

**University of California San Francisco
CURRICULUM VITAE**

Prepared: 3/25/2025

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EDUCATION:

8/2001-5/2005	University of Pennsylvania, Philadelphia, PA	B.A.S.	Cum Laude, Bioengineering
7/2006-5/2014	University of Virginia Medical School	M.D.	
7/2008-9/2012	University of Virginia	Ph.D.	Immunology
7/2014-6/2016	University of California, San Francisco	Resident	Pathology
7/2016-6/2017	University of California, San Francisco	Fellow	Surgical Pathology
5/2017	Cleveland Clinic Medical Foundation	Visiting Fellow	Soft Tissue Pathology
7/2017-6/2019	University of California, San Francisco	Fellow	Dermatopathology
9/2018-8/2024	University of California, San Francisco	Postdoc	Immunology

LICENSES, CERTIFICATION:

2016	Medical Licensure, California
2017	Board Certification, Pathology
2018	Board Certification, Dermatopathology

HONORS AND AWARDS:

2005	Cum Laude, University of Pennsylvania
2008	Pathology Skeleton Award, University of Virginia School of Medicine
2008	Microbiology Award, University of Virginia School of Medicine
2009	Best Poster, University of Virginia Medical Student Research Symposium
2010	Travel Scholarship, Tolerance and Autoimmunity Meeting, Keystone Symposia
2010	Best Poster, UVA Medical Scientist Training Program Annual Retreat
2012	Trainee Abstract Award, American Association of Immunologists
2012	Life Technologies Trainee Achievement Award, American Association of Immunologists
2014	Poetry Grand Prize Winner, Health System Blog, University of Virginia
2016	Best Oral Presentation Physician-In-Training Award, American Society of Dermatopathology
2017	Surgical Pathology Unknown Cases of the Week Winner, UCSF Pathology
2018	Surgical Pathology Unknown Cases of the Week Winner, UCSF Pathology

KEYWORDS/AREAS OF INTEREST:

Immunology, cancer, pathology, dermatopathology, soft tissue pathology, alopecia, inflammatory skin disease.

PROFESSIONAL ACTIVITIES

CLINICAL

Resident, Anatomic Pathology, UCSF: From 7/2014-6/2016, I completed rotations in surgical pathology, cytopathology, dermatopathology, and molecular pathology at UCSF Parnassus, Mission Bay, and Mount Zion campuses, as well as the San Francisco General Hospital and the San Francisco VA Medical Center.

Fellow, Surgical Pathology, UCSF: From 7/2016-6/2017, I completed rotations in surgical pathology and at UCSF Parnassus and Mission Bay campuses.

Fellow, Dermatopathology, UCSF: From 7/2017-6/2019, I have completed clinical dermatology rotations at the UCSF Mount Zion campus and Zuckerberg San Francisco General Hospital.

Clinical Instructor, UCSF: From 7/2019-8/2024, I analyzed and interpreted routine histology slides, special stains, and immunohistochemistry to sign out dermatopathology cases at the UCSF Mount Zion campus and Zuckerberg San Francisco General Hospital.

Assistant Professor, UCSF: From 9/2024-present, I analyze and interpret routine histology slides, special stains, and immunohistochemistry to sign out dermatopathology cases at the UCSF Mount Zion campus.

SUMMARY OF CLINICAL ACTIVITIES

During my anatomic pathology residency, my clinical activities consisted of grossing resection, excision, and biopsy surgical specimens, previewing histology slides, and writing up cases under the guidance of attending physicians. During my surgical pathology and dermatopathology fellowship, I had autonomy to interpret frozen section slides for surgical cases as well as donor organ assessment. During my dermatopathology fellowship year, I rotated through a variety of dermatology clinics including Dr. Tim Berger's Complex Medical Dermatology Clinic, General Dermatology Clinic, Cutaneous Lymphoma Clinic, High Risk Clinic, Autoimmunity Clinic, Alopecia Clinic, and MOHS Surgery Clinic. During this time, I conducted medical interviews, physical skin exams, and wrote clinic notes that were attested by dermatology attending physicians. Additionally, I was assigned both in-house and consult dermatopathology cases and wrote reports under the guidance of a dermatopathology attending with graduated autonomy over the course of the dermatopathology fellowship. I also presented the histopathology for cases presented at Dermatology Grand Rounds. As an instructor in Dermatopathology, I have previously signed out all the dermatopathology cases at the Zuckerberg San Francisco General Hospital and occasionally read cases that require direct immunofluorescence microscopic interpretation (2022-2023). I am currently an assistant professor of Dermatopathology at the UCSF Mount Zion campus, where I sign out routine and consult dermatopathology cases from UCSF and outside institutions and clinics.

PROFESSIONAL ORGANIZATIONS

Memberships

2008-2010	American Medical Association
2008-10	American Medical Student Association

2008-12	American Association of Immunologists
2008-13	American Physician Scientist Association
2013-14	American Society for Clinical Pathology
2014-Present	College of American Pathologists
2014-Present	American Society of Dermatopathology
2014-Present	International Society of Dermatopathology
2021-Present	Society of Investigative Dermatology

Service to Professional Organizations

2007-08	American Physician Scientist Association	Institutional Representative
2008-09	American Physician Scientist Association	Vice Chair, Annual Meeting Committee
2009-10	American Physician Scientist Association	Chair, Annual Meeting Committee
2024-25	American Society of Dermatopathology	Member, Ad hoc, Young Physicians Committee

INVITED PRESENTATIONS

NATIONAL, REGIONAL, AND OTHER INVITED PRESENTATIONS

2009	Poster, APSA/ASCI/AAP Joint Annual Meeting, Chicago, IL
2009	Poster, UVA Medical Student Research Symposium, Charlottesville, VA
2009	Poster, UVA Medical Scientist Training Program Annual Retreat, Charlottesville, VA
2010	Oral presentation and poster, Tolerance and Autoimmunity Meeting, Keystone Symposia, Taos, NM
2010	Poster, UVA Graduate School of Arts and Sciences Huskey Research Exhibition, Charlottesville, VA
2012	Poster, UVA Medical Scientist Training Program Annual Retreat, Charlottesville, VA
2012	Oral presentation and poster, American Society of Immunologists Annual Meeting, Boston, MA
2015	Oral presentation and poster, American Society of Dermatopathology Annual Meeting, San Francisco, CA
2016	Oral presentation, Korean Pathologist Association of North America Annual Meeting, Seattle, WA
2016	Posters, United States and Canadian Academy of Pathology Annual Meeting, Seattle, WA
2016	Oral presentation, UCSF Clinical Cancer Genomics Laboratory Molecular Symposium, San Francisco, CA
2016	Oral presentation, American Society of Dermatopathology Annual Meeting, Chicago, CA
2016	Oral presentation, International Melanoma Pathology Symposium, Boston, MA
2016	Oral presentation, UCSF Melanoma Annual Retreat, San Francisco, CA
2017	Oral presentation and posters, United States and Canadian Academy of Pathology Annual Meeting, San Antonio, TX
2017	Oral presentation and poster, American Society of Dermatopathology Annual Meeting, Baltimore, MD
2018	Oral presentations, International Society of Dermatopathology Annual Meeting, San Diego, CA
2018	Poster, United States and Canadian Academy of Pathology Annual Meeting, Vancouver, WA
2018	Poster, American Society of Dermatopathology Annual Meeting, Chicago, IL
2019	Poster, United States and Canadian Academy of Pathology Annual Meeting, Washington, DC
2020	Oral presentation, United States and Canadian Academy of Pathology Annual Meeting, Los Angeles, CA
2022	Oral presentation, Society of Investigative Dermatology Annual Meeting, Portland, OR
2023	Poster, Keystone Symposia, Skin-Immune Crosstalk, Breckenridge, CO
2023	Oral presentation, International Society of Investigative Dermatology Annual Meeting, Tokyo, Japan
2024	Poster, Midwinter Conference of Immunologists, Asilomar, CA

CME COURSES ATTENDED

2016	Evolving Concepts in Soft Tissue Pathology, California Tumor Tissue Registry 141 st Semi-Annual Cancer Seminar, San Francisco, CA
2017	Soft Tissue Course, Dermpedia, San Diego, CA
2018	Inflammatory Skin Disease, Dermpedia, San Diego, CA
2022	Dermatopathology Self-Assessment Course, American Society of Dermatopathology Annual Meeting, Chicago, IL

TEACHING and MENTORING

FORMAL SCHEDULED CLASSES FOR UCSF STUDENTS:

Qtr	Academic Yr	Course No. & Title	Teaching Contribution	Units	Class Size
F	2014-15	Pathology Lab: Inflammation, Immunity, Infection	Small Group Instructor; 1 one hour session	N/A	20
S	2014-15	Pathology Lab: Renal Lab 2	Small Group Instructor; 1 one hour session	N/A	20
S	2014-15	Pathology Lab: Renal Lab 3	Small Group Instructor; 1 one hour session	N/A	20
S	2014-15	Pathology Lab: Life Cycle: Ovary and Endometrium	Small Group Instructor; 1 one hour session	N/A	20
F	2015-16	Pathology Lab: Inflammation, Immunity, Infection	Small Group Instructor; 1 one hour session	N/A	20
S	2015-16	Pathology Lab: Pulmonary Lab 1	Small Group Instructor; 1 one hour session	N/A	20
S	2015-16	Pathology Lab: Pulmonary Lab 2	Small Group Instructor; 1 one hour session	N/A	20
S	2015-16	Pathology Lab: Placenta Lab	Small Group Instructor; 1 one hour session	N/A	20
S	2015-16	Pathology Lab: Renal Lab 1	Small Group Instructor; 1 one hour session	N/A	20
S	2015-16	Pathology Lab: Renal Lab 2	Small Group Instructor; 1 one hour session	N/A	20

INFORMAL TEACHING:

2017	Dermatopathology boot camp for 1 st year dermatology residents (weekly for 8 weeks with 7 residents at the microscope)
2017-18	Unknown case review with dermatology residents (weekly with 5-10 residents at the microscope)
2019-23	I teach pathology and/or dermatology residents and fellows at the Mount Zion and/or San Francisco General Hospital during a clinical sign-out once a week
2024-present	I teach pathology and/or dermatology residents and fellows at the Mount Zion Hospital during a clinical sign-out once a week

TEACHING AIDS:

Created a "Normal Skin Histology Teaching Module" for UCSF Medical Students.

American Academy of Dermatology Core Curriculum, Dermatopathology Section. Reviewed and edited part of the "Malignant Neoplastic Processes" section.

SUMMARY OF TEACHING HOURS:

2016-17:	0 total hours of teaching (including preparation). Formal class or course teaching hours: 0 hours
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Informal teaching hours: 0 hours

2017-18: 20 total hours of teaching (including preparation).
Formal class or course teaching hours: 0 hours
Informal teaching hours: 20 hours

2018-19: Total hours of teaching: 20 hours.
2019-20: Total hours of teaching: 5 hours.
2022-23: Total anticipated hours of teaching: 50 hours.
2024-25: Total anticipated hours of teaching: 50 hours.

TEACHING NARRATIVE

In residency, I had the opportunity to teach UCSF medical students in the small group setting in the pathology lab. Topics included renal pathology, pulmonary pathology, placental pathology, inflammation, infection, and immunity. As a dermatopathology fellow, I taught the first year dermatology residents the foundations of dermatopathology including lectures on reaction patterns in inflammatory skin disease and epithelial proliferations and neoplasms. Also as a dermatopathology fellow, I teach the dermatology residents a set of unknown cases and work through teaching points and a histological differential diagnosis. As a clinical instructor in dermatopathology, I lead sign out sessions at a multiheaded microscope for pathology and dermatology residents as well as visiting residents and fellows nationally and internationally.

RESEARCH AND CREATIVE ACTIVITIES

PEER REVIEWED PUBLICATIONS:

1. Coughlin CM, Fleming MD, Carroll RG, Pawel BR, Hogarty MD, Shan X, Vance BA, **Cohen JN**, Jairaj S, Lord EM, Wexler MH, Danet-Desnoyers GA, Pinkus JL, Pinkus GS, Maris JM, Grupp SA, Vonderheide RH. 2006. Immunosurveillance and survivin-specific T-cell immunity in children with high-risk neuroblastoma. *J Clin Oncol.* **24**(36):5725-34.
2. Mason NJ, Coughlin CM, Overley B, **Cohen JN**, Mitchell EL, Colligon TA, Clifford CA, Zurbriggen A, Sorenmo KU, Vonderheide RH. 2008. RNA-loaded CD40-activated B cells stimulate antigen-specific T-cell responses in dogs with spontaneous lymphoma. *Gene Therapy.* **15**(13):955-65.
3. **Cohen JN**, Guidi CJ, Tewalt EF, Qiao H, Rouhani SJ, Ruddell A, Farr AG, Tung KS, Engelhard VH. 2010. Lymph node-resident lymphatic endothelial cells mediate peripheral tolerance via Aire-independent direct antigen presentation. *J Exp Med.* **207**(4):681-8.
4. Tewalt EF, **Cohen JN**, Rouhani SJ, Guidi CJ, Qiao H, Fahl SP, Conaway MR, Bender TP, Tung KS, Vella AT, Adler AJ, Chen L, Engelhard VH. 2012. Lymphatic endothelial cells induce tolerance via PD-L1 and lack of costimulation leading to high-level PD-1 expression on CD8 T cells. *Blood.* **120**(24):4772-82.
5. Tewalt EF, **Cohen JN**, Rouhani SJ, Engelhard VH. 2012. Lymphatic endothelial cells - key players in regulation of tolerance and immunity. *Front Immunol.* **3**:305.
6. **Cohen JN**, Tewalt EF, Rouhani SJ, Buonomo EL, Bruce A, Xu X, Bekiranov S, Fu YX, Engelhard VH. 2014. Tolerogenic properties of lymphatic endothelial cells are controlled by the lymph node microenvironment. *Plos One.* **9**(2):e87740.
7. Rouhani SJ, Eccles JD, Riccardi P, Peske JD, Tewalt EF, **Cohen JN**, Liblau R, Makinen T, Engelhard VH. 2015. Roles of lymphatic endothelial cells expressing peripheral tissue antigens in CD4 T cell tolerance induction. *Nat Commun.* **6**:6771.

8. Buelow B, **Cohen J**, Nagymanyoki Z, Frizzell N, Joseph N, McCalmont T, Garg K. 2016. Immunohistochemistry for 2SC and FH in cutaneous leiomyomas may aid in identification of patients with HLRCC (Hereditary leiomyomatosis and renal cell carcinoma syndrome). *Am J Surg Pathol.* 40:982.
9. **Cohen JN**, Solomon DA, Horvai AE, Kakar S. 2016. Pancreatic involvement by mesenchymal chondrosarcoma harboring the HEY1-NCOA2 gene fusion. *Hum Pathol.* 58:35.
10. **Cohen JN**, Joseph NM, North JP, Onodera C, Zembowicz A, LeBoit PE. 2017. Genomic analysis of pigmented epithelioid melanocytomas reveals recurrent alterations in PRKAR1A, and PRKCA genes. *Am J Surg Pathol.* 41(10):1333.
11. **Cohen, JN**, Sabnis AJ, Krings G, Cho SJ, Horvai AE, Davis JL. 2018. EWSR1-NFATC2 gene fusion in a soft tissue tumor with epithelioid round cell morphology and abundant stroma: A case report and review of the literature. *Human Pathol.* 81:281-290.
12. **Cohen JN**, Spies JA, Ross F, Bohlke A, McCalmont TH. 2018. Heavily pigmented epithelioid melanoma with loss of protein kinase A regulatory subunit- α expression. *American Journal of Dermatopathology.* 40(12):912-916.
13. **Cohen JN**, Yeh I, Jordan RC, Wolsky RJ, Horvai AE, McCalmont TH, LeBoit PE. 2018. Cutaneous non-neural granular cell tumors harbor recurrent ALK gene fusions. *Am J Surg Pathol.* 42(9):1133-1142.
14. Sanchez IM, Lowenstein S, Johnson KA, Babik J, Haag C, Keller JJ, Ortega-Loayza AG, **Cohen J**, McCalmont TH, Demer AM, Mansh MD, Hylwa SA, Liu J, Shinkai K. 2019. Necrotizing neutrophilic dermatosis: key clinical features of a sepsis-like neutrophilic dermatoses resembling necrotizing fasciitis. *JAMA Dermatol.* 155(1):79-84.
15. Mathur, AN, Zirak, B, Tan, M, Ali, N, Boothby, I, **Cohen, JN**, Lowe, M, Abbas, AK, Rosenblum, MD. 2019. Regulatory T cells Facilitate Epithelial Stem Cell Differentiation During Barrier Regeneration. *Immunity.* 50(3):655-557.
16. Yu WY, Berger TG, North JP, Laszik Z, **Cohen JN**. 2019. Expression of Programmed Cell Death Ligand 1 and Programmed Cell Death 1 in Cutaneous Warts. 2019. *J Am Acad Dermatol.* 81(5): 1127-1133.
17. **Cohen JN**, Rosenblum MD. Y'all comeback now. 2019. *Sci Immunol.* 4(35). pii: eaax8197. doi: 10.1126/sciimmunol.aax8197.
18. Kalekar LA, **Cohen JN**, Prevel N, Sandoval PM, Mathur AN, Moreau JM, Lowe MM, Nosbaum A, Wolters PJ, Haemel A, Boin F, Rosenblum MD. Regulatory T cells in Skin are Uniquely Poised to Suppress Profibrotic Immune Responses. 2019. *Sci Immunol.* 4(39). pii: eaaw2910. doi: 10.1126/sciimmunol.aaw2910.
19. **Cohen JN**, Yeh I, LeBoit PE. Melanotic Schwannoma of the Vulva: A Case Report and Review of the Literature. 2020. *Am J Dermatopathol.* 42(1):46-51.
20. **Cohen JN**, Bowman S, Laszik ZG, North JP. Clinicopathologic Overlap of Psoriasis, Eczema, and Psoriasiform Dermatitis: A Retrospective Study of Th2 and Th17 subsets, IL-36 and β -Defensin 2 in Spongiotic Psoriasiform Dermatitis, Sebopsoriasis, and TNF α Inhibitor-Associated Dermatitis. 2020. *J Am Acad Dermatol.* 82(2):430-439.

21. **Cohen JN**, Yeh I, Mully TW, LeBoit PE, McCalmont TH. Genomic and Clinicopathologic Characteristics of *PRKARIA*-inactivated Melanomas: Toward Genetic Distinctions of Animal Type Melanoma/Pigment Synthesizing Melanoma. 2020. *Am J Surg Pathol*. 44(6):805-816.
22. Boothby IC, **Cohen JN**, Rosenblum MD. Regulatory T cells in Skin Injury: At the Crossroads of Tolerance and Tissue Repair. 2020. *Sci Immunol*. 5(47):eaa9631.
23. Dhariwala MO, Karthikeyan D, Vasquez KS, Farhat S, Weckel A, Taravati K, Leitner EG, Clancy S, Pauli M, Piper ML, **Cohen JN**, Ashouri JF, Lowe MM, Rosenblum MD, Scharschmidt TC. Developing Human Skin Contains Lymphocytes Demonstrating a Memory Signature. 2020. *Cell Reports Medicine*. 1(8):100132. doi: 10.1016/j.xcrm.2020.100132.
24. Moreau JM, Dhariwala MO, Gouirand V, Boda DP, Boothby IC, Lowe MM, **Cohen JN**, Macon CE, Leech JM, Kalekar LA, Scharschmidt TC, Rosenblum MD. Regulatory T Cells Promote Innate Inflammation after Skin Barrier Breach via TGF- β Activation. 2021. *Sci Immunol*. 6(62):eabg2329. doi: 10.1126/sciimmunol.abg2329.
25. Boothby IC, Kinet MJ, Boda DP, Kwan EY, Clancy S, **Cohen JN**, Habrylo I, Lowe MM, Pauli M, Yates AE, Chan JD, Harris HW, Neuhaus IM, McCalmont TH, Molofsky AB, Rosenblum MD. Early-life Inflammation Primes a T Helper 2 Cell-Fibroblast Niche in Skin. 2021. *Nature*. 599(7886):667-672.
26. Rahbar Z, **Cohen JN**, McCalmont TH, LeBoit PE, Connolly MK, Berger T, Pincus LB. Cicatricial Pemphigoid Brunsting-Perry Variant Masquerading as Neutrophil-Mediated Cicatricial Alopecia. 2021. *J Cutan Pathol*. doi: 10.1111/cup.14177. Online ahead of print.
27. Neumann NM, LeBoit PE, **Cohen JN**. Superficial Angiomyxomas Frequently Demonstrate Loss of Protein Kinase A Regulatory Subunit 1 Alpha Expression: Immunohistochemical Analysis of 29 Cases and Cutaneous Myxoid Neoplasms with Histopathologic Overlap. 2022. *Am J Surg Pathol*. 46(2):226-232.
28. Bapat SP, Whitty C, Mowery CT, Liang Y, Yoo A, Jiang Z, Peters MC, Zhang LJ, Vogel I, Zhou C, Nguyen VQ, Li Z, Chang C, Zhu WS, Hastie AT, He H, Ren X, Qiu W, Gayer SG, Liu C, Choi EJ, Fassett M, **Cohen JN**, Sturgill JL, Crotty Alexander LE, Suh JM, Liddle C, Atkins AR, Yu RT, Downes M, Liu S, Nikolajczyk BS, Lee IK, Guttman-Yassky E, Ansel KM, Woodruff PG, Fahy JV, Sheppard D, Gallo RL, Ye CJ, Evans RM, Zheng Y, Marson A. Obesity Alters Pathology and Treatment Response in Inflammatory Disease. 2022. *Nature*. 604(7905):337-342.
29. Merana GR, Dwyer LR, Dhariwala MO, Weckel A, Gonzalez JR, Okoro JN, **Cohen JN**, Tamaki CM, Han J, Tasoff P, Palacios-Calderon Y, Ha CWY, Lynch SV, Segre JA, Kong HH, Kattah MG, Ma A, Scharschmidt TC. Intestinal inflammation alters the antigen-specific immune response to a skin commensal. 2022. *Cell Rep*. 39(9): 110891. doi: 10.1016/j.celrep.2022.110891.
30. Moss MI, Pauli M, Moreau JM, **Cohen JN**, Rosenblum MD, Lowe MM. Xenograft skin model to manipulate human immune responses in vivo. 2022. *J Vis Exp*. Jun 29;(184). doi: 10.3791/64040.
31. Ricardo-Gonzalez RR, Kotas ME, O'Leary CE, Singh K, Damsky W, Liao C, Arouge E, TenVooren I, Marquez DM, Schroeder AW, **Cohen JN**, Fassett MS, Lee J, Daniel SG, Bittinger K, Díaz RE, Fraser JS, Ali N, Ansel KM, Spitzer MH, Liang HE, Locksley RM. Innate type 2 immunity controls hair follicle commensalism by Demodex mites. 2022. *Immunity*. Aug 26:S1074-7613(22)00378-8. doi: 10.1016/j.immuni.2022.08.001.
32. Black MA, Neumann NM, Krings G, Najjar S, Troxell ML, Wang A, Devine WP, Vohra P, Gasper C, Chen YY, **Cohen JN**, Bean GR. Genetic and Immunohistochemical Profiling of Mammary Hidradenoma

and Comparison to Mucoepidermoid Carcinoma. 2023. *Mod Pathol*. 36(10) Jul 7;36(10):100270. doi: 10.1016/j.modpat.2023.100270.

33. Lowe MM, **Cohen JN**, Moss MI, Clancy S, Adler J, Yates A, Naik HB, Pauli M, Taylor I, McKay A, Harris H, Kim E, Hansen SL, Rosenblum MD, Moreau JM. Tertiary Lymphoid Structures Sustain Cutaneous B cell Activity in Hidradenitis Suppurativa. 2023. *JCI Insight*. 9(3):e169870. doi: 10.1172/jci.insight.169870.
34. **Cohen JN**, Gouirand V, Macon C, Boothby IC, Moreau JM, Gratz IK, Stoecklinger A, Weaver CT, Sharpe AH, Ricardo-Gonzalez RR, Rosenblum MD. Tissue-Specific Manipulation of Regulatory T cells Reveals the Skin to be a Site of Immune Tolerance. 2024. *Sci Immunol*. Jan 5;9(91):eadh0152. doi: 10.1126/sciimmunol.adh0152.
35. Wilkerson K, Bradely FE, Lee EY, **Cohen JN**, Chang AY. Sweet Syndrome in a Patient with Rectal Adenocarcinoma and HIV following Neoadjuvant Chemoradiation. 2024. *JAAD Case Rep*. 2023 Nov 27;43:72-75. doi: 10.1016/j.jcdr.2023.11.015. eCollection 2024 Jan.
36. Sommer C, **Cohen JN**, Dehmel S, Neuhaus V, Schaudien D, Braun A, Sewald K, Rosenblum MD. Interleukin-2-Induced Skin Inflammation. *Eur J Immunol*. 2024 Apr;54(4):e2350580. doi: 10.1002/eji.202350580. Epub 2024 Mar 2.
37. Macon CE, Yang A, Patel D, North JP, Rosenblum MD, **Cohen JN**. CD4+ T cells Occupy Perivascular and Perifollicular Niches in Healthy Human Skin. *Exp Dermatol*. 2024 Dec;33(12):e70023. doi: 10.1111/exd.70023.
38. Pukhalskaya T, Finkelstein M, Miyake-Caballero DA, Tetzlaff MT, North JP, **Cohen JN**. Cytokine Profiling of Erythroderma Biopsies Reveals Types 2 and 17 Immune Activations Status. *J Cutan Pathol*. 2025 Mar;52(3):235-243. doi: 10.1111/cup.14775. Epub 2024 Dec 12.
39. Leboit PE, Patel DU, **Cohen JN**, Moss MI, Naik HB, Yates AE, Harris HW, Klufas DM, Kim EA, Neuhaus IM, Hansen SL, Kyle RL, Kelly M, Rosenblum MD, Lowe MM. The Inflammatory Landscape of a Whole-Tissue Explant Model of Hidradenitis Suppurativa. *Exp Dermatol*. 2025 Feb;34(2):e70057. doi: 10.1111/exd.70057.

BOOK CHAPTERS

1. Perkins IU, **Cohen J**, Mirmirani P. Disorders of hair, adnexae, nails, and cartilage. 2018. Pediatric Dermatopathology and Dermatology. Wolters Kluwer. First Edition.
2. Zembowicz A, **Cohen JN**, LeBoit PE. Pigmented epithelioid melanocytoma. 2019. Pathology of Melanocytic Tumors. Elsevier. First Edition.

CONTRIBUTIONS TO SCIENCE

1. Lymphatic endothelial cells as mediators of peripheral immune tolerance

During my graduate training my biggest contribution to the field of immunology was the discovery of a novel mechanism of T cell tolerance. My project focused on elucidating the cellular and molecular mechanisms of CD8+ T cell tolerance to the melanocyte/melanoma antigen, tyrosinase. In contrast to the paradigm at that time-that peripheral tolerance was mediated by quiescent antigen presenting cells, I demonstrated that lymphatic endothelial cells within lymph nodes promiscuously express tyrosinase and present a particular epitope to antigen-specific CD8+ T cells, leading to their elimination from the peripheral T cell repertoire. Further studies demonstrated that CD8+ T cell deletional tolerance was

mediated by the PD-1/PD-L1 pathway. Additionally, my graduate lab demonstrated that lymph node-resident lymphatic endothelial cells are also capable of facilitating CD4+ T cell tolerance.

1. **Cohen JN**, Guidi CJ, Tewalt EF, Qiao H, Rouhani SJ, Ruddell A, Farr AG, Tung KS, Engelhard VH. Lymph node-resident lymphatic endothelial cells mediate peripheral tolerance via Aire-independent direct antigen presentation. 2010. *J Exp Med*. **207**(4):681-8.
2. Tewalt EF, **Cohen JN**, Rouhani SJ, Guidi CJ, Qiao H, Fahl SP, Conaway MR, Bender TP, Tung KS, Vella AT, Adler AJ, Chen L, Engelhard VH. Lymphatic endothelial cells induce tolerance via PD-L1 and lack of costimulation leading to high-level PD-1 expression on CD8 T cells. 2012. *Blood*. **120**(24):4772-82.
3. **Cohen JN**, Tewalt EF, Rouhani SJ, Buonomo EL, Bruce A, Xu X, Bekiranov S, Fu YX, Engelhard VH. Tolerogenic properties of lymphatic endothelial cells are controlled by the lymph node microenvironment. 2014. *Plos One*. **9**(2):e87740.
4. Rouhani SJ, Eccles JD, Riccardi P, Peske JD, Tewalt EF, **Cohen JN**, Liblau R, Makinen T, Engelhard VH. Roles of lymphatic endothelial cells expressing peripheral tissue antigens in CD4 T cell tolerance induction. 2015. *Nat Commun*. **6**:6771.

2. Functional Role of Regulatory T cells Interactions with Skin Epithelial Stem Cells and Stroma

As a postdoctoral research fellow, my main scientific contribution was generating a novel technique to selectively and inducibly manipulate immune cells only in skin. We provided the first definitive demonstration that regulatory T cells (Tregs) in a barrier tissue (i.e. skin) actively suppress autoreactive effector T cells in the steady-state. Additionally, I showed that skin Tregs protect hair follicle stem cells from autoimmune attack. I also leveraged my training as a clinical dermatopathologist to be among the first in the dermatology department to perform fixed nuclear RNA sequencing and spatial transcriptomics on archival dermatologic human samples of autoimmune alopecias. I contributed as a co-author to several manuscripts in high impact journals. In one study, we demonstrated that Tregs facilitate hair follicle stem cell differentiation following epidermal injury in a manner partially dependent on suppression of Th17 responses and neutrophil recruitment. Another study revealed a key role for Tregs in suppressing profibrotic cutaneous Th2 immune responses, in part by Treg expression of the transcription factor GATA3.

1. Mathur, AN, Zirak, B, Tan, M, Ali, N, Boothby, I, **Cohen, JN**, Lowe, M, Abbas, AK, Rosenblum, MD. Regulatory T cells Facilitate Epithelial Stem Cell Differentiation During Barrier Regeneration. 2019. *Immunity*. **50**(3):655-557.
2. Kalekar LA, **Cohen JN**, Prevel N, Sandoval PM, Mathur AN, Moreau JM, Lowe MM, Nosbaum A, Wolters PJ, Haemel A, Boin F, Rosenblum MD. Regulatory T cells in Skin are Uniquely Poised to Suppress Profibrotic Immune Responses. 2019. *Sci Immunol*. **4**(39). pii: eaaw2910. doi: 10.1126/sciimmunol.aaw2910.
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3. Clinical Surgical Pathology and Dermatopathology

My clinical research interests have mainly focused on genomic and histopathologic characterization of cutaneous neoplasms with *PRKARIA* genetic alterations and immunophenotypic characterization of dermatoses with ambiguous histopathology. I provided the first comprehensive genomic characterization of pigmented epithelioid melanocytomas, finding an association with *PRKARIA* alterations, and the first clinicopathologic description of *PRKARIA*-inactivated melanomas. I demonstrated that IL-36 and β -Defensin 2 can be used as markers that discriminate a psoriasis-like signature from an eczema-like signature in dermatoses with mixed histopathologic features. Additionally, I described a classifier based on IL-13 gene expression and IL-36 protein expression that can be used as markers of type 2 and 17 immune activation in biopsies of erythroderma.

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D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

2022-2027 NIH K08 Mentored Clinical Scientist Research Career Development Award, NIAMS, P0557953

Completed Research Support

2021-2022 Dermatology Foundation, Women's Health Career Development Award, P0549880
2021-2022 NIH T32 Postdoctoral Fellowship, UCSF Department of Dermatology, 5T32AR007175-44
2022-2024 University Hospitals Cleveland Medical Center, David Miller Hair Follicle Inflammatory Disease Biology Award, P0565501
2023-2024 Nan Fung Life Sciences (Pivotal Life Sciences) Sponsorship Program Award