

CURRICULUM VITAE

DATE: May, 2023

NAME: Mark C. Siracusa

PRESENT TITLE: Associate Professor, Chancellor Scholar
Director of the Research Support Core

OFFICE ADDRESS: Cancer Center, G1226
205 S. Orange Ave.
Newark, NJ 07103

TELEPHONE NUMBER/E-MAIL ADDRESS: p. 973-972-1265
mark.siracusa@rutgers.edu

CITIZENSHIP: USA

EDUCATION:

- A. Undergraduate
Merrimack College
N. Andover, MA
BSc (Biochemistry) *May 2000*

- B. Graduate and Professional
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD
PhD (Molecular Microbiology & Immunology) *Sept. 2008*

POSTGRADUATE TRAINING:

- A. Internship and Residencies
N/A

- B. Research Fellowships
N/A

- C. Postdoctoral Appointments
University of Pennsylvania, Perelman School of Medicine
Mucosal Immunology
Mentor, Dr. David Artis
Oct. 2008 – April 2014

MILITARY: N/A

ACADEMIC APPOINTMENTS:

Department of Medicine
Rutgers New Jersey Medical School
Associate Professor, Chancellor Scholar
Director, Research Support Core
April 2021 – present

Department of Medicine
Rutgers New Jersey Medical School
Assistant Professor, Chancellor Scholar
June 2014 – April 2021

HOSPITAL APPOINTMENTS:

N/A

OTHER EMPLOYMENT OR MAJOR VISITING APPOINTMENTS:

N/A

PRIVATE PRACTICE

N/A

LICENSURE:

N/A

DRUG LICENSURE:

N/A

CERTIFICATION:

N/A

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

American Association of Immunology, Member (Dec 2008 – present)

The Society for Mucosal Immunology, Member (Dec 2015 – present)

HONORS AND AWARDS:

The Hegner, Cort Root Honorary Fellowship (2004)

NIH T32 Training Grant (2006)

AAI Trainee Abstract Award (2013)

K22 Career Transition Award (2014)

Rutgers Biomedical and Health Sciences Chancellor Scholar (2014)

AAI Trainee Abstract Award (2014)

AAI Early Career Faculty Award (2015)

AAI Early Career Faculty Award (2016)

The New Jersey Health Foundation Excellence in Research Award (2020)

BOARDS OF DIRECTORS/TRUSTEES POSITIONS: N/A

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

NIH Human Immunology Consortium Study Section.

2016 – 2018 (AdHoc)

NHCBI Program Project Grant Study Section.

2018 (AdHoc)

NIH Innate Immunity and Inflammation (III) Study Section.

June 2019 (AdHoc)

NIH Innate Immunity and Inflammation (III) Study Section.

March 2021 (AdHoc)

NIH Innate Immunity and Inflammation (III) Study Section.

Oct. 2021 (AdHoc)

NIH Innate Immunity and Inflammation (III) Study Section.

May 2022 (Permanent member - active)

SERVICE ON MAJOR COMMITTEES:

A. International *N/A*

B. National *N/A*

C. Medical School/University

Rutgers I3D Retreat Organizing Committee (Dec 2016 – present). One of several faculty members that assists with determining the list of invitees, evaluates submitted abstracts and assists with the selection of oral presentations and posters for our bi-annual I3D Retreats.

Genomics Core Search Committee (Dec 2017). Participated in the search and evaluation of qualified candidates to fill a full-time bioinformatics position to support the cores growing needs.

Microbiology Search Committee (Dec 2017). Participated in the search and evaluation of qualified candidates to fill an assistant professor position for an ultrastructural biologist.

Flow Cytometry Oversight Committee (Dec 2017 – present). Participate as a faculty representative that evaluates the Flow Cytometry Core's performance, budget, staffing, pricing structure and equipment needs. I am also responsible for bringing faculty needs and complaints to the committee.

Admissions Committee (Nov 2017 – present). One of several faculty members that evaluate prospective students applying to Rutgers Biomedical Health and Sciences programs. Responsibilities include screening submitted applications, choosing applicants to interview, reviewing faculty evaluations of interviewed candidates and deciding those students that will be accepted.

Gnotobiotic User Committee (March 2017 – present). As a founding member of this committee I have worked closely with Rutgers Office of Research and Economic Development to establish a Gnotobiotic facility. Responsibilities include choosing and purchasing equipment, evaluation of staffing, determining workflows and standard operating procedures, establishing pricing structures and advertising to potential users.

Biomedical Advisory Committee (March 2017 – present). As a faculty member on this committee we work closely with Rutgers Office of Research and Economic Development and Animal Use and Care Committee to evaluate the operations of all Rutgers vivariums. Responsibilities include evaluating budgets, staffing, subsidy rates, per diem rates and establishing standard operating procedures for all vivariums. I am also responsible for bringing faculty needs and complaints to the committee.

Rutgers Medical Science Building Renovation Committee (March 2017 – present).). As a voting member of this committee I was responsible for evaluating the plans of various architecture firms in response to the Request for Proposal for the \$200M renovation of Rutgers Medical Science Building (MSB). I also attend bi-weekly meetings to evaluate and give input on floor plans, the feasibility of construction and how it will affect faculty and on-going research and provide input on how improvements to the building must reflect Rutgers commitment to academic and research excellence.

Genomics Core Oversight Committee (Dec 2018 – present). Participate as a faculty representative that evaluates the Genomics Core's performance, budget, staffing, pricing structure and equipment needs. I am also responsible for bringing faculty needs and complaints to the committee.

COVID-19 Research Alliance Steering Committee (April 2020 – present). The responsibilities of this steering committee are to assist with the distribution of resources and aligning collaborators at Rutgers to more efficiently advance COVID-19-related research.

COVID-19 Animal Model Subcommittee (April 2020-present). The responsibilities of this steering committee were to assist with the design and development of novel murine model systems to study COVID-19. Once these mouse models are available, committee members will evaluate faculty requests, coordinate the distribution of mice and determine a pricing structure for these services.

MaGIC Advisory Committee (May 2022-present). The responsibilities of this committee were to assist with establishment and growth of a Bioinformatic Core at NJMS. This includes determining services, pricing, advertising, and the hiring of staff.

Chair of Faculty Search Committee (April 2022 – present). One of several faculty members that evaluate prospective faculty members applying to the CII. Responsibilities include screening submitted applications, choosing applicants to interview, hosting candidates during their visit, reviewing evaluations and conducting a committee vote.

MD/PhD Admissions Committee (April 2023 – present). One of several faculty members that evaluate prospective MD/PhD students applying to NJMS. Responsibilities include screening submitted applications, choosing applicants to interview, reviewing faculty evaluations of interviewed candidates and deciding those students that will be accepted.

- D. Hospital (N/A)
- E. Department (N/A)
- F. Editorial Boards (N/A)
Guest Editor (Frontiers in Immunology, 2019-present)
Guest Editor (eLife, 2022-present)
- G. AdHoc Reviewer
(Nature Medicine, 2016-present)
(PLOS Pathogens, 2016-present)
(PLOS One, 2016-present)
(Journal of Immunology, 2016-present)
(Journal of Food and Chemical Toxicology, 2016-present)
(Mucosal Immunology, 2017-present)
(Frontiers in Immunology, 2019-present)
(Science Immunology, 2019-present)
(Clinical and Experimental Immunology, 2020-present)
(eLife, 2022-present)
(EMBO, 2022-present)

SERVICE ON GRADUATE SCHOOL COMMITTEES:

Admissions Committee (Nov 2017 – present)

SERVICE ON HOSPITAL COMMITTEES: N/A

SERVICE TO THE COMMUNITY: N/A

SPONSORSHIP (Primary Mentorship) OF CANDIDATES FOR POSTGRADUATE DEGREE:

Everett Henry, PhD – graduated 2019
Chandler Sy, MD/PhD – graduated 2019
Juan Manuel Inclan Rico, PhD – graduated 2020
Emily Baron (MSc candidate)
Christina Hernandez (PhD – graduated 2022)
John Ponessa (PhD candidate)
Hannah Federman (PhD candidate)
Krupa Chavan (PhD candidate)
Arman Sawhney (MD/PhD candidate)

SPONSORSHIP (Primary Mentorship) OF POSTDOCTORAL FELLOWS:

Jianya Peng (Postdoc) 2019-present

TEACHING RESPONSIBILITIES:

Lectures or Course Directorships

*University of Pennsylvania, School of Veterinary Medicine, Microbiology, Virology
Parasitology, 1.5 hour discussion groups. (2010-2014)*

University of Pennsylvania, School of Veterinary Medicine, Immunology, Mucosal Immunology 1 hour lecture. (2013-2014)
NJMS, Advanced Concepts in Infection, Immunity and Inflammation, 2 hour lecture. (2014-present)
NJMS, Critical Readings, in Infection, Immunity and Inflammation, (3) 1.5 hour discussion groups. (2014-present)
NJMS, Infections and Host Response, Tolerance and Autoimmunity, 1 hour lecture. (2015-present)
Woods Hole Biology of Parasitism Course, Protective immunity to helminth parasites, 3 hours of lectures and 1 day of lab mentoring. (2017)
University of Pennsylvania, School of Veterinary Medicine, Type 2 Immunity, Parasitology, 1 hour guest lecture (2020-present)

Research Training (other than Primary Mentorship)

Grand Rounds:

Department of Medicine (2016)
Allergy and Immunology (2016)
Allergy and Immunology (2018)
Allergy and Immunology (2019)
Allergy and Immunology (2021)
Department of Medicine (2022)

Rutgers Pre-Doctoral Students:

Sai Zhang, thesis committee (2014-2018)
Constance McElrath, thesis committee (2015-2019)
Orchi Dutta, thesis committee (2016-2018)
Jorge Masso, thesis committee (2016-2018)
Mark Palma, thesis committee (2016-2018)
Luo Jia, thesis committee (2017-2021)
Jianya Peng, thesis committee (2017-2020)
Hsiang Chi Tseng, thesis committee (2018-2020)
Katherine Lothstein, thesis committee (2018-2022)
Eliezer Rovira-Diaz (2019-2022)
Jihad El-Fenej (2020-present)
Samantha Avina (2020-present)
Gina Sanchez (2022-present),
Lianhua Jin (2022-present),
JoJo Reyes (2023-present)
Sweth Kodall (2023-present).

External Pre-Doctoral Students:

Montclair State University, Tamara Kreiss, thesis committee (2019-2022)

Masters Students:

Kayla Baker, thesis host lab (2017)
Mariham Wassef, thesis host lab (2018)
Khadija Bano, lab rotation (2023)

Rutgers Summer Research Program (RBHS):

Janmejay Hingu, mentor (2016)
Dev Ardeshta, mentor (2017)
Roberto Berrios-Rivera, mentor (2018)
Alex Rodriguez, mentor (2018)
Alyssa Giambrone (2022)
Ryan Martinez (2023)

Rutgers undergraduate summer research:

Lauren Kim (2019)

New Jersey Highschool summer interns:

Laren Kim (2016)

Lauren Aslami (2017)

Tyler Man (2017)

Lauren Kim (2017)

CLINICAL RESPONSIBILITIES: N/A

GRANT SUPPORT: (Please list newest or most current first)

A. Principal Investigator (Active)

1. NIH, RO1, 1R01AI151599, (Siracusa contact PI, Artis Co-PI), Neuropeptide-mediated regulation of antihelminth immunity (9/17/2020-8/31/2025), \$260,000/year
2. NIH R21 (PI, Siracusa) New innovations: advancing mast cell biology (6/1/2022-5/31/2024), \$150,000/year one
3. NIH R43 (PI, Siracusa) Developing novel therapeutics for the treatment of mastocytosis (6/1/2022-5/31/2023), \$270,000

B. Co-Investigator

N/A

C. Pending

D.

1. NIH RO1AI181080, (Siracusa contact PI, Gause Co-PI) Dissecting the differential effects of macrophage subtypes on antihelminth immunity. (Resubmitted, previously scored 14th percentile).
2. NIH RO1AI180644 (PI, Siracusa) Car4 regulates M2 macrophage responses and host protection to helminths. (Resubmitted, previously scored 22nd percentile).
3. NIH, RO1AI175637 (Siracusa contact), Protective and pathologic functions of macrophages induced by helminths (Being resubmitted, previously scored 40th percentile).

PUBLICATIONS:

A. Refereed Original Article in Journal (Reverse Chronological)

Publications:

1. Peng J, Sy CB, Ponessa JJ, Lemenze AD, Hernandez CM, Inclan-Rico JM, Sawhney A, Federman HG, Chavan K, Espinosa V, Kottenko SV, Rivera A, **Siracusa MC**. Monocytes maintain central nervous system homeostasis following helminth-induced inflammation. *PNAS*. 2022 Sep 13;119(37). (PMID 36070344)
2. Doke T, Aldridge DL, Yang Y, Park J, Hernandez CM, Amin A, Balzer MS, Shrestha R, Coppock G, Inclan Rico JM, Han SY, Kim J, Xin S, Piliponsky AM, Angelozzi M, Lefebvre V, **Siracusa MC**, Hunter CA, Susztak K. Single cell analysis identifies the key role of basophils orchestrating Th17 immunity and kidney fibrosis. *Nature Immunology*. 2022 Jun;23(6):947-959. doi: 10.1038/s41590-022-01200-7. Epub 2022 May 12. PubMed PMID: 35552540.
3. Chen F, El-Naccache DW, Ponessa JJ, Lemense A, Espinosa V, Wu W, Lothstein K, Jin L, Antao O, Weinstein JS, Damani-Yokota P, Khanna K, Murray PJ, Rivera A, **Siracusa MC***, Gause WC* Lung macrophages mediate helminth resistance through

differential activation of recruited monocyte-derived alveolar macrophages and arginine depletion. *Cell Reports* 2022 Jan 11;38(2):110215.doi: 10.1016/j.celrep.2021.110215.

***Co-corresponding authors.**

4. Chang C, Wang J, Zhao Y, Liu J, Yang X, Yue X, Wang H, Zhou F, Inclan-Rico J, Ponessa J, Xie P, Zhang L, Siracusa MC, Feng Z, and Hu W. Tumor suppressor p53 regulates intestinal type 2 immunity. *Nature Communications*. 2021 Jun 7;12(1):3371. (PMID 34099671)

5. Inclan-Rico JM, Ponessa JP, Valero-Pacheco N, Hernandez CM, Sy CB, Lemenze AD, Beaulieu AM and **Siracusa MC**. Basophils prime group 2 innate lymphoid cells for neuropeptide-mediated inhibition. *Nature Immunology*. 2020 Oct; 21(10):1181-1193. (PMID 32807942)

6. Inclan-Rico JM, Hernandez CM, Henry EK, Federman HG, Sy CB, Ponessa JP, Lemenze AD, Joseph N, Soteropoulos P, Beaulieu AM, Yap GS and **Siracusa MC**. Trichinella Spiralis-Induced Mastocytosis and Erythropoiesis Are Simultaneously Supported by a Bipotent Mast Cell/Erythrocyte Precursor Cell. *PLOS Pathog*. 2020 May 18;16(5):e1008579. (PMID 32421753)

7. Shan M, Carrillo J, Yeste A, Gutzeit C, Segura-Garzón D, Walland AC, Pybus M, Grasset EK, Yeiser JR, Matthews DB, van de Veen W, Comerma L, He B, Boonpiyathad T, Lee H, Blanco J, Osborne LC, **Siracusa MC**, Akdis M, Artis D, Mehandru S, Sampson HA, Berin MC, Chen K, Cerutti A. Secreted IgD Amplifies Humoral T Helper 2 Cell Responses by Binding Basophils via Galectin-9 and CD44. *Immunity*. 2018 Oct 16;49(4):709-724.e8. (PMID 30291028)

8. Leichner TM, Satake A, Harrison VS, Tanaka Y, Archambault AS, Kim BS, **Siracusa MC**, Leonard WJ, Naji A, Artis D, Kambayashi T. Skin-derived TSLP systemically expands regulatory T cells. *Journal of Autoimmunity*. 2017 May;79:39-52. (PMID 28126203)

9. Henry EK, Sy CB, Inclan-Rico JM, Channy SS, Dwyer DF, Soteropoulos P, Rivera A, **Siracusa MC**. Carbonic anhydrase enzymes regulate mast cell-mediated inflammation. *Journal of Experimental Medicine*. 2016 Aug 22; 213(9):1663-73. (PMID 27526715)

10. Gravitt PE, Marks M, Kosek M, Huang C, Cabrera L, Olortegui MP, Mejia Medrano A, Trigo DR, Qureshi S, Bardales GS, Manrique-Hinojosa J, Cardenas AZ, Larraondo MA, Cok J, Qeadan F, **Siracusa MC**, Gilman RH.

Soil transmitted helminth infections are associated with an increase in human papillomavirus prevalence and a Th2 cytokine signature in cervical fluids. *The Journal of Infectious Diseases*. 2016 Mar 1;213(5):723-30. (PMID 26486638)

11. Rak GD, Osborne LC, **Siracusa MC**, Kim BS, Wang K, Bayat A, **Artis D**, Volk SW. IL-33-Dependent Group 2 Innate Lymphoid Cells Promote Cutaneous Wound Healing. *Journal of Investigative Dermatology*. 2016 Feb;136(2):487-96. (PMID: 26802241)

12. Giacomini PR, Moy RH, Noti M, Osborne LC, **Siracusa MC**, Alenghat T, Liu B, McCorkell KA, Troy AE, Rak GD, Hu Y, May MJ, Ma HL, Fouser LA, Sonnenberg GF, **Artis D**. Epithelial-intrinsic IKK α expression regulates group 3 innate lymphoid cell responses and antibacterial immunity. *Journal of Experimental Medicine*. 2015 Sep 21;212(10):1513-28. (PMID 26371187)

13. Kim BS, Wang K, **Siracusa MC**, Saenz SA, Brestoff JR, Monticelli LA, Noti M, Tait Wojno ED, Fung TC, Kubo M, and Artis D. Basophils promote innate lymphoid

cell responses in inflamed skin. *Journal of Immunology*. 2014 Oct 1;193(7);3717-25. (PMID 25156365)

14. Berg MG, Adams RJ, Gambhira R, **Siracusa MC**, Scott AL, Roden RB, and Ketner G. Immune responses in macaques to a prototype recombinant adenovirus live oral human papillomavirus 16 vaccine. *Clinical Vaccine Immunology*. 2014 Sep; 21(9):1224-31. (PMID 24990902)

15. Osborne LC, Monticelli LA, Nice TJ, Sutherland TE, **Siracusa MC**, Hepworth MR, Tomov VT, Kobuley D, Tran SV, Bittinger K, Bailey AG, Laughlin AL, Boucher JL, Wherry EJ, Bushman FD, Allen JE, Virgin HW, and Artis D. Virus-helminth coinfection reveals a microbiota-independent mechanism of immunomodulation. *Science*. 2014 Aug 1; 345(6196):578-82. (PMID 25082704)

16. **Siracusa MC**, Hill DA, Ruymann KR, Tait Wojno ED, Artis D, and Spergel JM. Omalizumab therapy is associated with reduced circulating basophil populations in asthmatic children. *Allergy*. 2014 May; 69(5):674-7. (PMID 24611974)

17. Noti M, Kim BS, **Siracusa MC**, Rak GD, Kubo M, Moghaddam AE, Sattentau QA, Comeau MR, Spergel JM, and Artis D. Exposure to food allergens through inflamed skin promotes intestinal food allergy through the thymic stromal lymphopoietin-basophil axis. *Journal of Allergy and Clinical Immunology*. 2014 May; 133(5):1390-9. (PMID: 245604412)

18. **Siracusa MC**, Saenz SA, Tait Wojno ED, Kim BS, Osborne LC, Ziegler C, Benitez AJ, Ruymann KR, Farber DL, Sleiman PM, Hakonarson H, Cianferoni A, Wang ML, Spergel JM, Comeau MR, and Artis D. TSLP-mediated extramedullary hematopoiesis promotes allergic inflammation. *Immunity*. 2013 Dec 12; 39(6):1158-70. (PMID 24332033)

19. Saenz SA, **Siracusa MC**, Monticelli LA, Ziegler CGK, Wherry EJ, Goldrath AW, Bhandoola A, and Artis D. IL-25 simultaneously elicits distinct populations of innate lymphoid cells and multi-potent progenitor type 2 (MPP^{type2}) cells. *Journal of Experimental Medicine*. 2013 Aug 26; 210(9): 1823-37. (PMID 23960191)

20. Noti M, Tait Wojno ED, Kim BS, **Siracusa MC**, Giacomini PR, Nair MG, Benitez AJ, Ruymann KR, Muir AB, Hill DA, Chikwava KR, Moghaddam AE, Sattentau QJ, Alex A, Zhou C, Yearley JH, Menard-Katcher P, Kubo M, Obata-Ninomiya K, Karasuyama H, Comeau MR, Brown-Whitehorn T, de Waal Malefyt R, Sleiman PM, Hakonarson H, Cianferoni A, Falk GW, Wang ML, Spergel JM, and Artis D. Thymic stromal lymphopoietin-elicited basophil responses promote eosinophilic esophagitis. *Nature Medicine*. 2013 Aug; 19(8):1005-13. (PMID: 23872715)

21. Kim BS, **Siracusa MC**, Saenz SA, Noti M, Monticelli LA, Sonnenberg GF, Hepworth MR, Van Voorhees AS, Comeau MR, and Artis D. TSLP elicits IL-33-independent innate lymphoid cell responses to promote skin inflammation. *Science Translational Medicine*. 2013 Jan 30; 5(170):170ra16. (PMID: 23363980)

22. Giacomini PR, **Siracusa MC**, Walsh KP, Grecis RK, Kubo M, Comeau MR, and Artis D. Thymic stromal lymphopoietin-dependent basophils promote Th2 cytokine responses following intestinal helminth infection. *Journal of Immunology*. 2012 Nov 1; 189(9):4371-8. (PMID: 23024277)

23. Hill DA, **Siracusa MC**, Abt MC, Kim BS, Kobuley D, Kubo M, Kambayashi T, LaRosa DF, Renner ED, Orange JS, Bushman FD, and Artis D. Commensal bacterial-

derived signals limit innate immune mechanisms of allergen-induced TH2 cell development. *Nature Medicine*. 2012 Mar 25; 18(4):538-46. (PMID: 22447074)

24. **Siracusa MC**, Saenz SA, Hill DA, Kim BS, Headley MB, Doering TA, Wherry EJ, Jessup HK, Siegel LA, Kambayashi T, Dudek EC, Kubo M, Cianferoni A, Spergel JM, Ziegel SF, Comeau MR, and Artis D. TSLP promotes interleukin-3-independent basophil haematopoiesis and type 2 inflammation. *Nature*. 2011 Aug 14; 477(7363):229-33. (PMID: 21841801)

25. Saenz SA, **Siracusa MC**, Perrigoue JG, Spencer SP, Urban Jr. JF, Tocker JE, Budelsky AL, Kleinschek MA, Kastelein RA, Kambayashi T, Bhandoola A, and Artis D. IL25 elicits a multipotent progenitor cell population that promotes T(H)2 cytokine responses. *Nature*. 2010 Nov; 31(11):407-13. (PMID: 20200520)

26. Perrigoue JG, Saenz SA, **Siracusa MC**, Allenspach EJ, Taylor BC, Giacomini PR, Nair MG, Du Y, Zaph C, van Rooijen N, Comeau MR, Pearce EJ, Laufer TM, and Artis D. MHC class II-dependent basophil-CD4+ T cell interactions promote T(H)2 cytokine-dependent immunity. *Nature Immunology*. 2009 Jul; 10(7):697-705. (PMID: 19465906)

27. **Siracusa MC**, Reece JJ, Urban Jr. JF, and Scott AL. Dynamics of Alveolar Macrophage Activation in Response to Helminth Infection. *Journal of Leukocyte Biology*. 2008 Dec; 84(6):1422-33. (PMID: 18719016)

28. Reece JJ, **Siracusa MC**, Southard TL, Brayton CF, Urban Jr. JF, and Scott AL. Hookworm-Induced Persistent Changes to the Immunological Environment of the Lung. *Infection and Immunity*. 2008 Aug; 76(8):3511-24. (PMID: 18505812)

29. **Siracusa MC**, Overstreet MG, Housseau F, Scott AL, and Klein SL. 17 β -Estradiol Alters the Activity of Conventional and IFN-Producing Killer Dendritic Cells. *The Journal of Immunology*. 2008 Feb 1; 180(3):1423-1431. (PMID: 18209037)

30. Berg M, Gambhira R, **Siracusa MC**, Hoiczky E, Roden R, and Ketner G. HPV16 L1 capsid protein expressed from viable adenovirus recombinants elicit neutralizing antibody in mice. *Vaccine*. 2007 Apr 30; 25(17):3501-10. (PMID: 16914239)

31. Reece JJ, **Siracusa MC**, and Scott AL. Innate Immune Responses to Lung-Stage Helminth Infection Induce Alternatively Activated Alveolar Macrophages. *Infection and Immunity*. 2006 Sept; 74(9):4970-81. (PMID: 16926388)

32. Foote LC, Cifuni JM, **Siracusa MC**, Monteforte GM, McCole JL, D'Orazio CC, Hastings WD, and Rothstein TL. Interleukin-4 produces a breakdown of tolerance in vivo with autoantibody formation and tissue damage. *Autoimmunity*. 2004 Dec; 37(8):569-77. (PMID: 15763919)

B. Books, Monographs and Chapters (Reverse Chronological)

1. **Siracusa MC** and Gause WC. Immunity to Parasitic Worms John Wiley and Sons, Inc. eLS 1-8. 2016

2. **Siracusa MC** and Artis D. Basophils, mast cells and eosinophils. *Principles in Mucosal Immunology*. (Eds. Smith PD, MacDonald TT, Blumberg RS). London: Garland Science. 2012

C. Patents Held

1. Carbonic anhydrase enzymes for regulating mast cell hematopoiesis and type inflammation (granted, May 2020).

2. Neuromedin B negatively regulates type 2 cytokine-mediated inflammation (provisional patent submitted).
3. Novel Carbonic anhydrase inhibitor for the inhibition of mast cell-mediated Inflammation (provisional patent submitted).
4. Carbonic anhydrase 4 as a target for the treatment of lung fibrosis and emphysema (provisional patent submitted)

* Secured a \$1M commercialization grant as the founder and president of NemaGen Discoveries to advance the IP generated at Rutgers by the Foundation Venture Capital Group. NemaGen Discoveries has exclusively license Dr. Siracusa's technologies generated at Rutgers that identified Carbonic anhydrase 1 as a novel target to treat mast cell-mediated inflammation. These funds will support NemaGen's initial FDA application to employ novel carbonic anhydrase inhibitors to treat mastocytosis and severe allergic inflammation.

D. Other Articles (Reviews, Editorials, etc.) In Journals; Chapters; Books; other Professional Communications (Reverse Chronological)

1. Peng J, **Siracusa MC**. Basophils in antihelminth immunity. *Semin Immunol*. 2021 Mar;53:101529.doi: 10.1016/j.smim.2021.101529. (PMID: 34815162)
2. Inclan-Rico JM, Ponessa JJ, **Siracusa MC**. Contributions of innate lymphocytes to allergic responses. *Curr Opin Allergy Clin Immunol*. 2019 Apr;19(2):175-184. (PMID: 30672750)
3. Inclan-Rico JM, **Siracusa MC**. *First Responders: Innate Immunity to Helminths. Trends Parasitol*. 2018 Oct;34(10):861-880. doi: 10.1016/j.pt.2018.08.007. Epub 2018 Aug 31. (PMID: 30177466)
4. Henry EK, Inclan-Rico JM, **Siracusa MC**. Type 2 cytokine responses: regulating immunity to helminth parasites and allergic inflammation. *Current Pharmacologic Reports*. 2017 Dec;3(6)346:359. (PMID 29399438)
5. Sy CB, **Siracusa MC**. The Therapeutic Potential of Targeting Cytokine Alarmins to Treat Allergic Airway Inflammation. *Frontiers in Physiology*. 2016 Jun 14;7:214. (PMID 27378934)
6. Rivera A, **Siracusa MC**, Yap GS, and Gause WC. Innate cell communication kick-starts pathogen-specific Immunity. *Nature Immunology*. 2016 Mar 22;17(4):356-63 (PMID 27002843)
7. Hui CC, McNagny KM, Denburg JA, and **Siracusa MC**. In situ hematopoiesis: a regulator of TH2 cytokine-mediated immunity and inflammation at mucosal surfaces. *Mucosal Immunology*. 2015 Mar 18. (PMID 25783967)
8. **Siracusa MC**, Kim BS, and Artis D. Basophils and allergic inflammation. *Journal of Allergy and Clinical Immunology*. 2013 Oct; 132(4):789-801. (PMID: 24075190)
9. **Siracusa MC**, Tait Wojno ED, and Artis D. Functional heterogeneity in the basophil cell lineage. *Advances in Immunology*. 2012; 115:141-59. (PMID: 22608258)
10. **Siracusa MC**, Comeau MR, and Artis D. New insights into basophil biology: initiators, regulators, and effectors of type 2 inflammation. *Annals of the NY Academy of Sciences*. 2011 Jan; 1217:166-77. (PMID: 21276006)

11. **Siracusa MC** and Artis D. Basophil Functions During Type 2 Inflammation: Initiators, Regulators and Effectors. *The Open Allergy Journal*. 2010; 3:46-51.

12. **Siracusa MC**, Perrigoue JG, Comeau MR, and Artis D. New paradigms in basophil development, regulation and function. *Immunology and Cell Biology*. 2010 Mar-Apr; 88(3):275-84. (PMID: 20125116)

E. Abstracts

1. Sima J. Patel, Shreya N. Patel, Chandler B. Sy, **Mark C. Siracusa**, and Alan H. Wolff. Does Carrying a Rescue Inhaler Correlate With Better Asthma Control? (Abstract) *The Journal of Asthma and Clinical Immunology*. 2017 Feb; volume 139, Issue 2, Supplement, pg. AB55

F. Reports
N/A

PRESENTATIONS:

1. *Advancing Therapies to treat mast cell-related and chronic inflammatory disorders.* Brigham and Women's Hospital Mastocytosis Meeting (Invited speaker), Boston, MA USA (April 2023).

2. *Advancing Therapies to treat mast cell-mediated inflammation.* New Jersey Medical School Department of Medicine Grand Rounds, Newark, NJ USA (Dec 2022).

3. *Neuroimmune interactions are crucial for regulating immunity and inflammation.* Molecular and Cellular Biology of Helminths IX meeting. (Invited speaker), Hydra, Greece (September 2022).

4. *Bystander effects of helminths on immunity to viruses and bacteria.* NIH USJCMSP Research Approaches to Emerging Pathogens and Diseases of Global Health Concern. (Invited speaker), Manchester, UK. (March 2022). *virtual seminar (COVID-19)

5. *Neuropeptides: regulators of helminth-induced inflammation.* University of Manchester Immunology Seminar Series. (Invited speaker), Manchester, UK. (May 2021). *virtual seminar (COVID-19)

6. *Neuropeptides: regulators of helminth-induced inflammation.* University of Edinburgh. (Invited speaker), Edinburgh, UK (Sept. 2020). * virtual seminar (COVID-19)

7. *Type 2 immunity: protecting the barrier.* Molecular and Cellular Biology of Helminths IX meeting. (Invited speaker), Hydra, Greece (September 2020). *Canceled as a result of COVID-19

8. *New approaches to combating food allergy.* Division of Allergy and Immunology, Northwestern Feinberg School of Medicine. (Invited speaker), Chicago, IL (February 2020).

9. *Type 2 immunity: protecting the barrier.* Perelman School of Medicine, University of Pennsylvania. (Invited speaker), Philadelphia, PA (January 2020).

10. *Host protective responses to helminths are supported by dual mast cell/erythrocyte precursors.* Keystone meeting, Helminths: New Insights from Immunity to Global Health. (Oral presentation), Cape town, South Africa (Dec 2019).

11. *Regulation of immunity and inflammation at mucosal sites.*
Center for Host-Parasite Interaction, McGill University. (Invited speaker), Montreal, Canada (November 2019).
6. *Analysis of metabolic enzyme expression reveals the presence of a mast cell/erythrocyte precursor cell.* The New Jersey Health Foundation. (Invited speaker).
Princeton, NJ (March 2019).
12. *Developing novel strategies to treat mast cell-mediated inflammation.*
Division of Allergy and Immunology, Northwestern Feinberg School of Medicine. (Invited speaker), Chicago, IL (August 2019).
13. *Neuropeptides: regulators of immunity and inflammation.*
Office of Research and Economic Development, Rutgers University. (Invited speaker), Piscataway, NJ (May 2018).
14. *Infiltrating monocytes promote host survival by preventing helminth-induced brain inflammation.* Annual Woods Hole Immunoparasitology Meeting. (Oral presentation), Woods Hole, MA (April 2018).
15. *Targeting Carbonic anhydrase enzymes to treat allergic inflammation.*
The New Jersey Health Foundation. (Invited speaker), New Brunswick, NJ (May 2018).
16. *Targeting mast cell development as a novel approach to combat allergic inflammation.*
The New Jersey Health Foundation. (Invited speaker), New Brunswick, NJ (August 2017).
17. *Regulation of immunity and inflammation at mucosal sites.*
Division of Allergy and Immunology, Northwestern Feinberg School of Medicine. (Invited speaker), Chicago, IL (April 2017).
18. *Developing novel strategies to treat mast cell-mediated inflammation.*
Microbiology and Immunology, The University of British Columbia. (Invited speaker), Vancouver, Canada (April 2017).
19. *Regulation of immunity and inflammation at mucosal sites.*
Chemistry and Biochemistry, Montclair State University. (Invited speaker), Montclair, NJ (October 2016).
20. *Regulation of immunity and inflammation at mucosal sites.*
The Child Health Institute of New Jersey, Robert Wood Johnson University Hospital. (Invited speaker), New Brunswick, NJ (October 2015).
21. *In situ hematopoiesis-derived mast cells promote protective immunity to Trichinella spiralis.*
Molecular and Cellular Biology of Helminths IX meeting, (Oral presentation), Hydra, Greece (September 2015).
22. *Developing New Strategies to treat mast cell-mediated inflammation.*
The New Jersey Health Foundation. (Invited speaker), New Brunswick, NJ (August 2015).
23. *The Center for Immunity and Inflammation.*
The New RBHS: A new level of excellence for Biomedicine in New Jersey, (Invited speaker) Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ (May 2015).
24. *Regulation of immunity and inflammation at mucosal sites.*

Johns Hopkins Bloomberg School of Public Health. (Invited speaker), Baltimore, MD (April 2015).

25. *Regulation of immunity and inflammation at mucosal sites.*

McMaster University, Michael G. DeGroot School of Medicine. (Invited speaker), Hamilton, Canada (April 2015).

A. Professional (*Clinical*): N/A