

Anna C. Belkina, MD, PhD
Personal statement



I am running for the Basic Research Councilor position because cytometry is central to my work as an immunologist, and I want to keep shaping how this Society supports the people who practice it. As both a basic researcher running an academic lab and a core facility director, I see our field from both sides — the science and the infrastructure that makes it possible. Having previously served on Council (2020–2024), I understand the level of commitment this role requires and am ready to serve in a new term.

My priorities align closely with ISAC's Strategic Plan goals, and as a Council member, my attention would focus on:

- Lowering the threshold of access to cutting edge methodologies, specifically computational cytometry practices. Mastering data analysis beyond just data acquisition in cutting-edge cytometry studies needs to become a major focus of cytometry training. This effort can be a shared task for industry leaders, academic researchers, and educators, and it directly supports ISAC's goal of offering the highest quality educational programming in the field. As the co-chair of the ISAC Data Analysis Education Subcommittee, I've been presenting cytometry data analysis tutorials at CYTO meetings and actively contributing to the CytoBytes YouTube channel content.
- Supporting and promoting high quality data reporting and data reproducibility. For many years, ISAC has consistently pushed for higher standards in peer review and publication practices. We aim to partner with journals and publishers to promote and enforce transparent methodology reporting and data accessibility. In my own work, including service on the Editorial Board of Cytometry Part A, I strongly value efforts that improve reporting standards and strengthen the quality of published cytometry research.
- Fostering communication between diverse groups that comprise our community, specifically academic researchers, SRL staff, and industry professionals. Bridging gaps and promoting interaction among these areas of expertise requires joint actions from the society leadership and members and would make the whole field stronger.
- Hearing the community. I am committed to making sure that our members at all stages of their careers are well informed, heard, and feel represented. Remote solutions such as virtual roundtables and online forums should be encouraged, promoted, and curated by the Society. Strengthening these channels is key to how ISAC communicates with and remains accountable to its membership. Beyond formal ISAC channels, I maintain an active presence in online cytometry communities, including the Cytometry Discord server — a space where over 1,400 practitioners across career stages exchange practical knowledge daily. Staying connected to these grassroots conversations helps me understand what our community needs and ensures that the voices shaping everyday cytometry practice are represented in Society decisions.

An MD, PhD scientist with extensive experience in immunology and bioinformatics, I currently serve as Assistant Professor of Pathology and Laboratory Medicine at Boston University Chobanian & Avedisian School of Medicine and Director of the Boston University Flow Cytometry Core Facility. My research, funded through NIH and private foundation grants, spans cellular immunity across diverse disease contexts and reflects deep expertise in advanced cytometry, study design, and data analysis methods. As an immunologist, I have over 15 years of experience investigating immune changes associated with chronic infectious and autoimmune diseases, including HIV, systemic sclerosis, obesity, type 2 diabetes, and periodontal disease.

My most recent research focuses on the intersection of immunology and computational biology and the development of computational techniques to assess high-parameter single-cell cytometry data. My contributions to the cytometry field include novel method development, educational outreach, and the

development of facility operation guidelines. As a representative sample of my peer-reviewed publications relevant for the Basic Research Councilor position, please see:

1. **Belkina AC**, Ciccolella CO, Anno R, Halpert R, Spidlen J, Snyder-Cappione JE. **Automated optimized parameters for T-distributed stochastic neighbor embedding improve visualization and analysis of large datasets**. Nat Commun. 2019;10(1):5415.
2. Pihl RMF, Smith-Mahoney EL, Olson A, et al., **Belkina AC***, Snyder-Cappione JE*. **V δ 1 Effector and V δ 2 $\gamma\delta$ T-Cell Subsets Shift in Frequency and Are Linked to Plasma Inflammatory Markers During Antiretroviral Therapy-Suppressed HIV Infection**. J Infect Dis. 2024;229(5):1317–1327.
3. Vanuytsel K, Yeung AK, Dowrey TW, Murphy GJ, **Belkina AC**. **Comprehensive phenotyping of hematopoietic stem and progenitor cells in the human fetal liver**. Cytometry A. 2022;101(11):903–908.
4. Shenoy AT, Lyon De Ana C, Arafa EI, et al., **Belkina AC**, Mizgerd JP. **Antigen presentation by lung epithelial cells directs CD4⁺ TRM cell function and regulates barrier immunity**. Nat Commun. 2021;12(1):5834.
5. Wallace PK, Jellison ER, Thornton S, Kluepfel K, et al. (including **Belkina AC**) **Cyt-Geist: Current and Future Challenges in Cytometry: Reports of the CYTO 2025 Conference Workshops**. Cytometry A. 2026;109(1):5–41.

Since 2014, I have been deeply involved in the International Society for the Advancement of Cytometry (ISAC) community, and I was recognized as an Emerging Shared Research Laboratory Leader in 2015 and elected as a Councilor for 2020–2024. I have attended CYTO meetings, presented oral and poster presentations every year since 2015, and delivered multiple ISAC-invited tutorials. Each year, I commit time to co-chairing CYTO parallel sessions, reviewing abstracts, and judging poster award competitions. Currently, I serve as the co-chair of the ISAC Data Analysis Education Subcommittee and a member of the Flow Content Subcommittee, with intention to continue this work regardless of Elections outcome. I also serve as an ISAC-representing Cytometry Examination Committee member (2022-2028) and Co-Chair (2026-2027) at ASCP (American Society for Clinical Pathology Board of Certification).

I would be glad to have your support!

Curriculum Vitae
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March 28, 2026

Academic Training and Appointments:

- 6/2003 M.D. Russian State Medical University, Moscow, Russia; Pediatrics
- 6/2007 M.S. Rockefeller University, New York, NY; Molecular and Cellular Biology
- 9/2012 Ph.D. Boston University School of Medicine, Boston, MA; Molecular Medicine
- 6/2018 -present Assistant Professor, Department of Pathology and Laboratory Medicine, Chobanian & Avedisian School of Medicine, Boston University, Boston, MA

Additional Training:

- 9/2012-1/2013 Boston University School of Medicine, Boston, MA; Denis Lab; Nikolajczyk Lab

Non-Academic Appointments:

- 1/2013-11/2015 Research Specialist, Flow Cytometry Core Facility, Boston University School of Medicine, Boston, MA
- 11/2015-05/2018 Senior Research Specialist, Flow Cytometry Core Facility, Boston University School of Medicine, Boston, MA
- 5/2018-10/2020 Associate Director, Flow Cytometry Core Facility, Boston University School of Medicine, Boston, MA
- 10/2020-present Director, Flow Cytometry Core Facility, Chobanian & Avedisian School of Medicine, Boston University, Boston, MA

Honors and Awards:

- 6/2003 Summa Cum Laude, Russian State Medical University, Moscow, Russia
- 9/2005 Women & Science Initiative Scholarship, New York, NY
- 9/2010 Ethan Sims Young Investigator Award (The Obesity Society) – finalist of the 2010 TOS Meeting
- 5/2011 Henry I. Russek Student Achievement Award First Prize
- 5/2015 ISAC (International Society for Advancement of Cytometry) Emerging SRL Leader Award 2015-2019
- 4/2018 ISAC Lecture Award, SoCal Meeting
- 5/2020 BU CTSI (Clinical and Translational Science Institute) Mini Sabbatical Award
- 6/2020 ISAC (International Society for Advancement of Cytometry) Council Member, 2020-2024

Teaching Experience and Responsibilities:

- 2010-2012 Medical Immunology (MS 144) BUSM (senior teaching assistant, instructor)
- 2013-2014 Analytical Methods in Environmental Health (SPH EH 725), BUSM SPH (instructor)
- 2017, 2020 Immunological Basis of Disease (MI715 A1), BUSM GMS (instructor)
- 2016-2020 PrISM: Medical Immunology (MS 141-143) BUSM (instructor)
- 2013-present Seminars on flow cytometry panel design and optimization at BUSM
- 2013-present Biological Core Technologies (MM730 A1), BUSM GMS core curriculum (instructor)
- 2020-present Introduction to Pathology and Pathophysiology of Disease (PA600/PA700), BUSM GMS (instructor)
- 2021-present Medical Immunology (PA510), BUSM GMS (instructor)
- 2022-present Techniques in Biomedical Research (BI777) BUSM GMS (instructor)

Diversity, Equity, Inclusion, and Belonging Activities:

- 2022-present Flowwomen (founding member, mentor): a networking group for flow cytometrists in Greater Boston area to support each other as strong women leaders and scientists
- 2022-present CYTO Women (Task Force member)
- 2013-present LGBTQIA+ Faculty Research Network, member

Major Mentoring Activities:

Mentee, degree(s)	Dates	Mentee Position Institution	Content or Product resulting from relationship	Current Position
Riley Pihl, MS	FEB-AUGUST 2017	M.S. program trainee at the Flow Cytometry Core Facility	Capstone MS project	PiBS Graduate student (started Fall 2020)
Riley Pihl, MS	SEPT 2017-AUGUST 2020	Staff member at the FCCF	Multiple conference presentations and peer review publications. First author publication in progress	PiBS PhD Graduate student (started Fall 2020) at BUSM
Allen Yen, MS	SPRING 2017	M.S. program trainee at the FCCF	MS program 8 week rotation at the FCCF	PhD Graduate student at Washington University School of Medicine
Minoo Rafati, MS	SPRING 2018	M.S. program trainee at the FCCF	MS program 8 week rotation at the FCCF	Scientist, AstraZeneca
Julie Mosaddeghi, MS	SPRING 2019	M.S. program trainee at the FCCF	MS program 8 week rotation at the FCCF	Medical student '2027, Philadelphia College of Osteopathic Medicine
Dr. Anukul Shenoy, PhD	MARCH 2019-MARCH 2023	Postdoctoral fellow at the Pulmonary Center, BUSM (co-mentoring with Dr. Mizgerd)	Ongoing collaboration and co-mentorship with Mizgerd lab. Multiple peer review publications and conference presentations. First author paper accepted at Nature Comm (I am a co-last author)	Assistant Professor, Microbiology & Immunology, University of Michigan Medical School
Dr. Richard Pickering, PhD	MARCH 2021-JUN 2023	Postdoctoral fellow, Department of Medicine, BUSM (co-mentoring with Dr. Lin)	A co-mentorship project with Dr. Nina Lin (DOM) lab. A methods paper is in preparation	Research Assistant Professor, Department of Medicine, BUSM
Jones, Albert, Richard/IV, PhD	JUNE 2018-OCT 2021	PhD student, Department of Medicine, BUSM	PhD Dissertation (I served as a member of his DAC)	Postdoctoral fellow at the Joslin Diabetes Center
Erik Matson, BS	JUNE 2021-MARCH 2025	PhD student, Department of Medicine, BUSM	Ongoing collaboration with Maglione lab. I was a member of Erik's DAC	Biotech industry position in Cambridge, MA
Erika Smith, BS	JUNE 2021-JUNE 2025	PhD student, Department of Microbiology, BUSM	Ongoing collaboration with Cappione lab. I was a member of Erika's DAC	Postdoctoral Fellow, VIM, BUSM
Riley Pihl, MS	DEC 2021-MAY 2025	PhD student, Department of Microbiology, BUSM	Ongoing collaboration with Dr. Traber's lab. I was the Chair of Riley's DAC	Biotech industry position in Cambridge, MA
Darrien Viitala, MS	JUNE-AUGUST 2023	M.S. program trainee at the FCCF	Capstone MS project	Biotech industry position in Cambridge, MA

Mentee, degree(s)	Dates	Mentee Position Institution	Content or Product resulting from relationship	Current Position
Victoria Volfson, MS	SEPT 2023- SEPT 2025	PhD student, Department of Microbiology, BUSM	I was a member of Victoria's DAC and stepped in as her Advisor when her mentor relocated to another state. I served as her Advisor until she defended her PhD and graduated.	Pharma/clinical trial design industry position in Cambridge, MA
Elise Armstrong, BS	SEPT 2023- PRESENT	PhD student, Department of Microbiology, BUSM	Ongoing collaboration with Dr. Mizgerd's lab. I am a member of Elise's DAC	PhD student, Department of Microbiology, BUSM
Michael Vannini, BS	SEPT 2024- PRESENT	PhD student, Department of Microbiology, BUSM	Ongoing collaboration with Dr. Mizgerd's lab. I am a member of Elise's DAC	MD/PhD student, Department of Microbiology, BUSM
Brittney Garcia, BS	SEPT 2025- PRESENT	PhD student, Department of Microbiology, BUSM	Ongoing collaboration with Dr. Mizgerd's lab. I am a member of Brittney's DAC	MD/PhD student, Department of Microbiology, BUSM
Lucien Garo, BS	SEPT 2024- PRESENT	PhD student, Department of Microbiology, BUSM	Ongoing collaboration with Dr. Bosmann's lab. I am a member of Lucien's DAC	PhD student, Department of Microbiology, BUSM
Manika Kaur, BS	JAN-AUGUST 2025	M.S. program trainee at the FCCF	Capstone MS project	MS student, Department of Pathology, BUSM

Major Administrative Responsibilities:

2013-present Flow Cytometry Core Facility, BUSM, Boston, MA

Other Professional Activities:

Professional Societies: Memberships, Offices, and Committee Assignments:

2012-present Member, American Association of Immunologists
2014-present Member, International Society for Advancement of Cytometry (ISAC)
2015-2016 Member, Society for Immunotherapy of Cancer
2015-2020 ISAC Membership Committee, ISAC E-Learning Committee, ISAC CYTO-U Task Force
2018-present New England Cytometry, Board member
2020-present ISAC Flow Cytometry Content Task Force, ISAC Data Standards committee
2020-2024 ISAC (International Society for Advancement of Cytometry) Council Member, 2020-2024 (elected)
2022-2028 ASCP (American Society for Clinical Pathology Board of Certification), Cytometry Examination Committee member (appointed, 6-year term)
2025-2026 ASCP Cytometry Examination Committee Vice-Chair
2024-present Cytometry Part A Journal (Wiley), Associate Editor

Ad Hoc Reviewing 2017-present

Cytometry Part A
Nature Communications
Frontiers Immunology
Bioinformatics
Diabetes
eLife
Plos One
Journal of Immunology
Cancer Immunology Research

Editorial Responsibilities

2022-2024 Cytometry Part A, Guest Editor, Data Science
2022-present Frontiers in Immunology, Associate Editor, section 'NK and Innate Lymphoid Cell Biology'
2024-present Cytometry Part A Journal (Wiley), Associate Editor

University Committee Assignments:

2020-present BUSM PiBS Admission Committee

Other support:

Current:

S10 1S10OD038346-01 (PI: Belkina) 4/15/2025-4/14/2026
Role: Primary Investigator
NIH Office of the Director
Title: Full Spectrum Cell Sorter with Imaging Enhancement for Boston University Flow Cytometry Core Facility

R01 AG065050-01A1 (PI: Snyder-Cappione) 8/15/2020-05/2025
Role: Co-investigator
NIH NIAID
Title: Gamma delta T cells promote inflammation in aviremic HIV infection and normal aging

Past:

U01 CA243004-01A1 (PI: Denis) 09/09/2020 - 08/31/2025
NIH/NCI
Role: Collaborator
Title: Multiscale analysis of metabolic inflammation as a driver of breast cancer

R01 DA042685-03 (PI: Lin) 08/15/2016 - 06/30/2023
NIH/NIDA
Role: Collaborator
Title: Impact of smoking and its cessation on systemic and airway immune activation

R01AG058538-01 (Multi-PI: Gummuluru, Sagar & Lin) 8/01/2018 – 04/30/2023
NIH:NIA
Role: Key Personnel
Title: Persistent HIV expression induced type I IFN responses and inflammaging

R01AG058538-01 (Multi-PI: Gummuluru, Sagar & Lin) 8/01/2018 – 04/30/2023
NIH:NIA
Role: Key Personnel
Title: Persistent HIV expression induced type I IFN responses and inflammaging

Janssen Research & Development LLC

Role: Collaborator 10% effort

Title: mPCGA: Characterization a Mouse Model of Lung Squamous Premalignancy & Pre-Clinical Intervention Studies

Invited lectures, conference oral presentations and workshops:**Invited Lectures and Workshops:**

- 2017 Cytobank webinar series, Invited Speaker, February 2017
- 2017 CYTO conference, Research Showcase speaker, June 2017
- 2018 University of Washington Immunology Seminar series, Invited Speaker, July 2018
- 2018 CytoU Cytometry Part A Spotlight Series, Invited Speaker, August 2018
- 2019 ATS (American Thoracic Society) PG Course: High-Content Single-Cell Techniques to Study Lung in Health and Disease, Invited speaker, April 2019
- 2019 CCMA (Canadian Cytometry and Microscopy Association) Workshop Invited Speaker, June 2019
- 2019 Cytek Biosciences Annual User Meeting, Invited Plenary Speaker, June 2019
- 2019 ISAC Scientific Tutorial Speaker, June 2019
- 2020 Amsterdam Advanced Cytometry Course, Invited Speaker, October 2020
- 2020 Principles of Image and Flow Cytometry Graduate Course, University of Buffalo/Roswell Park Comprehensive Cancer Center, Invited Speaker, December 2020
- 2021 Brigham & Women Clinical Pathology Departmental Conference, Boston, USA. Invited Speaker, February 2021
- 2021 CytoU Current Research Webinar, Invited Speaker, August 2021
- 2022 University of California Irvine, Molecular Biology and Biochemistry Seminar series, Invited Speaker, February 2022
- 2022 Cytek Biosciences Annual User Meeting, Philadelphia, USA. Invited Plenary Speaker, June 2022
- 2022 Malaghan Institute of Medical Research Seminar Series, Wellington, New Zealand. Invited Speaker, November 2022
- 2022 Malaghan Institute of Medical Research, "High Dimensional data analysis of cytometry datasets" 2-day workshop, Invited speaker, November 2022
- 2022 2022 Australasian Cytometry Meeting, Melbourne, Australia, "High Dimensional Data Analysis Workshop", Invited speaker, November 2022
- 2023 CYTO2023 conference, "Crimes against Cytometry" Invited Tutorial speaker, Montreal, Canada, May 2023
- 2023 European Association for the Study of the Liver (EASL), "Spectral flow cytometry in liver immunology", Invited seminar, June 2023
- 2024 CYTO2024 conference, "Why can't they play nicely?" Invited Tutorial speaker, Edinburgh, United Kingdom, May 2024
- 2024 NWFSC (North West Flow Cytometry Society) Annual meeting, "Crimes against Cytometry: the Adventure of Bad Data" workshop, invited speaker, Seattle, March 2024
- 2024 Spectral Symposium, "Crimes against Cytometry" workshop, invited speaker, Cambridge, United Kingdom, July 2024
- 2024 Spectral Symposium, "Some mixed feelings: when multiplex panels bring challenges along with breakthroughs", invited lecturer, Cambridge, United Kingdom, July 2024
- 2025 CYTO2025 conference, "Before you click 'Run': what truly matters for successful high-dimensional data analysis?" Invited Tutorial speaker, Denver, CO, USA June 2025
- 2025 FOCIS (Federation of Clinical Immunology Societies) 2025. "Some mixed feelings: when novel fluorochromes bring challenges along with breakthroughs". Flow Cytometry Course, invited speaker. Boston, MA June 2025
- 2026 Cytek Biosciences Annual User Meeting, Invited Plenary Speaker, February 2026

Conference Presentations:

Regional:

- October 2016 **Belkina AC.** “Automated analysis of 16-color flow cytometry data maps rare immune cell populations and reveals Inhibitory Receptor signatures in systemic sclerosis patients”. New England Cytometry Meeting, Invited Plenary Speaker
- April 2018 **Belkina AC.** “Revealing disease phenotypes with computational analysis of high-dimensional flow cytometry”. SoCal Flow Meeting (Southern California Flow Cytometry Association) Invited Plenary Speaker, ISAC lecturer
- October 2018 **Belkina AC.** “Computational analysis of high-dimensional flow cytometry opens new horizons for immune exhaustion mechanisms”. MetroFlow (Flow Cytometry Association located in New York, NY) Invited Plenary Speaker
- February 2019 **Belkina AC.** “Revealing disease phenotypes with computational analysis of high-dimensional flow cytometry”. FlowTex (Texas Flow Cytometry Association) Invited Plenary Speaker
- September 2019 **Belkina AC.** “Visualizing high dimensional diversity of immune cells in health and disease with computational analysis tools”. GLIIFCA (Great Lakes International Imaging and Flow Cytometry Association) Invited Plenary Speaker
- March 2024 **Belkina AC.** “Are those clusters in the room with us right now? Overcoming obstacles on our way to explore novel immune subsets”. FlowTex (Texas Flow Cytometry Association) Invited Plenary Speaker
- April 2024 **Belkina AC.** “A Good Problem to Have: Innovating Through the Challenges of High-Parameter Flow Cytometry”. SoCal Flow Meeting (Southern California Flow Cytometry Association) Invited Keynote Speaker
- January 2026 **Belkina AC.** “You are what you make: mapping T cell functional diversity with high parameter cytometry”. San Diego Flow Meeting Invited Keynote Speaker

National:

- October 2010 **Belkina AC, Wang F, Blanton WP, Liu H, Denis GV.** (2010). Whole body Brd2 deficiency protects obese mice from insulin resistance by creating a low inflammatory environment. Obesity Society 28th Annual Scientific Meeting, San Diego, CA. Oral Presentation.
- May 2012 **Belkina AC, Snyder-Cappione J, Jagannathan-Bogdan M, Carr J, DeFuria J, Markham D, Allen J, Bouchard J, Nersesova Y, Watkins A, McDonnell M, Denis GV, Apovian C, Nikolajczyk BS.** B cells as master regulators of a pro-inflammatory T cell balance in obesity and glucose intolerance. Presented at: IMMUNOLOGY 2012 AAI Meeting. Oral Presentation.
- June 2012 Nikolajczyk BS, **Belkina AC, Snyder-Cappione J, Jagannathan-Bogdan M, Carr J, DeFuria J, Markham D, Allen J, Bouchard J, Nersesova Y, Watkins A, McDonnell M, Denis GV, Apovian C.** B Lymphocytes are Master Regulators of a Pro-inflammatory T Cell Balance in Obesity and Glucose Intolerance. American Diabetes Association 2012 Meeting. Oral presentation.
- September 2019 **Belkina AC.** “Data dimensionality reduction”. SBI2 (Society of Biomolecular Imaging and Informatics) Invited Workshop Speaker.
- May 2023 **Belkina AC.** “Overcoming analysis paralysis: How to break into the high-dimensional cytometry data analysis space”. ABRF (Association of Biomolecular Resource Facilities) Annual Meeting, Invited Workshop Speaker

International:

- June 2015 **Belkina AC**, Fleury M, Vazques Mateo C, Raval F, Lafyatis R, Dooms R. Snyder-Cappione JE. Automated analysis of 16-color polychromatic flow cytometry data maps immune cell populations. CYTO 2015 International Society for Advancement of Cytometry (ISAC), Glasgow, UK
- June 2017 **Belkina AC**, Ciccolella C, Snyder-Cappione JE “viSNE Fine-Tuning Enables Better Resolution of Cell Populations”. CYTO 2017 International Society for Advancement of Cytometry (ISAC), Oral presentation
- June 2018 **Belkina AC**, Starchenko A, Drake K, Proctor E, Pihl RMF, Olson A, Lauffenburger D, Lin N, Snyder-Cappione JE. “Inhibitory Receptor Signatures on Gamma Delta T Cells Predict ART-Suppressed HIV Infection, are Synergistically Altered by HIV and Aging, and Co- Vary with Inflammatory Plasma Analytes”. CYTO 2018 International Society for Advancement of Cytometry (ISAC), Oral presentation
- June 2019 Pihl RMF, Olson A, Lin N, Snyder-Cappione JE, **Belkina AC**. “Multivariate Analyses of High Parameter Spectral Flow Cytometry and Plasma Analyte Datasets Reveal Links Between Gamma Delta T Cell Subsets and Plasma Markers of Systemic Inflammation and/or Gut Permeability with ARTSuppressed HIV Infection and Healthy Aging”. CYTO 2019 International Society for Advancement of Cytometry (ISAC), Oral presentation
- June 2019 **Belkina AC**, Ciccolella C, Anno R, Halpert R, Spidlen J, Snyder-Cappione JE. “Ditch the Ball: Automated Optimal Parameters for T-Distributed Stochastic Neighbor Embedding Improve Visualization and Allow Analysis of Large Datasets”. CYTO 2019 International Society for Advancement of Cytometry (ISAC), Oral presentation
- June 2019 **Belkina AC**, “From chaos to chorus: revealing disease phenotypes with computational analysis of high-dimensional flow cytometry”. Invited Plenary Speaker. Canadian Cytometry and Microscopy Association, Edmonton, Canada.
- September 2021 **Belkina AC**, “How full spectrum cytometry becomes our new normal”. German Society of Cytometry Annual Meeting, Invited Speaker
- November 2022 **Belkina AC**, “Revealing diverse cellular phenotypes with computational analysis of high-dimensional flow cytometry data”, Invited speaker, 2022 Australasian Cytometry Meeting, Melbourne, Australia
- November 2022 **Belkina AC**, “Profiling engraftable human fetal liver-derived hematopoietic stem cells at single cell resolution”, Invited speaker, 2022 Australasian Cytometry Meeting, Melbourne, Australia
- June 2025 **Belkina AC**, “50-parameter CyTOF Intracellular Panel Reveals Distinct Functional T cells”, CyTOF Summit 2025, Invited Speaker
- June 2025 **Belkina AC et al**, “Novel functional diversity of human T cells is revealed through the unprecedented resolution of intracellular cytokines, transcription factors and phosphoproteins using mass cytometry (CyTOF)”, CYTO 2025 International Society for Advancement of Cytometry (ISAC), Oral presentation

Bibliography:

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<https://www.ncbi.nlm.nih.gov/myncbi/anna.belkina.1/bibliography/public/>
https://www.researchgate.net/profile/Anna_Belkina

Original, Peer Reviewed Articles:

1. Wang F, Liu H, Blanton W, **Belkina A**, Lebrasseur N, Denis G 2010 Brd2 disruption in mice causes severe obesity without Type 2 diabetes. The Biochemical journal 425 (1) p. 71-83
2. Landesman-Bollag E, **Belkina A**, Hovey B, Connors E, Cox C, Seldin DC 2011 Developmental and growth defects in mice with combined deficiency of CK2 catalytic genes. Molecular and cellular biochemistry 356 (1-2) p. 227-31

3. Ehrlich DJ, McKenna BK, Evans Evans JG, **Belkina AC**, Denis DV, Sherr DH, Cheung MC 2011 Parallel imaging microfluidic cytometer. *Methods in cell biology* 102 p. 49-75
4. Banerjee C, Archin N, Michaels D, **Belkina AC**, Gerald DV, Bradner J, Sebastiani P, Margolis DM, Montano M 2012 BET bromodomain inhibition as a novel strategy for reactivation of HIV-1. *Journal of Leukocyte Biology*, 2012 Dec;92(6):1147-54.
5. DeFuria J*, **Belkina AC***, Jagannathan-Bogdan M, Snyder-Cappione J, Carr JD, Nersesova Y, Markham D, Strissel KJ, Watkins A, Allen J, Bouchard J, Toraldo G, Jasuja R, Obin MS, McDonnell ME, Apovian CM, Denis GV, Nikolajczyk BS. (2013). B cells regulate the pro-inflammatory T cell balance in obesity and metabolic disease. *Proc. Natl. Acad. Sci. USA*. 110: 5133–5138. (* co-first authorship)
6. **Belkina AC**, Nikolajczyk BS, Denis GV. BET protein function is required for inflammation: Brd2 genetic disruption and BET inhibitor JQ1 impair mouse macrophage inflammatory responses. *Journal of Immunology*. 190: 3670–3678.
7. Al-Sebaei MO, Daukss, **Belkina AC**, Kaker S, Wigner NA, Cusher D, Graves D, Einhorn T, Morgan E, Gerstenfeld LC. Fas Deficient (lpr) Mouse Model of Lupus Show Delayed Cartilage Resorption but High-Turnover Bone Loss during Fracture Healing. *Journal of Immunology*. 190: 3670–3678.
8. **Belkina AC**, Blanton WP, Nikolajczyk BS, Denis GV. The double bromodomain protein Brd2 promotes B cell expansion and mitogenesis. *Journal of Leukocyte Biology*, 2013 Dec 6. [Epub ahead of print]
9. Zhu M, **Belkina AC**, Defuria J, Carr JD, Van Dyke TE, Gyurko R, Nikolajczyk BS. B cells promote obesity-associated periodontitis and oral pathogen-associated inflammation. *Journal of Leukocyte Biology*, 2014 April 29. [Epub ahead of print]
10. Bragdon B, Burns R, Baker AH, **Belkina AC**, Morgan EF, Denis GV, Gerstenfeld LC, Schlezinger JJ. Intrinsic Sex-Linked Variations in Osteogenic and Adipogenic Differentiation Potential of Bone Marrow Multipotent Stromal Cells. *Journal of Cell Physiology*, 2014 June 24.
11. Ip B, Cilfone N, **Belkina AC**, Defuria J, Jagannathan-Bogdan M, Zhu M, Kuchibhatla R, McDonnell M, Xiao Q, Kepler TB, Apovian CM, Lauffenburger DA, Nikolajczyk BS. Th17 cytokines differentiate obesity from obesity-associated type 2 diabetes and promote TNF α production. *Obesity*, 2016 Jan;24(1):102-12. doi: 10.1002/oby.21243.
12. Deeney JT, **Belkina AC**, Shirihai OS, Corkey BE, Denis GV. BET Bromodomain Proteins Brd2, Brd3 and Brd4 Selectively Regulate Metabolic Pathways in the Pancreatic β -Cell. *PLoS One*. 2016 Mar 23;11(3):e0151329. doi: 10.1371/journal.pone.0151329
13. Kamata H, Yamamoto K, Wasserman GA, Zabinski MC, Yuen CK, Lung WY, Gower AC, **Belkina AC**, Ramirez MI, Deng JC, Quinton LJ, Jones MR, Mizgerd JP. Epithelial Cell-derived Secreted and Transmembrane 1a (Sectm1a) Signals to Activated Neutrophils During Pneumococcal Pneumonia. *Am J Respir Cell Mol Biol*. 2016 Apr 11.
14. **Belkina AC**, Snyder-Cappione JE. OMIP-037: 16-color panel to measure inhibitory receptor signatures from multiple human immune cell subsets. *Cytometry A*. 2016 Oct 5.
15. Lentucci C*, **Belkina AC***, Cederquist CT, Chan M, Johnson HE, Prasad S, Lopacinski A, Nikolajczyk BS, Monti S, Snyder-Cappione J, Tanasa B, Cardamone MD, Perissi V. Inhibition of Ubc13-mediated ubiquitination by GPS2 regulates multiple stages of B cell development. *J Biol Chem.*, 2016 Dec 30. (* co-first authorship)
16. Kartha V, Alamoud K, Sadykov K, Laroche F, Feng H, Lee J, Pai S, Varelas X, Egloff AM, Snyder-Cappione J, **Belkina AC**, Bais M, Monti S, Kukuruzinska, M. Functional and genomic analyses reveal therapeutic potential of targeting β -catenin/CBP activity in head and neck cancer. *Genome Med*, 2018 Jul 20;10(1):54. doi: 10.1186/s13073-018-0569-7.
17. Woolf N, Pearson BE, Bondzie PA, Meyer RA, Lavaei M, **Belkina AC**, Chitalia V, Rahimi N. Targeting tumor multicellular aggregation through IGPR-1 inhibits colon cancer growth and improves chemotherapy. *Oncogenesis*, 2017; 6(9):e378. PMID: 28920928.
18. Fleury M; **Belkina AC**; Proctor E; Zammitti C; Simms R; Lauffenburger D; Snyder-Cappione J; Lafyatis R ; Dooms H. Increased expression and modulated regulatory activity of co-inhibitory receptors PD-1, TIGIT and TIM-3 in lymphocytes of systemic sclerosis patients *Arthritis Rheumatol*.

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Editorials and Critical Reviews:

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