Candidate Statement Sherry Thornton

It is an honor to be nominated for the ISAC President-elect position. As director of the Research Flow Cytometry Facility at Cincinnati Children's Hospital and director of the Integrative Cell Phenotyping Core for the Cincinnati Rheumatic Disease Resource Center, my career has enabled the pursuit of a deep commitment to using flow cytometry to study underlying pathogenic mechanisms of rheumatic diseases at a single cell level. ISAC's values to pursue the highest quality, access, and dispersion of cytometry knowledge, mentoring, community, and innovation are reflected in the extraordinary people that make up the society and their passion for cytometry. Our diverse membership, encompassing clinical, basic, translational, and shared resource laboratory (SRL) scientists, provides a unique strength through our enthusiastic sharing of concepts applicable to all cytometry. I am committed to serving ISAC to aid in our mission of promoting inclusivity, technological innovation, the development of professionals, and the exchange of knowledge in cytometry.

I have been an active member of ISAC since 2013, serving as a member and chair of the SRL Content Subcommittee, past chair and current co-chair of the Education Committee, and a member of the CYTO Women and Governance committees. I have served on additional ISAC committees and working groups, including strategic planning (chair of the Education pillar group) and the committee to determine ISAC's executive structure. Through this service, I have had the privilege of learning from and leading diverse groups of volunteers from various geographic areas and cytometry interests to deliver programming for our members efficiently and effectively. If elected President-elect, I would continue to lead with these priorities, aligning with ISAC goals to serve in an equitable manner and to reflect our diversity of leadership and volunteer service.

I have also been involved in leadership of other local, national, and international cytometry associations, including as a Board Member and past President of the Great Lakes International Imaging and Flow Cytometry Association(GLIIFCA), an ISAC Associated Society, the Ohio River Valley Cytometry Association (ORVCA), and chairing working groups in the Association for Biomolecular Facilities (ABRF). I am a founding member of ORVCA and have played a key role in organizing its annual meetings since 2012. At my own institution, I have held many leadership roles, including growing an undergraduate research experience summer program from 30 to 120 students and the flow cytometry core from 2 to 20 instruments and 1 to 9 staff. I have a passion for mentoring students, postdocs, junior faculty, and staff, and for helping them identify their passions and how to build their careers. I have leveraged this passion to facilitate mentoring workshops and tutorials at CYTO and the ABRF annual meeting. Planning annual meetings and generating educational content for these societies has provided me with an unequivocally knowledgeable and passionate community that I have relied on for my own cytometry education and support, both as a basic/translational research investigator and as a director of an SRL.

I have had the unique opportunity to work in both basic and translational cytometry, to start and direct a cytometry SRL, and to lead various successful institutional initiatives. ISAC is poised to be the leader in Cytometry Education and to deliver cytometry content worldwide. Working together in an efficient and effective manner is important to making this vision a reality. Two of our strategic goals focus on effective communication about who we are, how we operate, and the impact on membership, as well as on the impact of our work on the community, emphasizing how important communication is to ISAC membership. I want to see ISAC be more effective at communicating what we are doing across the society to our membership and to cytometrists around the world and to

streamline these educational initiatives. Leading these efforts must reflect and consider the diversity of our society, including geographic and cytometry focus areas.

My goals:

1. Tools: Educational content delivery has developed to include various modes, and ISAC is poised to provide education in different modes and languages in a highly efficient manner. Having the appropriate tools available to committees and used in an organized manner will enable greater productivity in the delivery of educational content for global cytometry, increasing equity of access.
2. Communication: We have very enthusiastic and engaged volunteers, and communication is key to ensuring topics and initiatives can be worked on by overlapping committees that are passionate about such subjects, and educational tools are utilized on a society-wide basis. Using the tools ISAC currently has available or developing new ones that effectively facilitate this communication process could empower and increase our membership.
3. Mentorship: Develop a framework for cytometry mentorship. Development of an underlying framework for mentorship, particularly for new members, would aid in developing our leaders and in including others in the field who need expertise and guidance in their cytometry endeavors. Mentorship could also enhance access to membership, knowledge and potentially resources for interested cytometrists, as well as entice membership globally, supporting ISAC's strategic goals.
4. Innovation: Support innovators and the knowledge or "know-how" of translating ideas to the field. Encouragement and showcasing of innovation and cutting-edge cytometry supports our strategic goal of providing the highest quality educational content for cytometry.

I am honored to be nominated for President-elect of ISAC and excited to give back to the society to strengthen its mission of promoting inclusivity, technological innovation, development of cytometry professionals, and the exchange of knowledge in cytometry.

Sincerely,

Sherry Thornton

Curriculum Vitae

Sherry L. Thornton, Ph.D.

1. Name and Personal Data:

Work Address: Cincinnati Children's Hospital Medical Center
Division of Rheumatology, ML 4010
3333 Burnet Avenue
Cincinnati, OH 45229
(513) 636-1318-phone
(513) 636-3328- fax
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2. Education:

February 2024	Courageous Together (beta training), Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
August 2022- October 2022	CCHMC Women's Faculty Leadership Program, Xavier Leadership Center, Cincinnati Ohio
September 2020- November 2020	Culture Labs, Cincinnati Children's Hospital Cohort 13, CCHMC
November 2019- February 2020	K Mentoring Workshop, CCTST University of Cincinnati College of Medicine, Cincinnati OH
November 11-15, 2019	Leadership and Management in Core Facilities, Nonprofit Executive Education, Northwestern University Kellogg School of Business, Chicago, Illinois
March 19, 2019	Mentoring AND Leadership in Academic and Corporate Environments, Bob Garvey, Association for Biomolecular Resource Facilities, San Antonio, Texas
September 2016- June 2017	Core Leadership Program, CCHMC
September 2008	FACSAria Cell Sorting Training, Becton Dickinson, Billerica, Maryland
February 1997- June 2002	Postdoctoral Research Fellow, Division of Rheumatology Cincinnati Children's Hospital Medical Center, Cincinnati, OH Mentor: Raphael Hirsch, M.D.
January 1997	Ph.D., Developmental Biology Program University of Cincinnati, College of Medicine, Cincinnati, OH Mentor: Roger E. Ganschow, Ph.D.

3. Academic Appointments:

July 2002- December 2012	Research Assistant Professor, Department of Pediatrics, University of Cincinnati College of Medicine. Division of Rheumatology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
January 2013- June 2014	Field Service Assistant Professor, Department of Pediatrics, University of Cincinnati College of Medicine. Division of Rheumatology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
July 2014- June 2020	Field Service Associate Professor, Department of Pediatrics, University of Cincinnati College of Medicine. Division of Rheumatology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
July 2020- present	Field Service Professor, Department of Pediatrics, University of Cincinnati College of Medicine. Division of Rheumatology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

4. Licensing and Certification

2021-2026	CITI Training: Biosafety/Biosecurity, Human Subject Research, Animal

5. Awards and Honors:

1986	Admitted with Distinction to Ball State University
1988	Sigma Zeta, science honorary
1989-1990	Honors College Fellowship, Ball State University
1989	Pew Scholarship (1 out of 20 awarded nationally) Baylor College of Medicine, Summer Medical and Research Training Program
1990	Outstanding Biology Student, Ball State University
1990-1996	Graduate Student Fellowship, Developmental Biology Program, University of Cincinnati
1992-1993	Representative to the Organization of Health Science Graduate Students
1992-1993	Vice-President, Developmental Biology Program
2010	ACR Notable Poster (top 10%) SapC-DOPS Imaging in Arthritis
2016	Waters Award, Association Biomolecular Resource Facilities
2024	Hidden Gem Award, Cincinnati Children's Hospital

6. Clinical Service: N/A

7. Research and Scholarly Activity

Brief Description of Focus of Research and Scholarly Activity: My overarching research goals focus on identification and characterization of genes involved in arthritis and functional analysis of these genes and their products through *in vitro* cellular assays and *in vivo* animal models of arthritis. Cytometric and cellular analyte analysis aids in determination of cell types in PBMC from Juvenile Idiopathic Arthritis (JIA) subtypes; miRNA contributions to disease, as well as examination of analytes in tears from JIA patients with uveitis, urine from lupus patients and synovial fluid from JIA

patients. My primary role as Director of the Research Flow Cytometry Facility (RFCF) compliments this research and allows me to provide expertise for cellular analysis and procurement of funding for cytometric instruments for over 180 investigators from UC and CCHMC utilizing the RFCF.

Grant Support:

Active

Service:

HRSA 6 CE1HS52338-01-01 (Sherry Thornton, PhD, PI) 09/30/23 to 09/29/26
Community Project Funding/Congressionally Directed Spending - Construction Cell Sorter **Total Direct Cost:** $630,000.00
For the purchase of a state-of-the-art cell sorter to support pediatric research of investigators at Cincinnati Children's Hospital.

P30 AR070549 (Leah Kottyan, Ph.D, PI) 08/01/23-07/31/28
NIH/NIAMS Cincinnati Rheumatic Disease Resource Center
Core: Integrative Cell Phenotyping Core **Total Direct Costs**: $500,000
This core functions to allow Rheumatology investigators to analyze cell function and gene expression at the single cell level in autoimmune diseases and to foster interaction between Rheumatology and other divisions examining immune cell function.
Role: Core Leader**, Sherry Thornton, PhD** **15% effort**

P30DK078392 (Lee Denson, M.D., PI) 08/31/22-07/31/27
DIGESTIVE HEALTH CENTER: BENCH TO BEDSIDE RESEARCH IN PEDIATRIC DIGESTIVE DISEASE
Core: Gene Expression Core **Total Direct Costs**: $614,950
Flow Cytometry Core Director: **Sherry Thornton, Ph.D**. **5% effort**
This core functions to allow Digestive Health investigators to analyze cell function and gene expression at the single cell level in digestive diseases.

R01 AR079524-01 (Grant Schulert, MD, PhD, PI) 07/01/21-06/30/26
NIH/NIAMS **Total Direct Costs**: $1,973,350
Pathogenesis of Systemic Juvenile Idiopathic Arthritis-Associated Lung Disease
Our long-term goal is to identify the causes and best treatment approaches for SJIA-LD. The central objective of this project is to define the role of IFNγ activation in the pathogenesis of SJIA-LD.
Co-investigator: **Sherry Thornton, Ph.D Effort in Research Flow Cytometry Facility**

Research:

Falk Catalyst Award (John Erickson, MD PhD, PI) 11/01/25-10/31/27
Falk Medical Research Trust **Total Direct Costs**: $350,000
Co-investigator: **Sherry Thornton, Ph.D**. **3% effort**
Antibody sialic acid acetylation controls autoimmune arthritis.
The major goal is to determine whether a subtle change to self-reactive antibodies acts as a molecular switch controlling autoimmune arthritis and whether measuring this change can predict who will develop rheumatoid arthritis.

CARRA Data analysis support grant (Grant Schulert PI) 1/26-12/26
High dimensional analysis of circulating immune populations in systemic JIA-associated lung disease patients in the CARRA Registry

Co-investigator: **Sherry Thornton, Ph.D Effort in Research Flow Cytometry Facility**
Major goal is to analyze SJIA and MAS PBMC populations for unique cellular phenotypes as compared to each other and controls.

K23AR081424 (Patricia Vega Fernandez, MD, PI) 8/1/23-7/31/28
NIH/NIAMS **Total Direct Costs**: $850,500
Validation of a Novel Ultrasound Score to Improve the Assessment of Joint Inflammation in Children with Juvenile Arthritis.
The major goal of this project is to determine the ability of the MSUS-10 to capture clinically relevant changes in JIA and evaluate the score in relations to biological markers of JIA inflammation.
Mentor: **Sherry Thornton, Ph.D**.

Falk Transformational Award (Hermine Brunner, MD, PI) 1/1/23-12/31/25
Falk Medical Research Trust **Total Direct Costs:** $1,000,000
Co-investigator: **Sherry Thornton, Ph.D**. **5% effort**
The major goal of this project is to develop a single multiplex assay of the RAIL biomarkers for assessment of lupus patient disease status that will provide a more rapid and convenient test than the current ELISA format.

Completed
Service:
P30 AR070549 (Susan D. Thompson, Ph.D, PI) 08/01/16-07/31/22
NIH/NIAMS
Core: Single Cell Gene Expression Core **Total Direct Costs**: $288,255
This core functions to allow Rheumatology investigators to analyze cell function and gene expression at the single cell level in autoimmune diseases and to foster interaction between Rheumatology and other divisions examining immune cell function.
Role: Core Director**, Sherry Thornton, PhD** **15% effort**

1S10OD025045 -01 (**Sherry Thornton, PhD, PI**) 09/01/18-08/31/20
NIH/Office of Research Infrastructure Programs
"ZE5 Analytical Cytometer" **Total Direct Costs**: $359,250
Major goal: The instrument will be used to analyze cell populations based on their expression of unique cell-surface markers using highly multiparametric flow cytometry. The instrument will provide increased access to highly parametric flow cytometry and allow investigators to significantly progress the tempo of their research.

1S10OD023410-01 (**Sherry Thornton, PhD, PI**) 02/01/17-01/31/18
NIH/Office of Research Infrastructure Programs
"SH800 Cell Sorter" **Total Direct Costs:** $318,028
Major goal: The instrument will be used to purify rare cell populations based on their expression of unique cell-surface markers. The instrument will provide ease of use for training of users to be able to sort during off hours of the research flow cytometry core, and allow for patient samples to be sorted by users 24 hours a day. Both of these needs will be met allowing investigators to significantly progress the tempo of their research.

2P30 AR047363 09/01/06-06/30/16
NIH/NIAMS (Peer-reviewed) Total Direct Costs: $400,000

Pediatric Rheumatic Disease Core Center
Principal Investigator: Susan D. Thompson, Ph.D.
Core: Integrative Cell Phenotyping and Morphology Core
Core Director: **Sherry Thornton, Ph.D**. **15% effort**
Major goal: This core functions to allow rheumatology investigators to analyze cell function in autoimmune diseases and to foster interaction between Rheumatology and other divisions examining immune cell function. My capacity is to foster or identify projects for use of the core, supervise the flow cytometry core coordinator, address any problems with the daily running of the flow cytometers, obtain approval for projects supported by the P30, keep instrumentation and software up-to-date and write yearly progress reports.

P30DK090971 (Yi Zheng, Ph.D., PI) 09/30/2010-06/30/2015
CINCINNATI CENTER FOR EXCELLENCE IN MOLECULAR HEMATOLOGY
Core: Flow Cytometry Core **Total Direct Costs**: $164,000
Technical Core Director: **Sherry Thornton, Ph.D**. **10% effort**
Major goal: The major goal of this core center is to allow Experimental Hematology investigators to analyze cell function. My capacity is to supervise the flow cytometry core coordinator, address any problems with the daily running of the flow cytometers, obtain approval for projects supported by the P30, keep instrumentation and software up-to-date and aid in the writing of yearly progress reports.

S10RR03165 (Marsha Wills-Karp, PhD, PI) 02/15/11-02/14/12
NIH NCRR **Total Direct Costs** $462,394
"MoFlo XDP Cell Sorter"
Research Flow Cytometry Core Director: **Sherry Thornton, PhD**
My role: Provided information for all technical aspects of the grant, running of the core, budget and future management of the award. Provided initial drafts of grant and significant editing before submission. Solicited, gathered and edited information from major and minor investigators on their scientific use of the instrument and compiled grant for submission. Prepared and submitted progress reports.
Major goal: The instrument will be used to purify rare cell populations based on their expression of unique cell-surface markers. The instrument will provide jet-in-air sorting for investigators needing this technology, which reduces shear force stress on cells. Both of these needs will be met allowing investigators to significantly progress the tempo of their research.

Research:
R01 EY030521(Angeles-Han) **09/30/19-06/30/24**
NIH **Total Direct Costs**: $2,433,810
"Predicting uveitis onset in children with juvenile idiopathic arthritis"
The goal of this study is to identify new biologic and genetic risk markers to identify children at greatest risk for uveitis and vision loss.
Role: Analyze analytes in samples from patients at greatest risk for uveitis for potential biomarkers of disease**.**
Co-investigator: **Sherry Thornton, Ph.D**. **5% effort**

Falk Catalyst Award (Sherry Thornton, Ph.D., PI) **11/30/21 – 5/30/23**
Falk Medical Research Trust **Total Direct Costs**: $200,000
Biomarkers for the Advancement of Targeted Therapies for Children with Juvenile Arthritis.
PI: **Thornton** **7% effort**
The major goal of this project is to develop a laboratory assay of serum biomarkers and a mathematical algorithm for response to therapy to enable targeted therapies for children with Juvenile Idiopathic Arthritis.

CARRA-Arthritis Foundation Large Grant (Grant Schulert, MD, PhD, PI)
01/01/20-01/01/21
CARRA (peer reviewed) **Total Direct Costs**: $50,000
Establishing the CARRA Registry Research Network for SJIA-LD (CARE-NETS)
Cellular immunophenotyping with SJIA-LD using leading-edge >20 color Aurora flow cytometry panel to determine differences in the immune landscape in SJIA-LD.
Co-investigator: **Sherry Thornton, Ph.D.**

CCTST Just-in-Time Award(Grom, PI) 11/13/17-6/30/18
CCHMC/UC CTSA, Pluripotent Stem Cell Core **Total Direct Costs**: $5965
Role: Thornton, S. Co-Investigator
"Genetic Variation in Cytolytic Pathway and IFN induced cascade in Macrophage Activation Syndrome"
Major Goal: To generate iPSC specific to MAS patients and controls and learn the iPSC culture technologies for *in vitro* functional analyses. This ability will enhance future R01 submissions.

RO1 AR056990 09/01/09-07/31/14
NIH/NIAMS (Peer-reviewed) **Total Direct Costs**: $900,000
"Mechanisms linking the hemostatic protease thrombin to arthritic disease"
Principal Investigator: Matthew Flick, Ph.D.
Co-investigator: **Sherry Thornton, Ph.D.** **10% effort**
Major goal: The long-term objective is to define the mechanisms by which the central hemostatic system protease thrombin contributes to the pathogenesis of inflammatory joint disease using gene-targeted mice with functional mutations in prothrombin and the thrombin targets fibrinogen and factor XIIIA in a well-characterized murine model of collagen-induced arthritis. My capacity on this project includes induction of arthritis in specific mouse strains, assessment of arthritis and analysis of the effects of thrombin mutations and deficiencies on arthritis.

Clinical Translation Science Award 7/01/10-06/30/11
UCCOM/CCHMC; CCTST Pilot Grant Program **Total Direct Costs:** $100,000
"SapC-DOPS Agents: Imaging and Therapeutics in Arthritis"
Prinicipal Investigator: **Sherry Thornton, Ph.D**. no effort allowed
Co-PIs: Matthew Flick, Ph.D.; Xiaoyang Qi, PhD.
Major Goal: To determine the utility of SapC-DOPS as an imaging agent in mouse models of arthritis, and to determine the cell types targeted by SapC-DOPS agents in arthritic synovium. My capacity on this project includes initiation of arthritis mouse models, macroscopic scoring of arthritis and flow cytometry analysis. I will also

organize the overall study, meet with Drs. Flick and Qi to interpret and evaluate the data and write reports.

1 RO1 AR49822 (Jay Degen, Ph.D., PI) 12/01/03-12/01/08
NIH/NHLBI (Peer-reviewed) **Total Direct costs**: $1,137,970
"Arthritic Disease and the Hemostatic System"
Co-investigator: **Sherry Thornton, Ph.D**.
Major goal: To determine the role of the hemostatic factors, fibrinogen and plasminogen, in the pathogenesis of arthritis. My capacity on this project includes induction of arthritis in specific mouse strains and analysis of the effects of fibrinogen and plasminogen deficiencies on arthritis.

1 P01 AR048929-01A1 (David Glass, PI) 08/22/03 – 07/31/08
NIH/NIAMS (Peer-reviewed) **Total Direct costs**: $144,726
"Gene Expression in Pediatric Arthritis"
Project 4: "Gene Expression Profiles in Systemic Onset Juvenile Rheumatoid Arthritis and Macrophage Activation Syndrome" (Alexei Grom, PI)
(**Thornton, Co-I**)
Major goal: To define the pattern of immune gene dysregulation, which leads to development of different clinical subtypes of systemic juvenile idiopathic arthritis and macrophage activation syndrome. My capacity on this project is to aid in the analysis of microarray data from gene expression profiling of systemic onset juvenile rheumatoid arthritis samples and to oversee cell type analysis in peripheral blood mononuclear cells from these same patient samples.

Arthritis Foundation Investigator Grant (**Thornton, PI**) 07/01/02-07/01/07
Arthritis Foundation **Total Direct costs:** $375,000
"The role of fibrinogen/angiopoietin related protein in autoimmune arthritis"
Major goal: To determine the role of fibrinogen/angiopoietin related protein in angiogenic processes involved in autoimmune arthritis. My capacity on this project is to oversee all experiments performed and to analyze and report all data.

F32 AR47712 (**Thornton, PI**) 08/04/00-12/31/01
NIH/NIAMS
"Gene Therapy for Autoimmune Arthritis"
Major goal: To determine the effectiveness of reducing the immunogenicity of adenoviral vectors for long-term treatment of chronic arthritis.

Publications

1. **Thornton, S**., D. W. Thomas, P. M. Gallagher and R. E. Ganschow. 1998. The androgen response of mouse β-glucuronidase requires 5' flanking and intragenic sequences. *Mol. Endocrinol.*, 12: 333-341. PMID: 9514151
2. Ma, Y., **S. Thornton**, L. E. Duwell, G.P. Boivin, E.H. Giannini, J.M. Leiden, J.A. Bluestone and R. Hirsch. 1998. Inhibition of collagen-induced arthritis in mice by viral IL-10 gene transfer. *J. Immunol.* 161: 1516-1524. PMID: 9686619
3. Ma, Y., **S. Thornton**, G.P. Boivin, D. Hirsh, R. Hirsch, and E. Hirsch. 1998. Altered susceptibility to collagen-induced arthritis in transgenic mice with aberrant expression of IL-1 receptor antagonist. *Arth. Rheum*. 41: 1798-1805. PMID: 9778220

4. **Thornton, S.**, L.E. Duwel, G.P. Boivin, Y. Ma and R.Hirsch. 1999. Course of collagen-induced arthritis is associated with distinct patterns of cytokine and chemokine mRNA expression. *Arth. Rheum*. 42: 1109-1118. PMID: 10366103
5. Kwang, K.N., S. Watanabe, Y. Ma, **S. Thornton**, E.H. Giannini and R. Hirsch. 2000. Viral IL-10 and soluble TNF receptor act synergistically to inhibit collagen-induced arthritis following adenovirus-mediated gene transfer. *J. Immunol*. 164(3):1576-81. PMID: 10640777
6. Watanabe S, K.N. Kim, T. Imagawa, **S. Thornton**, A. Grom, R. Hirsch. 2000. On the mechanism of protection of distal joints after local gene transfer in collagen-induced arthritis. *Hum Gene Ther.* 11(5):751-8. PMID: 10757354
7. **Thornton, S.**, G.P. Boivin, K.N. Kwang, F.D. Finkelman, and R. Hirsch. 2000. Heterogeneous effects of IL-2 on collagen-induced arthritis. *J. Immunol.* 165(3): 1557-63. PMID: 10903764
8. **Thornton, S**., K.A. Kuhn, F.D. Finkelman and R. Hirsch. 2001. NK cells secrete high levels of IFN-gamma in response to in vivo administration of IL-2. *Eur J Immunol* 31:3355-3360. PMID: 11745353
9. L. Zuo, C.M. Cullen, M.L. DeLay, **S. Thornton**, L.K. Myers, E.F. Rosloniec, G.P. Boivin, and R. Hirsch. 2002. A single-chain class II MHC-IgG3 fusion protein inhibits autoimmune arthritis by induction of antigen specific hyporesponsiveness. *J. Immunol*. 168:2554-2559. PMID: 11859151
10. Yang L, **Thornton S**, and Grom AA. 2002. IL-15 inhibits SNP-induced apoptosis of synovial fibroblasts and vascular endothelial cells. *Arthritis Rheum*, 46:3010-3014. PMID: 12428244
11. **Thornton, S.** D. Sowders, B. Aronow, D.P. Witte, H.I. Brunner, E.H. Giannini and R. Hirsch. 2002. DNA Microarray analysis Reveals Novel Gene Expression Profiles in Collagen Induced Arthritis. *Clinical Immunology.* 105:155-168. PMID: 12482389
12. Katakura, S., K. Jennings, S. Watanabe, E. Adachi, **S. Thornton**, G. Gao, J.M. Wilson, H. Burstein, B. Trapnell, and R. Hirsch. 2004. Recombinant adeno-associated virus preferentially transduces human, compared to mouse, synovium: implications for arthritis therapy. *Mod. Rheumatol*. 14: 18-24. PMID: 17028800
13. Hermann, L.M., L. Yang, M. Pinkerton, A. Grom, D. Sowders, D.P. Witte, R. Hirsch, and **S. Thornton**. 2005. Angiopoietin-Like-4 is a Potential Angiogenic Mediator in Arthritis. *Clinical Immunology*. (115(1):93-101). PMID: 15870027
14. Carey, B., M. DeLay, J.E. Strasser, C. Chalk, K. Dudley-McClain, G.G. Milligan, H.I. Brunner, **S. Thornton**, and R. Hirsch. 2005. A Soluble Divalent Class I MHC/IgG1 Fusion Protein Activates CD8+ T Cells. *Clinical Immunology*. 116(1):65-76. PMID: 15925833
15. Fall N, Bove KE, Stringer K, Lovell DJ, Brunner HI, Weiss J, Higgins GC, Bowyer SL, Graham TB, **Thornton S**, Grom AA. 2005. Association between lack of angiogenic response in muscle tissue and high expression of angiostatic ELR-negative CXC chemokines in patients with juvenile dermatomyositis: possible link to vasculopathy. Arthritis Rheum. Oct;52(10):3175-80. PMID: 16200621
16. **Thornton, S**. 2006. Contribution of Angiogenic Genes to the Complex Genetic Trait Underlying Kawasaki Disease. Arthritis Rheum 54(5):1361-5. PMID: 16645964
17. Flick, MJ, CM La Jeunesse, KE. Talmage, DP. Witte, JS. Palumbo, MD. Pinkerton, **S Thornton**, and Jay L. Degen. 2007. Fibrin(ogen) exacerbates inflammatory joint disease through a mechanism linked to its $\alpha_M\beta_2$ binding motif. J Clin Invest Nov:117(11):3224-35. PMC2000806

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20. Hinze CH, Fall N, **Thornton S**, Mo JQ, Aronow BJ, Layh-Schmitt G, Griffin TA, Thompson SD, Colbert RA, Glass DN, Barnes MG, Grom AA. 2010. Immature cell populations and an erythropoiesis gene expression signature in systemic juvenile idiopathic arthritis: implications for pathogenesis. Arthritis Res Ther. Jun 4;12(3):R123. PMC2911917
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22. X. Qi, Flick, M.J., Frederick, M., Chu, Z., Mason, R. DeLay, M. **Thornton, S.** 2012. Saposin C Coupled Lipid Nanovesicles Specifically Target Arthritic Mouse Joints for Optical Imaging of Disease Severity. *PLoS ONE*;7(3):e33966.Epub 2012 Mar 28 PMC3314692
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Abstracts:

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Zheng, C.T. Esmon, D. D. Wagner, J. L. Degen. Prolonged survival following microbial infection in mice expressing the thrombin anticoagulant mutant W215A/E217A.

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24. American College of Rheumatology, Atlanta, GA, November 6-11, 2010. Ndate Fall, Malinda Frederick, Alexei A. Grom and **Sherry Thornton**. Angiopoietin-like 4 is expressed in human synovial fibroblasts and expression is increased in response to TGF-β.

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27. Society of Nuclear Medicine, San Antonio, TX, June 4-8, 2011. Kathleen LaSanc, Lisa Lemen, Zhentao Chu, Chang-Hyuk Kwon, Balveen Kaur, **Sherry Thornton**, Xiaoyang Qi. Multi-angle Rotational Optical Imaging of Brain Tumors and Arthritis Using Fluorescent SapC-DOPS Nanovesicles.

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29. XXVII Congress of the International Society for Advancement of Cytometry, Leipzig, Germany June 23-27, 2012. Monica L. DeLay, A. Nicole White, Edith Janssen, George Babcock, Christopher A. Worth and **Sherry Thornton.** Different sorts for different folks: the importance of technological diversity in a cell sorting facility.

30. Great Lakes International Imaging and Flow Cytometry Association, Buffalo, NY, September 27-29, 2012. A. Nicole White, Monica L. DeLay and **Sherry Thornton**. A networking guide for a multi-parametric community.

31. Association of Biomolecular Resource Facilities, Palm Springs, CA, March 2-6, 2013. Monica L. DeLay, A. Nicole White, Edith Janssen, George Babcock, Christopher A. Worth and **Sherry Thornton**. Comparing Dendritic Cell Function After Enrichment Using Different Fluorescence Activated Cell Sorters (FACS).

32. XXVIII Congress of the International Society for Advancement of Cytometry, San Diego, CA, May 18-22, 2013. A Nicole White, Ashley Sullivan, **Sherry Thornton** and

Stefan Pfuhler. Rapid Method for Evaluating Micronuclei Formation Using ImageStreamX.

33. Association of Biomolecular Resource Facilities, Albuquerque, NM, March 22-25, 2014. Monica L. DeLay, Andrew Rupert, A. Nicole White, Michael Wagner and **Sherry Thornton**. Evaluation of Billing and Tracking Programs Leads to a Hybrid Approach.

34. XXIX Congress of the International Society for Advancement of Cytometry, Fort Lauderdale FL, May 17-21, 2014. Monica L. DeLay, and **Sherry Thornton**. Using Surveys to Gain Feedback and Assess Core Needs.

35. XXIX Congress of the International Society for Advancement of Cytometry, Fort Lauderdale FL, May 17-21, 2014. **Sherry Thornton** and Monica DeLay. Workshop, Strategic Planning: Embracing the Business Side of SRL Management.

36. American Society for Hematology. San Francisco CA, December 6-9, 2014. **Sherry Thornton**, Harini Raghu, Alice Jone, Carolina Cruz, Cheryl L. Rewerts, Malinda D. Frederick, Jay L. Degen, and Matthew J. Flick. Mice deficient in urokinase-type plasminogen activator (uPA) or uPA receptor develop significantly diminished collagen-induced arthritis. Oral Presentation.

37. American Thoracic Society, Denver, CO, May 15-20, 2015 B. Carey, C. Chalk, A. Sallese, T Suzuki, D. Black, **S Thornton**, G. Keller, R.E. Wood, B.C. Trapnell. Early events in the natural history of autoimmune pulmonary alveolar proteinosis in non-human primates.

38 11th International Congress on Systemic Lupus Erythematosus, Vienna, Austria, September 2-6, 2015. AlEed AA, Abu-Azzah F, Gulati G, Wagner M, **Thornton S**, Fall N, Bennett M, Greis K, Wiley K, Watts A, Devarajan P, Aronow B, Brunner HI. Advanced Proteomics for Lupus Nephritis Biomarker Discovery.

39. American Association of Immunologists, New Orleans, LA, May 8-12, 2015. R. Strait and **S Thornton**. Specific variations in the protocol for the induction of collagen-induced arthritis in DBA/1 mice improve reproducibility of disease severity and incidence in an SPF facility.

40. American College of Rheumatology, November 6-11, San Francisco, CA. 2015. J. Turnier, N. Fall, A.A. Grom, **S. Thornton** and H. I. Brunner. Highly Elevated S100A8/A9 and S100A12 Levels May Distinguish Systemic Juvenile Idiopathic Arthritis Patients with New Onset Disease and Subclinical Macrophage Activation Syndrome.

41. American College of Rheumatology, November 6-11, San Francisco, CA. 2015. G. Schulert, N. Fall, N. Shen, **S. Thornton**, and A.A. Grom. Microrna-125a-5p Has Increased Expression in Active Systemic Juvenile Idiopathic Arthritis and Is an Essential Modulator of Regulatory Macrophage Phenotypes in Vitro.

42. EULAR 2016 Congress, London, June 8-11, 2016. **S. Thornton**, T. D. Do, R. Tan, A. Sproles, M. Bennett, M. Medvedovic, M. DeLay, N. Shen, A. Grom, G. Schulert. MicroRNA Associated with Active Systemic Juvenile Idiopathic Arthritis Regulate

CD163 Expression in Polarized Macrophages Through Two Distinct Mechanisms. Oral Presentation by G Schulert.

43. XXX Congress of the International Society for Advancement of Cytometry. Glasgow, Scotland, June 26-30. 2015. Rachel Tan, Alyssa Sproles, Monica DeLay, Grant Schulert, **Sherry Thornton**. CD163 mRNA detection using PrimeFlow flow cytometry detection assay: Analysis for Monocyte Pathobiology in Systemic Juvenile Idiopathic Arthritis.

44. Association of Biomolecular Resource Facilities**,** Fort Lauderdale, FL, February 20-23, 2016. M. DeLay, H. Xie, Y.Chen, **S. Thornton,** Y-H**.** Hu. Enrichment of CRISPR-mediated homologous-directed repair in mammalian cells by cell cycle-based flow sorting. Waters Award, Oral presentation.

45. XXXI Congress of the International Society for Advancement of Cytometry. Seattle, WA, June 11-15, 2016. **S. Thornton**, A. Sproles, T. Do, J. Schick, R. Tan, M. DeLay, G. Schulert. Cincinnati Children's Research Foundation, Cincinnati, OH. RNA detection of CD163 in conjunction with multiple cell surface markers to identify macrophage populations using flow cytometry.

46. 9th Annual Mentoring Conference, Developmental Networks, the Power of Coaching, University of New Mexico, Albuquerque, NM, Oct 24-28, 2016. Chennat, A., McMillen, D., Fletcher, L., Fisher, N.,Mische, S., Hockberger, L., Turpen, P., Mundoma, C. and **S. Thornton.** Expanding upon the Community of Practice in a Professional Academic Organization. Meeting paper.

47. American College of Rheumatology, Washington D.C., November 11-16, 2016. R. Tan, **S. Thornton**, A. Sproles, T. Do, J. Schick, M. DeLay and G. Schulert. Single-Cell Analysis of CD163 mRNA and Protein Expression by Primeflow™ in Polarized Monocyte and Macrophage Populations.

48. American College of Rheumatology, Washington D.C., November 11-16, 2016. Jessica Turnier, N. Fall, **S. Thornton**, A.Grom and H.I. Brunner. Evaluation of S100 Proteins as Potential Biomarkers of Global and Renal Specific Disease Activity in Childhood Onset SLE.

49. American College of Rheumatology, San Diego, CA, November 3-8, 2017. Jessica Turnier, B. Aronow, K. Greis, M. Bennett, W. Haffey**, S. Thornton**, G. Gulati, M. Wagner, D. Witte and Hermine I. Brunner. Applying Urine Proteomics for Discovery of Lupus Nephritis Damage Biomarkers in a Pediatric Cohort.

50. 24th European Paediatric Rheumatology Congress, Athens, Greece, September 14-17, 2017. G. Schulert, N. Salomonis, **S. Thornton** and A. Grom. Single Cell RNA Sequencing of Bone Marrow Macrophages Identifies a Distinct Subpopulation in Systemic JIA with Features of Interferon Response, Endocytic Vesicles and Phagocytosis.

51. American College of Rheumatology, Chicago, Illinois, October 19-24, 2018. McIntosh, L. A., Fukui, Y., Griffin, T. A., Kaufman, K., Meller, J., **Thornton, S.,** Moncrieffe, H.

and S.D. Thompson (2018). Whole Exome Trio Sequencing Implicates DOCK2 in Juvenile Idiopathic Arthritis. In *ARTHRITIS & RHEUMATOLOGY* Vol. 70.

52. American College of Rheumatology, Chicago, Illinois, October 19-24, 2018. Angeles-Han, S., Utz, V. M., **Thornton, S**., Sproles, A., Mwase, N., Hennard, T., . . . Holland, G. (2018). Comparison of the Tear Cytokine and Chemokine Profile of Children with JIA and JIA-Associated Uveitis. In *ARTHRITIS & RHEUMATOLOGY* Vol. 70

52. Association for Biomolecular Resource Facilities, San Antonio, Texas, March 23-26, 2019. Mehrnoosh Abshari, Alan Bergeron, Kathleen Brundage, Karen Clise-Dwyer, Matthew Cochran, Roxana Del Rio Guerra, Regina Harley, Laura Holmes, Nicolas Loof, E. Michael Meyer, Zachary Niziolek, Alan Saluk, **Sherry Thornton**, A Multi-Core Study on How Different Fixation Methods Prior to Sorting Impact the Purity, Quality, and Yield of RNA From Sorted Cells.

53. American College of Rheumatology, Atlanta GA, Nov, 8-13, 2019. Jackeline Rodriguez-Smith, Virginia Utz, **Sherry Thornton**, Grant S. Schulert, Adam Kauffman, Alyssa Sproles, Najima Mwase, Theresa Hennard, Alexei A. Grom, Mekibib Altaye, Gary Holland and Sheila Angeles-Han. Distinguishing S100 Proteins and Cytokine Levels Between Active and Inactive Uveitis in Children with Juvenile Idiopathic Arthritis.

54. American College of Rheumatology, Atlanta GA, Nov, 8-13, 2019. Grant Schulert, Thuy Do, Sanjeev Dhakal, Ndate Fall, Mario Medvedovic, **Sherry Thornton**, Nathan Salomonis, and Alexei Grom. Monocyte and Macrophage Transcriptional Phenotypes in Systemic Juvenile Idiopathic Arthritis Reveal TRIM8 as a Mediator of IFNγ Hyperresponsiveness and Risk for Macrophage Activation Syndrome.

55. Association for Biomolecular Resource Facilities, Palm Springs, California, February 27-March 3, 2020. Kathleen Brundage, Mehrnoosh Abshari, Dave Adams, Claudia Bispo, Sara Bowen, Matthew Cochran, Regina Harley, Christiane Hassel, Felicia Heyward, Avinash Kollipara, Nicolas Loof, Zachary Nziolek, **Sherry Thornton**. Single Cell Sorting – A Survey of Practices.

56. International Society for the Advancement of Cytometry annual meeting, CYTO, virtual, August 4-6, 2020. Celine S Lages, Sarah Croswell, Steven Wellington, **Sherry Thornton**. How Can a Core Efficiently Teach Flow Cytometry?

57. International Society for the Advancement of Cytometry annual meeting, CYTO, virtual, August 4-6, 2020. Kathleen Brundage, Mehrnoosh Abshari, Dave Adams, Claudia Bispo, Sara Bowen, Matthew Cochran, Regina Harley, Christiane Hassel, Felicia Heyward, Avinash Kollipara, Nicolas Loof, Zachary Nziolek, **Sherry Thornton**. Single Cell Sorting – A Survey of Practices.

58. American College of Rheumatology, 2020, Jackeline Rodriguez-Smith, Virginia Utz, Amy Cassedy, **Sherry Thornton**, Grant Schulert, Alyssa Sproles, Najima Mwase, Theresa Hennard, Mekibib Altaye, Alexei A. Grom, and Sheila Angeles-Han. Comparing S100 proteins and cytokine levels based on uveitis activity laterality in children with JIA-associated uveitis and non-JIA-U.

59. Ruperto, N., Schulert, G., Sproles, A., **Thornton, S**., Vega Cornejo, G., Anton, J., . . . Brunner, H. (2021). S100A8/A9 and S100A12 as potential predictive biomarkers of abatacept response in polyarticular juvenile idiopathic arthritis. In *Annals of the Rheumatic Diseases* Vol. 80 (pp. 245-246). doi:10.1136/annrheumdis-2021-eular.1081

60. Childhood Arthritis and Rheumatology Research Alliance, May 2-3, 2022. Grant Schulert, Emely Verweyen, **Sherry Thornton**, Min-Lee Chang, Mary Ellen Riordan, Alan Russell, Marc Natter, Yukiko Kimura. Establishing the CARRA Registry Research Network for SJIA-LD (CARE-NETS).

61. International Society for the Advancement of Cytometry annual meeting, CYTO, June 3-7, 2022, Ken Quayle, Celine S. Lages and **Sherry Thornton**. Determination of Optimal Settings for Detector Voltages for Resolution of a 14-color Panel on the Bigfoot Cell Sorter.

62. ACR PRYSM, New Orleans, LA, March 29-April 1, 2023, Esra Eloseily, Alex Pickering, Sanjeev Dhakal, Alexei Grom, Hermine Brunner, and **Sherry Thornton**. Gene Expression Changes in Polyarticular Juvenile Idiopathic Arthritis Following Tofacitinib Treatment.
63. ACR PRYSM, New Orleans, LA, March 29-April 1, 2023. Maccora, Ilaria, Altaye, Mekibib, Hennard, Theresa, Sproles, Alyssa, **Thornton, Sherry**, Utz, Ginny, Greis, Ken, Angeles-Han, Sheila; Potential Uveitic Biomarkers in Tears of Children with Juvenile Idiopathic Arthritis: A Pilot Study.
64. ABRF 2023, May7-10 Boston, MA. Regenia Campbell, Anitha Chennat, Kym Delventhal, Luellen Fletcher, Kevin Gerrish, Laura Lewis-Tuffin, Claudius Mundoma, Christine O'Connell, Heather Olson, Shekhar Patil, Ken Schoppman, Jianjun Shen, **Sherry Thornton**, Xinkun Wang. Compensation of Core Facility Staff and Associated Personnel in 2022: a Comprehensive Survey.
65. EULAR 2023, Milan, Italy, May 31-June 3. Esraa Eloseily, Alex Pickering, Sanjeev Dhakal, Hermine I. Brunner, Alexei Grom, and **Sherry Thornton**. Gene Expression Changes in Polyarticular Juvenile Idiopathic Arthritis following Tofacitinib Treatment.
66. International Society for the Advancement of Cytometry annual meeting, CYTO, May 20-24, 2023, Montreal, Canada, (Oral) Quayle K, Sproles A, Chidambaran V, Pilipenko V, Glynn S, Martin L, Lages CS, **Thornton S**. High-parameter cellular analysis of a clinical longitudinal study by an SRL—what the SRL, clinicians, and biostatisticians need to know and share.
67. International Society for the Advancement of Cytometry annual meeting, CYTO, May 20-24, 2023, Montreal, Canada, (Oral). Tursi A, Tilburgs T, Quayle K, **Lages CS**, **Thornton S**, Andorf S. Automated descriptive cell type naming in flow and mass cytometry.
68. Ohio River Valley Cytometry Association, August 29th, 2023, Cincinnati, OH, Noel Gibson, Alyssa Sproles, Emely Verweyen, Celine S Lages, **Sherry Thornton, PhD**, and Grant Schulert. Optimization of a high parameter flow cytometry panel to identify specific immune cell phenotypes key to the pathogenesis of Systemic Juvenile Idiopathic Arthritis.
69. International Society for the Advancement of Cytometry annual meeting, CYTO May 2nd-8th, 2024, Edinburgh, Scotland. Noel Gibson, Alyssa Sproles, Sanjeev Dhakal , Emely Verweyen, PhD, Celine S Lages, PhD, Grant Schulert, MD, PhD, **Sherry Thornton,**

PhD, Optimization of a high parameter flow cytometry panel to identify specific immune cell phenotypes key to the pathogenesis of Systemic Juvenile Idiopathic Arthritis

70. ACR Convergence, November 14-19, 2024, Washington, DC, Esraa Eloseily, Autumn Clark, Min-Lee Chang, Mary Ellen Riordan , Alan Russell, Marc Natter, Scott Canna, **Sherry Thornton**, Yukiko Kimura, Grant S Schulert, CARRA FROST Investigators, and the CARRA Registry SJIA-LD Cohort Investigators, 2024 Comparison of the Clinical Features and Biomarker Profiles of the Childhood Arthritis and Rheumatology Research Alliance (CARRA) Systemic Juvenile Idiopathic Arthritis- Associated Lung Disease (SJIA-LD) Cohort to CARRA registry SJIA Patients without Lung Disease.
71. ARVO, Seattle, Washington, 2024, Ilaria Maccora, Mekibib Altaye, Kenneth Greis, Adam Kaufman, Eniolami Dosunmu, Alexandra Duell, Michael Gray, Wendy Haffey, Preston Land, William Motley, Megan Quinlan-Waters, Arjun Sood, Alyssa Sproles, **Sherry Thornton**, Michael Yang, Sheila T. Angeles-Han, Proteomic analysis of tear fluid and aqueous humor of children with and without uveitis.
72. ACR Convergence, November 14-19, 2024, Washington, DC, Ilaria Maccora, Mariia Pavlenko, Jackeline Rodriguez-Smith, Amy Cassedy, Mekibib Altaye, Hermine Brunner, Alexandra Duell, Alexei Grom, Theresa Hennard, Virginia Miraldi Utz, Najima Mwase, Megan Quinlan-Waters, Grant Schulert, Alyssa Sproles, Jessica Shantha, Sunil K Srivastava, **Sherry Thornton**, Steven Yeh & Sheila Angeles-Han. Comparative Analysis of Tear-based S100 Proteins, Cytokines, and Chemokines Levels in Juvenile Idiopathic Arthritis Associated uveitis: Insights into Eye Laterality and Severity of Ocular Inflammation.
73. ACR Convergence, November 14-19, 2024, Washington, DC, Ilaria Maccora, Hermine Brunner, Mekibib Altaye, Alexandra Duell, Wendy Haffey, Megan Quinlan-Waters, Alyssa Sproles, **Sherry Thornton**, Virginia Miraldi Utz, Kenneth Greis & Sheila Angeles-Han. Identification of Protein Biomarkers in Tear Fluid of Children with Uveitis That Distinguishes the Ocular Inflammatory State.
74. ACR Convergence, November 14-19, 2024, Washington, DC, Minal Aundhia, Jinqi Liu2, Ellen Cody, James Rose, Angela Merritt, Megan Quinlan-Waters, Alyssa Sproles, **Sherry Thornton**, Prasad Devarajan, Bin Huang & Hermine Brunner. The Renal Activity Index for Lupus (RAIL) Identifies Active Renal Disease in SLE Patients and Its Longitudinal Score Associates with Achievement of Renal Responses in Lupus Nephritis.
75. ACR Convergence, November 14-19, 2024, Washington, DC, Mariia Pavlenko, Ilaria Maccora, Mekibib Altaye, Hermine Brunner, Alexandra Duell, Megan Quinlan-Waters, Alyssa Sproles, **Sherry Thornton**, Virginia Miraldi Utz & Sheila Angeles-Han. Tear Biomarkers for Monitoring Disease Activity and Progression of Noninfectious Chronic Anterior Uveitis in Children.
76. ACR Convergence, October 24-29, 2025, Chicago, Illinois, Haeja Kessler, Noel Gibson, Alyssa Sproles, **Sherry Thornton,** Celine Lages, Paul Dascani, and Grant Schulert. Identification Of Immune Phenotypes in Systemic Juvenile Idiopathic Arthritis Associated Lung Disease (sJIA-LD) Using High Parameter Flow Cytometry.
77. ACR Convergence, October 24-29, 2025, Chicago, Illinois, Ilaria Maccora, Mariia Pavlenko, Mekibib Altaye, Hermine Brunner, Alexandra Duell, Megan Quinlan-Waters, Alyssa Sproles, **Sherry Thornton**, Grant Schulert, Virginia Miraldi Utz, Sheila Angeles-Han. RANTES and CXCL10 as Potential Tear-Based Biomarkers Associated with Ocular Damage in Pediatric Chronic Anterior Uveitis.
78. ACR Convergence, October 24-29, 2025, Chicago, Illinois, Patricia Vega-Fernandez, Kelly Rogers, Alyssa Sproles, **Sherry Thornton**, Lexi Auld, Jackeline Rodriguez-Smith, Ekemini Ogbu, Kara Murphy Schmidt, McKenzie Vater, Katelyn Banschbach, Grant

Schulert, Alexei Grom, Sheila Angeles-Han, Hermine Brunner, Jennifer Huggins, Daniel Lovell, Amy Cassedy, Yuriy Baglaenko, Tracy Ting and Sara Szabo. Evaluation of Disease Activity in the Knee Joint Through Clinical, Radiologic, Synovial Fluid and Histopathologic Measurements of Inflammation in Children with Juvenile Idiopathic Arthritis.

8. Teaching and Mentoring:

3-5% of time teaching
5% preceptorship

Teaching:

Teaching materials:	SURF student orientation
	SURF Mentor orientation
	Immunobiology Foundation Lectures
	Autoimmunity Immunobiology students
	Scientific Writing I and II for UCCOM summer students
	Introduction to Flow Cytometry (online class)
	Spectral Cytometry Video for multi-parameter remote training
	Multi-parameter Flow Cytometry
	Imaging Cytometry
	Immunology and Flow Cytometry
	MS program curriculum for rotation through Flow Cytometry Core (adapted to remote learning)
	SURF Mentoring Program--students
	SURF Mentoring for Researchers
Teaching/lectures	
November 2002	Lecture at Ball State University and informal lecture with pre-med Biology students
April 2004	Immunohematology lecture at Cincinnati Children's Hospital
May-June 2006	Mentor workshop (1 lecture and 2 discussion sessions)
May 2006-2017	Faculty orientation for SURF program (CCHMC)
May-June 2006-2017	Student orientation for SURF program (CCHMC, 2 separate orientations offered).
2002-present	Laboratory skills to fellows and students
	Participation in summer student internship program
	Participation in biweekly Rheumatology Research Conferences
	Participation in biweekly laboratory research meetings
	Participation in biweekly Rheumatology Journal Club
Fall 2009	Advanced Topics, Immunobiology Students, fall quarter.
2009-2020	Foundations in Immunology, B-cell lectures
July 2010-2019	Scientific Writing I and II for UCCOM summer students
July 2011-2016	Rheumatology Fellows Immunology review
January 2014	MSTP journal club
November 2012	Invited Lecture at Ball State University and informal lecture with Biotechnology and Pre-med Biology students
October 2014	Invited Lecture, "Research, Shadowing, Observation and Summer Experiences." Mount Saint Joseph University, Cincinnati, OH.
March 2015	Invited lecture: "RNA detection by Flow Cytometry", ABRF, St. Louis MO.

June 2015	Invited lecture: "Analysis of CD163 mRNA for Monocyte Pathobioogy in Systemic Juvenile Idiopathic Arthritis" International Society for the Advancement of Cytometry, Glasgow, Scotland.
Fall 2015 to 2025	Biomedical Research MS Program, Instructor for Core Lab rotations, UC and CCHMC
February 2016	Invited Lecture: "Research Flow Cytometry Core: Providing Cutting Edge Technologies for Single Cell Analysis" Digestive Health Center seminar series, CCHMC, Cincinnati OH
October 2016	"ABRF Mentoring Group" Midwest Association of Core Directors Annual Meeting, Cincinnati, OH.
March 2021	Invited Participant, "Speed Mentoring" Association of Biomolecular Resource Facilities annual meeting—virtual

Mentoring:

Summer Undergraduate or High School Students

Matthew Korfhagen, SURF 2003

Michael Kazior, High School 2003, SURF 2004, MD, anesthesiologist

Neegum Patel, SURF 2005, MD

Maryann Paul, WISE 2006, MD

Penda Konate, WISE 2006, BS, research Procter &Gamble

Brian Bolinger, SURF 2007, MD

Clarissa Curioso, WISE 2008, BS, scientific research

Esther Shang, SURF 2009, BS, architect

Amanda Zofkie, SURF 2009, MD

Rachel Mason, SURF 2010 MD

Ana Brown, SURF 2011, MS, in PHD program for kinesiology

Julie Griffin, SURF 2012, MS

Leah Grinshpun, SURF 2012, MD

Aleeya Shareef, 2013, attending medical school

Nicholas Pinkerton, SURF 2014

Rachel Tan, WISE 2015, MD

Blake Simpson, SURF 2015 and 2016, post baccalaureate

Elizabeth Krekeler, SURF 2019, applying to medical school

Noel Gibson, SURF 2022 and McNair Scholar 2022-2025, undergraduate

Graduate Students:

Manuel Alvarez Jr., 2007-2009, thesis advisor, Immunobiology graduate program, MS, nurse practitioner.

Zachary Taylor, UC Pharmacology, Qualifying and PhD Thesis Committee, 2018- 2021 mentor Laura Ramsey, PhD

Ndate Fall, UC Nursing, Qualifying and PhD Thesis Committee 2021-2023.

Fellows:

Grant Schulert, MD, PhD, 2014-2016, Rheumatology Fellow, CCHMC, SOC

Jessica Turnier, MD, MS, 2015-2017, Rheumatology Fellow, CCHMC, SOC

Junior Faculty:

Xuemei Tang, MD, 2009, Assistant Professor, Visiting Professor from Shanghai

Jessica Turnier, MD, 2017-2018, Lupus Foundation Grant, Instructor, CCHMC; currently Assistant Professor, University of Michigan.

Grant Schulert, MD, PhD, 2017- 2022, KO8 mentor, Associate Professor, CCHMC.

Min Dong, PhD, 2019 – Field Service Assistant Professor, Career Development Committee.

Patricia Vega Fernandez, 2020-2025, Assistant Professor, KL2 and KL23 advisory

Rathnakumar Kumargurubaran, 2022, Assistant Professor, Director Single Cell Gene Expression Core, CCHMC, S10 advisor, general shared facility advisor

Hassan Chaib, 2024, Associate Professor, Director Genomics Shared Facility, CCHMC, Faculty Advisory Committee.

Mike Paucilio, 2025, Assistant Professor, Director Discover Together Biobank, Faculty Advisory Committee.

National Mentoring for Shared Facilities formal program through the National Research Mentoring Network (paired based on expertise):
Roxana Del Guerro, PhD, SCYM(ASCP), Flow Cytometry and Cell Sorting Facility Manager, faculty, University of Vermont College of Medicine, 2017-2018.

Laura Lewis Tuffin, PhD, Cellular Imaging and Flow Cytometry Specialist, Cell and Tissue Analysis Shared Resource Lab, Departments of Cancer Biology, Neuroscience, and Neurosurgery, Mayo Clinic, Jacksonville, Florida, 2020-2023.

9. Service and Leadership

Service:
Committee Involvement

State/Regional

2006-present	Co-chair, Summer Undergraduate Research Advisory Committee at Univ. Cincinnati College of Medicine
2008-2010	Undergraduate Research Council at Univ. of Cincinnati, member
2011-2018	Core Facilities Billing and Scheduling Software Committee, test core for software analysis, CCHMC
2012-2018, 2023	Co-chair of Executive Committee, Ohio River Valley Cytometry Association, founding member
2019-2022	Chair of Executive Steering Committee, Ohio River Valley Cytometry Association
2011-present	Organizing Committee for Imaging and Cytometry Research Day
2013	Research Tab Redesign Focus Group for CCHMC webpage
2012-2015	Organizing Committee for Shared Facilities Day, CCHMC
2014 -present	Schmidlapp Junior Scholar Committee

2014-present	Member, Institutional Biosafety Committee, CCHMC
2016-2019	Member, Radiation Safety Committee, University of Cincinnati, College of Medicine
2016-present	Member, Core Management Planning and Sustainability Advisory Committee, University of Cincinnati, College of Medicine.
2019-2025	Website Redesign Committee Member CCHMC
2021	Strategic Plan Scan, CCHMC
2022-present	Basic Science Research Committee, CCHMC, elected
2023-2024	Career Development Committee for Shared Facilities, member
2023-2026	Research Equipment Committee (capital purchases), CCHMC, appointed

National

2015-present	Invited member, Association of Biomolecular Resource Facilities, Career Development Committee
2020-present	Invited member, Cytometry Facility Steering Committee, University of Pittsburgh Medical Center

International

2014-present	Steering Committee Member, *invited*, Great Lakes International Imaging and Flow Cytometry Association (GLIIFCA)
2015-2017, 2019	Organizing Chair, GLIIFCA Roundtable Sessions
2015-2017	Invited member, International Society for the Advancement of Cytometry, Shared Resource Laboratory Education Content, CYTO U Task Force, 2018-2020 Committee Chair
2018-2020	International Society for the Advancement of Cytometry, Education Committee, invited member
2019-2025	International Society for the Advancement of Cytometry, Program Committee for annual CYTO meeting.
2020-2024	International Society for the Advancement of Cytometry, Education Committee, Chair
2025-2026	International Society for the Advancement of Cytometry, Education Committee, Co-Chair
2025-2026	International Society for the Advancement of Cytometry, CytoWomen, Invited Member
2025-2026	International Society for the Advancement of Cytometry, Governance Committee, Invited Member

<u>Professional Memberships:</u>

1998-2001	Postdoctoral Scholar's Advisory Committee, member
1998-2000	American Society for Gene Therapy, member
1998-2018	Women's Faculty Association, member
2000-2012	American Association of Immunologists, member
2009-present	Great Lakes International Flow Cytometry Association, member
2009-present	International Society for Advancement of Cytometry (ISAC), member
2013-present	Association of Biomolecular Resource Facilities (ABRF), member

<u>Professional Activities:</u>

2006-present	SURF (Summer Undergraduate Research Fellowship) Capstone Poster Event, founder, organizing committee and poster judge
2010-present	Executive Committee, Cincinnati Rheumatic Disease Core Center
2010	Arthritis Foundation Innovative Research Grants, reviewer
2014-2019	Poster Judge, Great Lakes International Imaging and Flow Cytometry Association (GLIIFCA)
2017	North Carolina Biotechnology Instrument Grant Review
2017-2025	Abstract selection and poster judging for CYTO, the annual meeting of ISAC
2017-2018	Ambassador for FASEB MARC program for ABRF
2018	NIH COBRE Study Section
2018-2024	Elected to FASEB "Excellence in Science" award review committee
2021	International Society for the Advancement of Cytometry, Strategic Planning, Chair of Education Pillar
2021	NIH P30 Diabetes Research Centers Study Section
2021-2022, 2024	NIH SBIR Study Section
2023	NIH P30 NIDDK Research Centers Study Section
2023-2026	Organizing Committee International Society for the Advancement of Cytometry annual meeting, CYTO
2024	NIH P30 Silvio O. Conte Digestive Diseases Research Core Centers Study Section

National/International Distinguished Activities:

2013	Association of Biomedical Resource Facilities meeting, Palm Springs, CA, presentation, "Comparing Dendritic Cell Function After Enrichment Using Different Fluorescence Activated Cell Sorters" presented by Monica DeLay, RFCC core manager.
2013	36th Annual Research Flow Cytometry Course, University of New Mexico, Albuquerque, New Mexico, lecture and lab, "Imaging is Believing", presented by RFCC core associate Nicole White.
2013	Great Lakes International Imaging and Cytometry Association, Detroit, MI, Core Manager and Director's meeting, invited speaker, "Bringing New Technologies Online"
2013	Great Lakes International Imaging and Cytometry Association, Detroit, MI, Leader, Roundtable Discussion, "Luminex and Flow Multiplexing"
May 2014	Invited Workshop Chair—**Strategic Planning**: Embracing the Business Side of Managing an SRL", International Society for the Advancement of Cytometry, Fort Lauderdale, FL
September 2014	Invited roundtable discussion "Imaging Flow Cytometry", Great Lakes International Imaging and Flow Cytometry Association, Oconomowac, Wisconsin
March 2015	Invited lecture: "RNA detection by Flow Cytometry", ABRF, St. Louis MO.
June 2015	Invited Workshop: "Bridging Flow Cytometry with New Technologies" International Society for the Advancement of Cytometry, Glasgow, Scotland.
December 2015	Webinar: "Bridging Flow Cytometry with New Technologies" International Society for the Advancement of Cytometry, CYTO University.

February 2017	Invited Speaker: Cell Sorting to Single Cell Transcriptomics using the Fluidigm C1" Association of Biomolecular Resource Facilities, San Diego, CA
September 2017	Invited Speaker, Core Manager's Workshop, GLIIFCA "Preparing for the Changing Landscape of Multicolor Flow: Expertise" Madison, Wisconsin.
September 2017	Session Chair "Translational and Clinical Cytometry", Great Lakes International Imaging and Flow Cytometry Association, Madison Wisconsin.
March 2018	Scientific Session Chair "Single Cell Sorting and the Bioinformatics Pathway", ABRF Myrtle Beach, South Carolina.
June 2018	Invited Speaker, CYTO 2018, "Effective Mentoring in a Shared Resource Lab Environment." Prague, Czech Republic.
September 2018	Session Chair **"**Mechanisms of Infectious Pathogens**",** Great Lakes International Imaging and Flow Cytometry Association, Cincinnati, Ohio.
September 2019	Session Chair, "Clinical and Translational Cytometry", Great Lakes International Imaging and Flow Cytometry Association, Detroit, MI
February 2020	Session Organizer and Chair, "Rigor and Reproducibility in Flow Cytometry" Association of Biomolecular Resource Facilities annual meeting, Palm Springs, CA.
March 2021	Invited Speaker: "NIH S10 Proposals: Tips for a Successful Application", Association of Biomolecular Resource Facilities annual meeting—virtual
October 2021	Invited Speaker for International Society for the Advancement of Cytometry, CYTO University webinar, "Funding for Cytometry Research Facilities: Grant tips and tricks."
September 2023	Invited Speaker: Great Lakes International Imaging and Flow Cytometry Association, Cincinnati, Ohio. "Grants, a Practical Approach."
March 2024	Invited Speaker: Grand Rounds CARRA, virtual. "Spectral cytometry panel development for analysis of cell populations in SJIA"
April 2024	Invited Roundtable Lead: Association for Biomedical Resource Facilities, Minneapolis, Minnesota, "Funding Mechanisms for Instrumentation Acquisition: Networking Breakout Session"
May 2024	Invited Speaker: CYTO International Society for the Advancement of Cytometry annual meeting, Edinburgh, Scotland. "Empowering Excellence: Building a Mentorship Program at ISAC"
September 2024	Invited Round Table Co-Lead: Great Lakes International Imaging and Flow Cytometry Association, Covington, KY. "AI in cytometry and how it may be used"
October 2024	Invited Speaker: Midwest Association of Core Directors (ABRF chapter) annual meeting, Louisville, KY. "State of the art in flow cytometry—a recent revolution in cellular analysis"
October 2024	Invited Speaker: Shared Facilities Symposium, CCHMC, Cincinnati, OH. "Analysis of arthritis pathogenesis using evolving cellular technologies"
March 2025	Invited Speaker: Association of Biomolecular Resource Facilities national meeting, Las Vegas, NV. "War for Core Talent II"

June 2025	Invited Speaker: International Society for the Advancement of Cytometry, Denver, CO. "Empowering Excellence: Building a Mentorship Program at ISAC"

Manuscripts Review:

2005-2010	Arthritis and Rheumatism, Clinical Immunology
2019	Science Reports
2024	Immunobiology

Participation in Department Recruitment Activities

2002-2023	Division of Rheumatology fellow recruitment
2011-2018	Division of Rheumatology/CAGE faculty recruitment
2012	Interviewer, Division of Infectious Disease Faculty recruitment
2013	Interviewer of MD/PhD fellowship candidates
2013	Interviewer, Biomedical Informatics Applications Specialists II for employing new shared facilities software
2015	Interviewer, Divisions of Pathology and Allergy faculty positions
2016	Interviewer, Divisions of Endocrinology, Immunobiology, Rheumatology and Experimental Hematology faculty positions
2017	Interviewer, Division of Endocrinology
2018	Interviewer, Divisions of Immunobiology, Rheumatology
2019	Interviewer, Divisions of Rheumatology, Experimental Hematology and Center for Inflammation and Tolerance
2020	Interviewer, Divisions of Rheumatology, Center for Inflammation and Tolerance and Mind, Brain, Behavior
2021	Interviewer, Divisions of Center for Inflammation and Immune Tolerance, Rheumatology, Allergy/Immunology and CBDI, CCHMC; Cancer Biology, UCCOM.
2022	Interviewer, Divisions of Rheumatology, Center for Inflammation and Immune Tolerance, CBDI, CCHMC; Hoxworth, UCCOM
2023	Interviewer, Divisions of Rheumatology, Center for Inflammation and Immune Tolerance, CBDI, Immunobiology, Asthma and Allergy, CCHMC
2024	Interviewer, Divisions of Rheumatology, Immunobiology, Center for Inflammation and Immune Tolerance, Experimental Hematology, Neonatology, Perinatal and Pulmonary Biology, and Asthma and Allergy, CCHMC
2025	Interviewer, Division of Rheumatology

Participation in Local Activities that Benefit the Institution

2002	Division of Rheumatology Retreat, headed committee for laboratory issues
2002-2004	Assistant Director, Flow Cytometry Core, Division of Rheumatology
2004-2016	Director, Integrative Cell Phenotyping and Morphology Core, Division of Rheumatology
2016- present	Director, Single Cell Phenotyping Core, Division of Rheumatology
2013	Graduate Student Forum, poster judge
2013	Faculty Diversity Advisory Committee
2013-2018	CTTST, internal grant reviewer for CCHMC and UC
2014-present	Divisional Scientific Reviewer

2014-present	Interview undergraduates for summer programs, Research Day at UC and CCHMC
October 2014	Invited Lecture, "Research, Shadowing, Observation and Summer Experiences." Mount Saint Joseph University, Cincinnati, OH
April 2015	Organized Panel Discussion: Strategies for Mentoring Undergraduate Students, CCHMC
April 2016-2018	Invited lecture: "Career Options in Biomedical Sciences" Roger Bacon High School, Cincinnati OH
May 2017-2019	Invited lecture: "Providing the best experience for your summer research student: mentoring strategies from the pros"
January 2020	Invited lecture: "Writing a shared instrumentation grant: bridging strategy between Core and PI", Cincinnati Children's Shared Facility Seminars
February 2020	Invited lecture: "Cutting edge technologies for flow cytometry analysis" Digestive Health Center seminar series, CCHMC
June, July, August 2020	Virtual program for SURF students (approximately 40 activities provided remotely for the students).
May, 2021-2025	Invited OAACD lecture: "Strategies and opportunities to give your summer student the best experience"
December 2022	ORVCA lecture "New State-of-the-Art Technology for Cytometry -- Overview of RFCC Services"
January 2024	Shared Facilities Overview Panel Discussion.
February 2025	Scientific Advisory Committee first Shared Facility review.

Leadership:

Local

2004	Assistant Director, Summer Undergraduate Research Fellowship Program Cincinnati Children's Hospital
2005-present	Director, Summer Undergraduate Research Fellowship Program, Cincinnati Children's Hospital. Place over 100 students from over 1000 applications.
2006-present	Co-chair for Summer Student Research Advisory Committee at Univ. Cincinnati College of Medicine
2008-present	Director, Research Flow Cytometry Core, CCHMC Serve 180 principal investigators at UC and CCHMC and over 500 users.

Regional

2012-2017	Co-chair of Executive Committee Ohio River Valley Cytometry Association
2018-2022	Chair of Executive Committee, Ohio River Valley Cytometry Assoc.
2023	Co-chair of Executive Committee, Ohio River Valley Cytometry Assoc.

National

2018-2020	Chair, Association of Biomolecular Resource Facilities, Flow Cytometry Research Group

International

2018-2020	Chair, International Society for the Advancement of Cytometry, Shared Resource Laboratory Education Content, CYTO U Task Force
2018	President, Great Lakes International Imaging and Flow Cytometry Association (GLIIFCA)
2019	Past-President, Great Lakes International Imaging and Flow Cytometry Association (GLIIFCA)
2020-2025	Re-appointed Chair in 2022, International Society for the Advancement of Cytometry Education Committee (directs education initiatives involving seven other committees for cytometry education curriculum)
2025-26	Co-Chair International Society for the Advancement of Cytometry Education Committee (directs education initiatives involving seven other committees for cytometry education curriculum)