Year 2 grant from the Arthritis National Research Foundation for her proposal “Splicing Disruption in Systemic Lupus Erythematosus”.
- **Pui Lee (BCH)** received a Year 2 grant from the Arthritis National Research Foundation for his proposal “mTORC1 in the pathogenesis of systemic juvenile idiopathic arthritis”.
- **Heather Faust** (BWH) has been awarded an ANRF grant on my application titled: "Adipose tissue as a memory T cell storage site in inflammatory arthritis"
- **Gregory McDermott** received a Fellowship Award from SPARTAN (Spondyloarthritis Research and Treatment Network) for his proposal "Determinants of Diagnostic Delay in Axial Spondyloarthritis”.
- **Micah Lefton’s** abstract "Polyfunctional IL-17A+ MAIT cells are expanded in the peripheral blood of patients with HLA-B27+ axial spondyloarthritis” was selected for oral presentation at the 2022 Annual Meeting of SPARTAN. Micah previously worked in Joerg Ermann’s lab and is now a medical student at Washington State University Elson S. Floyd College of Medicine.

JBC MEMBER PUBLICATIONS

- Dunlap GS, Billi AC, Xing X, Ma F, Maz MP, Tsoi LC, Wasikowski R, Hodgin JB, Gudjonsson JE, Kahlenberg JM, **Rao DA**. Single-cell transcriptomics reveals distinct effector profiles of infiltrating T cells in lupus skin and kidney. *JCI Insight*. 2022 Apr 22;7(8):e156341. doi: 10.1172/jci.insight.156341. PMID: 35290245.
- Kim AHJ, **Sparks JA**. Immunosuppression and SARS-CoV-2 breakthrough infections. *Lancet Rheumatol*. 2022 (In Press).
- Paik JJ, **Sparks JA**, Kim AHJ. Immunogenicity, breakthrough infection, and underlying disease flare after SARS-CoV-2 vaccination among individuals with systemic autoimmune rheumatic diseases. *Curr Opin Pharmacol*. 2022 (In Press).
- Kowalski EN*, Qian G*, Vanni KMM, **Sparks JA**. A roadmap for investigating pre-clinical autoimmunity using patient-oriented and epidemiologic study designs: Example of rheumatoid arthritis. *Front Immunol*. 2022 (In Press). *Contributed equally.
- Juge PA, Granger B, Debray MP, Ebstein E, Louis-Sidney F, Kedra J, Doyle TJ, Borie R, Constantin A, Combe B, Flipo RM, Mariette X, Vittecoq O, Saraux A, Carvajal AG, Sibilia J, Berenbaum F, Kannengiesser C, Boileau C, **Sparks JA**, Crestani C, Fautrel F, Dieudé P. A risk score to detect subclinical rheumatoid arthritis-associated interstitial lung disease. *Arthritis Rheumatol*. 2022 (In Press).

- **You X**, Dadwal UC, Lenburg ME, Kacena MA, **Charles JF**. Murine Gut Microbiome Meta-analysis Reveals Alterations in Carbohydrate Metabolism in Response to Aging. *mSystems*. 2022 Apr
- **Chang MH**, **Bocharnikov AV**, Case SM, Laird-Gion J, Alvarez-Baumgartner M, **Nigrovic PA**. Patterns of arthritis flare reveal joint-specific memory and sustained risk for new joint accumulation. *Arthritis Rheumatol* 2022 (in press).

OPEN POSITIONS

- The Grieshaber-Bouyer Lab (Heidelberg) is looking for a postdoctoral scientist in the field of Systems Immunology