



NRB  
1/10/24  
W. Richard Burack, M.D., Ph.D.

Professor

University of Rochester Medical Center | School of Medicine and Dentistry | 601 Elmwood Ave, Box 626 | Rochester, NY 14642

Office: 585.273.1885

Email: richard\_burack@urmc.rochester.edu

---

## EDUCATION

MD Medicine | Univ of Virginia Sch Medicine | 1995

PhD Molecular Biophysics | Univ of Virginia Sch Medicine | 1994

BS Biochemistry | McGill University | 1986

---

## POST-DOCTORAL TRAINING AND RESIDENCY

Post-Doctoral Fellow: T cell signal transduction, PI: Andrey Shaw, Washington University in St. Louis, Howard Hughes Medical Institute | July 1999 - July 2004

Clinical Fellow, Hematopathology, Department of Pathology and Immunology, Barnes-Jewish Hospital, Washington University in St. Louis. | 1998 - 1999

Post-doctoral Fellow: Enzymology of MAPK/ERK, PI Thomas. W. Strugill, University of Virginia, Howard Hughs Medical Institute | July 1995 - June 1998

Resident, Clinical Pathology, University of Virginia Hospital, Charlottesville, VA | 1995 - 1998

---

## CERTIFICATIONS

### BOARD

New York State Department of Health, Certificate of Qualification: Laboratory Director in Cellular Immunology, Clinical Chemistry, Hematology, Oncology. | 07/01/2007 - Present

American Board of Pathology, Hematopathology | 2000

American Board of Pathology, Clinical Pathology | 1998

---

## LICENSURE

New York State Education Department, Registration Certificate: Physician | Present

---

## FACULTY APPOINTMENTS

Professor | Pathology and Laboratory Medicine | SMD | 2017 - Present

Associate Professor | Pathology and Laboratory Medicine | SMD | 2007 - 2017

Interim Associate Professor | Pathology and Laboratory Medicine | SMD | 2007 - 2007

Vice Chair for Clinical Operations | Pathology and Laboratory Medicine | SMD | 2016 - 2022

Director, Hematopathology Unit | Pathology and Laboratory Medicine | SMD | 2007 - 2021

Professor | Cancer Center | 2017 - Present

Associate Professor | Cancer Center | 2007 - 2017

---

---

## **APPOINTMENTS**

### **ACADEMIC - EXTERNAL**

Assistant Professor of Pathology and Immunology, Acting Director of Hematopathology Division, Director of Hematopathology Fellowship Program, Medical Director - Flow Cytometry Laboratory | Washington University School of Medicine, St. Louis, MO | 2003 - 2007

Instructor in Pathology | Washington University School of Medicine St. Louis, MO | 1999 - 2003

---

---

## **MEMBERSHIPS**

### **PROFESSIONAL**

SWOG (formerly known as Southwest Oncology Group) | 2007 - Present

American Society for Hematology.

Society for Hematopathology

United States/Canada Association of Pathologists

---

---

## **LECTURESHIPS**

### **LOCAL**

"EBV-lymphoproliferative disorders---is it ever just one disease?" UHS Regional Hematopathology Meeting, Syracuse NY | 05/21/2016

Intraclonal Diversity in Follicular Lymphoma. 8th Annual Symposium on Hematopathology. Skaneateles, NY | 05/20/2014

AML with gene mutations. 8th Annual Symposium on Hematopathology. Binghamton, NY | 05/20/2013

CTSI Seminar Series; "The Translational Potential of "-omics" Research". Presentation entitled: "Quantifying intraclonal heterogeneity in follicular lymphoma." Audience--URMC community. Promoted collaborative research efforts at the University. | 10/02/2012

Pathogenesis, Clinical Behavior and Diagnosis of Angioimmunoblastic T-Cell Lymphoma and Adult T-cell Leukemia/Lymphoma. 7th Annual Hematology/ Hematopathology Symposium, Binghamton NY | 05/19/2012

"Histogenesis of Diffuse Large B-Cell Lymphoma, NOS". 6th Annual Hematology/Hematopathology Symposium: Diffuse Large B-Cell Lymphoma and its Variants: What's New? Binghamton, NY | 05/14/2011

I present in some format annually at the "UHS Regional Hematopathology Teaching Day". My role ranges from full lectures, to case series presentations, to moderator. With the exception of 2019, I have participated as a presenter/lecturer every year since 2009. Three of the full-scale lectures are listed separately here. | May 2009 - Present

### **NATIONAL**

Invited Lecturer to Genomic Pathology at the 22nd Annual William Beaumont Symposium in Detroit, MI. Presented, "B cell clonality testing: Biomed-2 and Beyond." | 09/26/2013

### **INTERNATIONAL**

Cellular signal recognition and transduction. Berlin-Dahlem, Germany. | 10/13/2005 - 10/15/2005

### **OTHER**

Moffitt Cancer Center, Tampa, FL. Grand Rounds in the Department of Pathology. "Using Immunogenetics to understand the clinical evolution of Lymphoma." | 10/18/2013

Montefiore/Einstein School of Medicine, Department of Pathology, Grand Rounds. "Evolution of Lymphoma" | 04/18/2013

University of Virginia, Grand Rounds, Department of Pathology. "Molecular Diagnostics of Non-Hodgkin Lymphomas". | *April 2008*

I have presented annually (except 2019) in some format (lecture, moderate, or case presentations) annually at the UHS Regional Hematopathology Meeting. | *Present*

---

### **COMMUNITY SERVICE**

Friends of 540 W Main: co-leader of development | *2022 - Present*

Rochester Environmental Partners: 22in22 project enabler | *2022 - Present*

---

### **AWARDS AND HONORS**

2018 Chairman's Recognition Award | *2018*

Eric A. Schenk Award for Excellence in Teaching | Pathology and Laboratory Medicine, University of Rochester School of Medicine and Dentistry | *2014*

Excellence in 2nd Year Teaching | University of Rochester School of Medicine | *2010*

Class of 2010 Professor of the Year | Washington Univ School of Medicine | *2007*

Class of 2009 Professor of the Year | Washington Univ School of Medicine | *2006*

Class of 2008 Lecturer of the Year | Washington Univ School of Medicine | *2005*

Class of 2006 Distinguished Teacher Award | Washington Univ School of Medicine | *2004*

---

### **CONTRIBUTIONS**

#### **PROFESSIONAL**

Moderator of Proffered paper presented at USCAP Annual Meeting in Baltimore, MD. | *03/04/2013 - 03/04/2013*

"Symposium on Myeloid Neoplasms in honor of Dr. John M. Bennett for June 9, 2012"; Organizer and chair | *2012*

---

### **STUDENTS**

#### **POST-DOCTORAL TRAINEES AND FELLOWS**

Chauncey Syposs, DO | Hematopathology Fellow; Assistant Professor URMC starting 7/1/2023 | *July 2022 - Present*

Murad Elsadawi, MD | Hematopathology Fellow | *July 2022 - Present*

Ilyas Yambeyev MD, Hematopathology Fellow : Current: Academic Practice, Boston Medical Center, Boston University | *July 2021 - June 2022*

Hani Katerji, MD | Hematopathology Fellow ; Current: Academic practice, Assistant Professor URMC | *July 2019 - June 2020*

Carol Fries-Simpson | Research mentor for Pediatric Hematology-Oncology Fellow | Current: Assistant Professor, University of Rochester School of Medicine | *07/01/2018 - 10/01/2022*

Sung Eun Kim, MD | Hematopathology Fellow | Current: private practice, Rochester Regional | *July 2018 - June 2019*

Meenakshi Bansal, MD | Hematopathology Fellow | Current: academic practice, Rochester General Hospital | *October 2017 - October 2018*

Chad Hudson, MD | Hematopathology Fellow 2016-2017 | Hematopathology Research Fellow 2017-2018 | Current: private practice, Hematologics, Seattle WA | *07/01/2016 - 06/30/2018*

Abraham Loo, MD | Hematopathology Fellow | Current: private practice, NJ | 07/01/2014 - 06/30/2015

Jaclyn Cappel, MD | Hematopathology Fellow | Current: private practice, Williamsport PA | 07/01/2013 - 06/30/2014

Kelly Garner, MD | Hematopathology Fellow | Current: private practice, Buffalo NY | 07/01/2013 - 06/30/2014

M. Kristen Subik, MD | Hematopathology Fellow | Current: academic practice, Associate Professor, Albany Medical Center | 07/01/2012 - 06/30/2013

Steven Nguyen, MD | Hematopathology Fellow | Current: private practice, Denver CO | 07/01/2012 - 06/30/2013

Sarah Eakin, MD | Hematopathology Fellow | Current: private practice, Erie PA | 07/01/2011 - 06/30/2012

Jennifer Pryor, MD | Hematopathology Fellow | Current: private practice, Lansing MI | 07/01/2010 - 06/30/2011

Joseph Weisensel, DO | Hematopathology Fellow | Current: private practice, New Jersey | 07/01/2009 - 06/30/2010

Mathew Dress, MD | Hematopathology Fellow | Current: private practice, Memphis TN | 07/01/2008 - 06/30/2009

Archibald Perkins, MD, PhD | Hematopathology Fellow | Current: Professor, University of Rochester | 07/01/2007 - 07/30/2008

#### OTHER

I have mentored a number of undergraduates over the last 16 years. Memorable examples are: - In the '21-22 academic year, I advised a team of 6 seniors in Biomedical Engineering on their final project, "Automating Histology". - UR undergrads with research rotations: A. Abumousa, A. Poudel, M. Bryant - Non-UR undergrads with research rotations: C. Cook, C. Chiu | July 2007 - Present

---

## COURSES

### TAUGHT

Hematology--benign, malignant, and everything in between. -12 contact hours. U of R Advanced Certificate Program in Clinical/Medical Laboratory Technology | 2017 - Present

Hematology Unit. Medical Technologist Program. Rochester General Hospital | 2013 - 2016

Pathology of Immunologic Diseases, in "Pathobiology". URM Department of Pathology Graduate Program. 4 lecture hours | 2008 - 2014

Pathology of Hematopoietic Diseases, in "Diagnosis, Pathogenesis, and Therapeutics". URM School of Medicine Year 2 curriculum. 5 Lecture and 4 lab hours | 2007 - Present

Pathology of Hematopoietic Diseases. Washington University School of Medicine. Second Year core course in pathology | 2001 - 2007

---

## PROFESSIONAL ASSIGNMENTS

### SERVICE

Molecular Genetic Pathology Unit, Medical Director | 2013 - Present

Clinical Protein Electrophoresis Lab, Medical Director | 2012 - 2014

Clinical Flow Cytometry Laboratory, Medical Director | 07/01/2007 - 2019

Hematopathology Unit, Medical Director | 07/01/2007 - 2019

#### ADMINISTRATIVE

Dept. of Pathology and Laboratory Medicine, Vice Chair of Clinical Operations | 11/01/2016 - Present  
Hematopathology Fellowship Program, Director | July 2007 - August 2016

#### OTHER

Internal Study section: URM Clinical Translational Science Institute pilot project program | 2019 - Present

Internal Study section: URM Clinical Translational Science Institute trainee pilot program | 2019 - Present

Internal study section: URM Clinical Translational Science Institute KL2 program 2016-present | 2016 - Present

Grant Reviewer: Cancer Research UK - Clinical Careers Committee 2016; | 2016

Hematopoietic Tissue Procurement Core Facility, Principal Investigator. This is an active biospecimen procurement program which focuses on obtaining tissue for experiments that require viable cells. In addition to providing support for a range of investigators, this resource is a cornerstone of my own research program. | 2007 - Present

Ad Hoc Reviewer: Blood, Blood Advances, Leukemia Research, Leukemia, Human Pathology, American Journal of Clinical Pathology, BBA-Molecular Cell Research, Hematological Oncology, Oncotarget, Journal of Clinical Oncology, Journal of Molecular Diagnostics, Oncogene | Present

---

#### RESEARCH GRANTS

PI: Burack, WR | Title: Leveraging Rural/Urban Diversity to Identify a Molecular Role of Pesticides in Lymphomagenesis | Sponsor: James P. Wilmot Foundation | Grant Type: non-NIH | Awarded: 11/13/2020 | Total Amount: \$50,000.00 | Direct Cost: \$50,000.00 | 12/01/2020 - 06/30/2021

PI: Burack | Title: Targeting TP53 with Radioimmunotherapy in Lymphoma | Sponsor: SWOG/Hope Foundation | Grant Type: non-NIH | Direct Cost: \$187,500.00 | 01/01/2019 - Present

PI: Burack and Mosmann | Title: Immune Function and Dysfunction in Lymphoma (2016 Pilot Program of the James P. Wilmot Cancer Institute) | Grant Type: non-NIH | Awarded: 07/01/2016 | Direct Cost: \$50,000.00 | 07/01/2016 - 06/30/2017

PI: Burack and Hashem (JAXlabs) | Title: The AID-RAD51 Axis as a Better Biomarker in Follicular Lymphoma; 5% salary/effort | Sponsor: Hope Foundation | Grant Type: non-NIH | Grant ID: SWOG ITSC Exploratory Pilot Program | Direct Cost: \$50,000.00 | 01/01/2016 - 12/31/2016

PI: Cerhan and Flowers | Investigators: Burack | Title: Lymphoma Epidemiology and Outcomes; 5% effort/salary | Grant Type: NIH | Direct Cost: \$102,097.00 | 07/01/2015 - 06/30/2020

PI: Burack | Title: Passenger Mutations Due to Activation-induced Deaminase as Biomarkers in Lymphoma; 10% effort/salary | Grant Type: NIH | NIH Grant ID: 1 R21-R21 CA198072-01-NCI | Awarded: 07/01/2015 | Direct Cost: \$139,548.00 | 07/01/2015 - 06/30/2017

PI: Burack | Title: Host-tumor interactions in FL: How tumor infiltrating T-cells modulate FL biology in vivo; 10% effort/salary | Sponsor: Lymphoma Research Foundation | Grant Type: non-NIH | Direct Cost: \$150,000.00 | 09/01/2013 - 08/31/2016

PI: Burack | Title: UR Clinical and Translational Science Institute: Quantifying Tumor Diversity to Predict and Target Cancer Progression | Grant Type: non-NIH | Direct Cost: \$67,177.00 | 07/01/2013 - 06/30/2014

PI: Bernstein, S. | Investigators: Burack | Title: UR Clinical and Translational Science Institute. Lymphoma and Its Microenvironment: A Novel Clinical Trial. | Sponsor: UR Clinical and Translational Science Institute | Grant Type: non-NIH | Direct Cost: \$50,000.00 | 07/01/2013 - 06/30/2014

PI: Burack, Walter Richard | Title: SPORE Scientific Development Project: Developing a Xeno-transplant model for non-Hodgkin Lymphomas for investigation of the tumor microenvironment and therapeutic trials | Grant Type: NIH | NIH Grant ID: P01-NCI | 07/01/2011 - 06/30/2012

PI: Burack | Title: Regional Stat Tumor Procurement to Support Studies of Lymphoma (Upstate New York Translational Research Network Pilot Project) | Grant Type: non-NIH | Direct Cost: \$50,000.00 | 07/01/2011 - 06/30/2012

PI: Fisher, RI | Title: Biospecimen Core Director: SPORE in Lymphoma | Grant Type: NIH | NIH Grant ID: 1 P50-CA130805-01A1-NCI | Direct Cost: \$256,888.00 | 09/01/2008 - 08/31/2013

PI: Friedberg, J. | Investigators: Burack | Title: Southwest Oncology Group (SWOG) | Grant Type: NIH | NIH Grant ID: 5 CA011083-NCI | Direct Cost: \$179,920.00 | 07/01/2007 - 12/31/2015

PI: Fisher, S. | Investigators: Burack | Title: A Comprehensive Investigation of Viral-induced Lymphomagenesis; 5% effort/salary (investigator) | Grant Type: NIH | NIH Grant ID: R01-CA121180-NCI | April 2006 - February 2011

PI: Burack | Title: Burroughs-Wellcome Career Development Award (Declined additional years support to pursue clinically oriented career) | Grant Type: non-NIH | 2001 - 2003

---

## COMMITTEES

### DEPARTMENTAL

Departmental Promotions and Tenure committee | July 2019 - Present

Departmental Grand Rounds Committee (chair) | 01/01/2014 - 07/30/2014

Pathology Department Steering Committee, member | July 2013 - 12/30/2015

Residency Education Committee | July 2007 - 2015

### HOSPITAL

URSMD Medical Scientist Training Program, Admissions Committee | 2016 - Present

Wehrheim Professorship Search Committee | 2013 - 2016

Laboratory Diagnostics Committee (Oncology) | March 2011 - Present

Residency Review Committees for ACGME credentialing (ad hoc member) | 2000 - Present

### NATIONAL

Follicular Lymphoma working group, Co-Chair, Lymphoma Epidemiology and Outcomes (LEO) project. LEO is an NCI funded consortium of 8 medical centers with particular expertise in the care of lymphoma patients | 2021 - Present

Southwest Oncology Group (SWOG) Membership Committee | 2010 - 2014

National Comprehensive Cancer Network: Subcommittee for Myelodysplastic Syndromes | 2005 - 2007

### OTHER

Molly Niska Dissertation Committee, Microbiology and Immunology | 04/01/2023 - Present

Biobank Advisory Committee (BAC) | 2022 - Present

Audrey Jajosky, M.D. - Assistant Professor (Molecular), Departmental Mentorship Committee | July 2021 - Present

Li Zha, PhD - Assistant Professor (Chemistry), Departmental Mentorship Committee | 2020

Carol Fries Simpson, M.D., Pediatric Hematology-Oncology fellow and subsequently instructor. Member of academic advisory committee and principal research mentor | 2019 - 2021

Tony Yeung, MD PhD - Assistant Professor (hematopathology), Departmental Mentorship Committee (Chair) | 2019

Akua Asante, MD, Pediatric Hematology-Oncology fellow, member academic advisory committee; current role private practice | 2018 - 2019

Rajnish Bharadwaj, MD PhD, Assistant Professor (neuropathology); Departmental Mentorship Committee (Chair) | 2018

Nicole Pecora, MD PhD - Assistant Professor, Clinical Microbiology, Departmental Mentorship Committee | 2016 - 2020

Philip Meacham - PhD Dissertation Committee, University of Rochester, Thesis on Evaluating the risk of second lymphoid malignancies. | 2016 - September 2019

Yi Ding, MD PhD - Assistant Professor, Molecular Genetic Pathology, Departmental Mentorship Committee (Chair) | 2016 - 2018

Bin Zhang, PhD - Assistant Professor (cytogenetics), Departmental Mentorship Committee (chair); promoted 2021 | 2016

Michael Wilson - PhD Dissertation Committee, University of Rochester, Thesis on the Role of Evf1 in Hematopoietic Stem Cell Regulation and Myeloid Lineage Commitment. | 2016

Andrew Evans, MD PhD, assistant Professor (Hematopathology) - Departmental Mentorship Committee (Chair); promoted 2019 | 2013 - Present

Victoria (Yan) Zhang, PhD, Assistant Professor - Departmental Mentorship Committee, promoted 2017 | 2012 - 2018

---

### **Examples of major current work-in-progress (for 2023 publication)**

1. Burack, Li, Adlowitz, Spence, Rimsza, Shadman, Spier, Kaminski, Leonard, Leblanc, Smith, Friedberg. "Subclonal TP53 mutations are a predictive marker for radioimmunotherapy resistance in follicular lymphoma." *Blood Advances*. 2023 In Review.
2. Fries, Spence, Baker, Poudel, Spence, Rock, Zhang, Iqbal, Wang, Adlowitz, Palumbo, McMurray, McDavid, Burack. "Extent of immunoglobulin sequence diversity distinguishes subgroups of patients with B-lymphoblastic leukemia ." in preparation.

---

### **JOURNAL ARTICLES**

1. Centor RM; Burack WR; Lichtman MA. "Annals On Call - The Complete Blood Count: Cleaning Up the Clutter." *Annals of internal medicine*. 2023; Epub 2023 Apr 04.
2. Archibald WJ; Baran AM; Williams AM; Salloum RM; Richard Burack W; Evans AG; Syposs CR; Zent CS. "The role of splenectomy in management of splenic B-cell lymphomas." *Leukemia research*. 2023;128():107053. Epub 2023 Mar 02.
3. Burack WR; Lichtman MA. "The Complete Blood Count: Increasing Its Precision and Impact." *Annals of internal medicine*. 2023; Epub 2023 Jan 31.
4. El Hussein S; Yabe M; Wang W; Pemmaraju N; Loghavi S; Jelloul FZ; Fang H; Medeiros LJ; Burack WR; Evans AG; Liesveld JL; Bennett JM. "Blastic plasmacytoid dendritic cell neoplasm (BPDCN) arising in the setting of polycythemia vera (PV): An illustration of the emerging role of flow cytometry analysis in monitoring progression of myeloproliferative neoplasms." *EJHaem*. 2022;3(3):954-957.

5. El Hussein S; Wang X; Fang H; Jelloul FZ; Wang W; Loghavi S; Vega F; Miranda RN; Muzzafar T; Manning JT; Khoury JD; Burack WR; Evans AG; Medeiros LJ. "Nodular Lymphocyte-predominant Hodgkin Lymphoma With Nodular Sclerosis: An Underrecognized Feature Associated With Pattern D." *The American journal of surgical pathology*. 2022; Epub 2022 May 16.
6. Casulo C; Larson MC; Lunde JJ; Habermann TM; Lossos IS; Wang Y; Nastoupil LJ; Strouse C; Chihara D; Martin P; Cohen JB; Kahl BS; Burack WR; Koff JL; Mun Y; Masaquel A; Wu M; Wei MC; Shewade A; Li J; Cerhan J; Flowers CR; Link BK; Maurer MJ. "Treatment patterns and outcomes of patients with relapsed or refractory follicular lymphoma receiving three or more lines of systemic therapy (LEO CREWE): a multicentre cohort study." *The Lancet. Haematology*. 2022;9(4):e289-e300.
7. Liu L; Adlowitz DG; Rock P; Casulo C; Burack WR. "Hypergammaglobulinemia as a presenting feature of Mantle cell lymphoma." *Leukemia & lymphoma*. 2022; Epub 2022 Mar 31.
8. Komisarof J; Lipof J; DiTursi J; Chowdhry A; Grace Choung HY; Burack WR; Constine L; Passero F. "An Unusual Case of Multiple Myeloma with Light-Chain Cast Nephropathy Secondary to a Very Large Plasmacytoma without Bone Marrow Involvement." *Case reports in hematology*. 2022;2022():7531142.
9. Zengin HB; Reyes-Barron C; Cusick E; Cordisco M; Katzman PJ; Burack WR; Scott G. "A Young Boy With Hemophagocytic Lymphohistiocytosis Presenting With Vaccine-Related Granulomatous Dermatitis: A Case Report and Literature Review." *The American Journal of dermatopathology*. 2021;43(12):e267-e272.
10. Valle-Argos B, Chiodin G, Bryant DJ, Taylor J, Lemm E, Duriez PJ, Rock PJ, Strefford JC, Forconi F, Burack RW, Packham G, Stevenson FK. "DC-SIGN binding to mannosylated B-cell receptors in follicular lymphoma down-modulates receptor signaling capacity". *Sci Rep*. 2021; 11(1): 11676.
11. Palacios F, Yan XJ, Ferrer G, Chen SS, Vergani S, Yang X, Gardner J, Barrientos JC, Rock P, Burack R, Kolitz JE, Allen SL, Kharas MG, Abdel-Wahab O, Rai KR, Chiorazzi N. "Musashi 2 influences chronic lymphocytic leukemia cell survival and growth making it a potential therapeutic target". *Leukemia*. 2021; 35(4): 1037-52.
12. Chiodin G, Allen JD, Bryant D, Rock P, Martino EA, Valle-Argos B, Duriez PJ, Watanabe Y, Henderson I, Blachly JS, McCann KJ, Strefford JC, Packham G, Geijtenbeek TB, Figdor C, Wright G, Staudt LM, Burack R, Bowden T, Crispin M, Stevenson FK, Forconi F. "Insertion of atypical glycans into the tumor antigen-binding site identifies DLBCLs with distinct origin and behavior". *Blood*. 2021; .
13. Fries C; Adlowitz DG; Spence JM; Spence JP; Rock PJ; Burack WR. "Acute lymphoblastic leukemia clonal distribution between bone marrow and peripheral blood." *Pediatric blood & cancer*. 2020; Epub 2020 Apr 11.
14. Meacham PJ; Williams AM; Strawderman M; Baran AM; Archibald WJ; Wallace DS; Tschernia NP; Burack WR; Barr PM; Zent CS. "Additional B-cell malignancies in patients with chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL)." *Leukemia & lymphoma*. 2020; Epub 2020 Mar 16.
15. Norris PAA; Segel GB; Burack WR; Sachs UJ; Lissenberg-Thunnissen SN; Vidarsson G; Bayat B; Cserti-Gazdewich CM; Callum J; Lin Y; Branch D; Kapur R; Semple JW; Lazarus AH. "FcγRI and FcγRIII on splenic macrophages mediate phagocytosis of anti-glycoprotein IIb/IIIa autoantibody-opsinized platelets in immune thrombocytopenia." *Haematologica*. 2020; Epub 2020 Feb 27.
16. Fries C; Burack WR. "A clinical perspective on immunoglobulin heavy chain clonal heterogeneity in B cell acute lymphoblastic leukemia." *Leukemia research*. 2018;75():15-22.
17. Hudson CA; Burack WR; Bennett JM. "Emerging utility of flow cytometry in the diagnosis of chronic myelomonocytic leukemia." *Leukemia research*. 2018;73():12-15.



18. Hudson CA; Burack WR; Leary PC; Bennett JM. "Clinical Utility of Classical and Nonclassical Monocyte Percentage in the Diagnosis of Chronic Myelomonocytic Leukemia." *American journal of clinical pathology*. 2018;150(4):293-302.
19. Aslam R; Burack WR; Segel GB; McVey M; Spence SA; Semple JW. "Intravenous immunoglobulin treatment of spleen cells from patients with immune thrombocytopenia significantly increases the percentage of myeloid-derived suppressor cells." *British journal of haematology*. 2018;181(2):262-264.
20. Barr PM; Li H; Burack WR; LeBlanc M; Smith SM; Gopal AK; Floyd JD; Persky DO; Press OW; Fisher RI; Friedberg JW. "R-CHOP, radioimmunotherapy, and maintenance rituximab in untreated follicular lymphoma (SWOG S0801): a single-arm, phase 2, multicentre study." *The Lancet. Haematology*. 2018;5(3):e102-e108.
21. Burack WR; Spence JM; Spence JP; Spence SA; Rock PJ; Shenoy GN; Shultz LD; Bankert RB; Bernstein SH. "Patient-derived xenografts of low-grade B-cell lymphomas demonstrate roles of the tumor microenvironment." *Blood advances*. 2017;1(16):1263-1273.
22. Hunter BD; Herr M; Meacham PJ; Bartaskar F; Evans AG; Burack WR; Liesveld JL; Becker MW; Milner LA; Constine LS; Dhakal S; Barr PM; Friedberg JW; Casulo C. "Late Relapses After High-dose Chemotherapy and Autologous Stem Cell Transplantation in Patients With Diffuse Large B-cell Lymphoma in the Rituximab Era." *Clinical lymphoma, myeloma & leukemia*. 2017;17(3):145-151.
23. Patel N; Hoffman CM; Goldman BI; Bentley K; Burack WR; Evans AG. "Green Inclusions in Neutrophils and Monocytes Are an Indicator of Acute Liver Injury and High Mortality." *Acta haematologica*. 2017;138(2):85-90.
24. Reyes-Barron C; Burack WR; Rothberg PG; Ding Y. "Next-Generation Sequencing for Minimal Residual Disease Surveillance in Acute Lymphoblastic Leukemia: An Update." *Critical reviews in oncogenesis*. 2017;22(5-6):559-567.
25. Youn P; Cummings MA; Dhakal S; Burack WR; Casulo C; Barr PM; Friedberg JW; Constine LS. "Prognostic Impact of Cell of Origin in Limited-Stage Diffuse Large B-Cell Lymphoma Treated With R-CHOP With or Without Radiation Therapy." *International journal of radiation oncology, biology, physics*. 2016;96(2S):E495.
26. Evans AG; Ahmad A; Burack WR; Iqbal MA. "Combined comparative genomic hybridization and single-nucleotide polymorphism array detects cryptic chromosomal lesions in both myelodysplastic syndromes and cytopenias of undetermined significance." *Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc*. 2016;29(10):1183-99.
27. Redd L; Schmelz M; Burack WR; Cook JR; Day AW; Rimsza L. "Langerhans Cell Histiocytosis Shows Distinct Cytoplasmic Expression of Major Histocompatibility Class II Antigens." *Journal of hematopathology*. 2016;9(3):107-112.
28. Kuzin II; Kates SL; Ju Y; Zhang L; Rahimi H; Wojciechowski W; Bernstein SH; Burack R; Schwarz EM; Bottaro A. "Increased numbers of CD23(+) CD21(hi) Bin-like B cells in human reactive and rheumatoid arthritis lymph nodes." *European journal of immunology*. 2016;46(7):1752-7.
29. Aslam R; Segel GB; Burack R; Spence SA; Speck ER; Guo L; Semple JW. "Splenic lymphocyte subtypes in immune thrombocytopenia: increased presence of a subtype of B-regulatory cells." *British journal of haematology*. 2016;173(1):159-60.
30. Lindorfer MA; Cook EM; Tupitza JC; Zent CS; Burack R; de Jong RN; Beurskens FJ; Schuurman J; Parren PW; Taylor RP. "Real-time analysis of the detailed sequence of cellular events in mAb-mediated complement-dependent cytotoxicity of B-cell lines and of chronic lymphocytic leukemia B-cells." *Molecular immunology*. 2016;70():13-23.

31. Till BG; Li H; Bernstein SH; Fisher RI; Burack WR; Rimsza LM; Floyd JD; DaSilva MA; Moore DF; Pozdnyakova O; Smith SM; LeBlanc M; Friedberg JW. "Phase II trial of R-CHOP plus bortezomib induction therapy followed by bortezomib maintenance for newly diagnosed mantle cell lymphoma: SWOG S0601." *British journal of haematology*. 2016;172(2):208-18.
32. Nedelkovska H; Rosenberg AF; Hilchey SP; Hyrien O; Burack WR; Quataert SA; Baker CM; Azadniv M; Welle SL; Ansell SM; Kim M; Bernstein SH. "Follicular Lymphoma Tregs Have a Distinct Transcription Profile Impacting Their Migration and Retention in the Malignant Lymph Node." *PloS one*. 2016;11(5):e0155347.
33. Evans AG; Rothberg PG; Burack WR; Huntington SF; Porter DL; Friedberg JW; Liesveld JL. "Evolution to plasmablastic lymphoma evades CD19-directed chimeric antigen receptor T cells." *British journal of haematology*. 2015;171(2):205-209.
34. Halliley JL; Tipton CM; Liesveld J; Rosenberg AF; Darce J; Gregoretti IV; Popova L; Kaminiski D; Fucile CF; Albizua I; Kyu S; Chiang KY; Bradley KT; Burack R; Slifka M; Hammarlund E; Wu H; Zhao L; Walsh EE; Falsey AR; Randall TD; Cheung WC; Sanz I; Lee FE. "Long-Lived Plasma Cells Are Contained within the CD19(-)CD38(hi)CD138(+) Subset in Human Bone Marrow." *Immunity*. 2015;43(1):132-45.
35. Pulvino M; Chen L; Oleksyn D; Li J; Compitello G; Rossi R; Spence S; Balakrishnan V; Jordan C; Poligone B; Casulo C; Burack R; Shapiro JL; Bernstein S; Friedberg JW; Deshaies RJ; Land H; Zhao J. "Inhibition of COP9-signalosome (CSN) deneddylation activity and tumor growth of diffuse large B-cell lymphomas by doxycycline." *Oncotarget*. 2015;6(17):14796-813.
36. Vajpayee N; Burack R; Wang D; Hutchison RE; Gajra A. "Immunohistochemical expression of mTOR in germinal center and nongerminal center group of diffuse large B-cell lymphoma: a clinicopathological study." *Clinical lymphoma, myeloma & leukemia*. 2015;15(3):159-63.
37. Frederiksen JK; Sharma M; Casulo C; Burack WR. "Systematic review of the effectiveness of fine-needle aspiration and/or core needle biopsy for subclassifying lymphoma." *Archives of pathology & laboratory medicine*. 2015;139(2):245-51.
38. Casulo C; Burack WR; Friedberg JW. "Transformed follicular non-Hodgkin lymphoma." *Blood*. 2015;125(1):40-7.
39. Costaldi, M.E. Lall, A. Burack, R. Zhou, Z.D. "Using Flow Cytometry for the Diagnosis of Lung Neuroendocrine Carcinoma With Samples From Endobronchial Ultrasound Fine Needle Aspiration and Pleural Fluid". *Journal of Interdisciplinary Histopathology*. 2015; 3(1): 3-8.
40. Spence JM; Spence JP; Abumoussa A; Burack WR. "Ultradeep analysis of tumor heterogeneity in regions of somatic hypermutation." *Genome medicine*. 2015;7(1):24.
41. Zent CS; Burack WR. "Mutations in chronic lymphocytic leukemia and how they affect therapy choice: focus on NOTCH1, SF3B1, and TP53." *Hematology*. 2014;2014(1):119-24.
42. Spence JM; Abumoussa A; Spence JP; Burack WR. "Intraclonal diversity in follicular lymphoma analyzed by quantitative ultradeep sequencing of noncoding regions." *The Journal of immunology : official journal of the American Association of Immunologists*. 2014;193(10):4888-94.
43. Subik MK; Herr MM; Hutchison RE; Kelly J; Tyler WK; Merzianu M; Burack WR. "A highly curable lymphoma occurs preferentially in the proximal tibia of young patients." *Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc.* 2014;27(11):1430-1437.
44. Friedberg JW; Unger JM; Burack WR; Gopal AK; Raju RN; Nademanee AP; Kaminski MS; Li H; Press OW; Miller TP; Fisher RI. "R-CHOP with iodine-131 tositumomab consolidation for advanced stage diffuse large B-cell lymphoma (DLBCL): SWOG S0433." *British journal of haematology*. 2014;166(3):382-9.

45. Friedberg JW; Mahadevan D; Cebula E; Persky D; Lossos I; Agarwal AB; Jung J; Burack R; Zhou X; Leonard EJ; Fingert H; Danaee H; Bernstein SH. "Phase II study of alisertib, a selective Aurora A kinase inhibitor, in relapsed and refractory aggressive B- and T-cell non-Hodgkin lymphomas." *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*. 2014;32(1):44-50.
46. Brown JT; Burack WR; Becker MW; Vlad-Vonica R; Nadasdy T; Bennett JM; Mendler JH. "Extracellular crystals in plasma cell myeloma." *Leukemia research reports*. 2014;3(2):49-50.
47. Bernstein SH; Epner E; Unger JM; Leblanc M; Cebula E; Burack R; Rimsza L; Miller TP; Fisher RI. "A phase II multicenter trial of hyperCVAD MTX/Ara-C and rituximab in patients with previously untreated mantle cell lymphoma; SWOG 0213." *Annals of oncology : official journal of the European Society for Medical Oncology*. 2013;24(6):1587-93.
48. Rauh MJ; Rahman F; Good D; Silverman J; Brennan MK; Dimov N; Liesveld J; Ryan DH; Richard Burack W; Bennett JM. "Blastic plasmacytoid dendritic cell neoplasm with leukemic presentation, lacking cutaneous involvement: Case series and literature review." *Leukemia research*. 2012;36(1):81-6.
49. Yeung CC; Powers ML; Nguyen TD; Kreisel F; Frater JL; Zehnbauser BA; Burack R; Hassan A. "Relevance of IgVH gene somatic hypermutation and interphase cytogenetics in lymphomatous presentation of chronic lymphocytic leukemia/small lymphocytic lymphoma." *International journal of surgical pathology*. 2011;19(5):563-9.
50. Hilchey SP; Rosenberg AF; Hyrien O; Secor-Socha S; Cochran MR; Brady MT; Wang JC; Sanz I; Burack WR; Quataert SA; Bernstein SH. "Follicular lymphoma tumor-infiltrating T-helper (T(H)) cells have the same polyfunctional potential as normal nodal T(H) cells despite skewed differentiation." *Blood*. 2011;118(13):3591-602.
51. Spence JM; Rothberg PG; Wang N; Burack WR. "Demonstration of array-based analysis for highly multiplexed PCR assays application to detection of IGH@-BCL2 translocations in FFPE follicular lymphoma specimens." *The Journal of molecular diagnostics : JMD*. 2011;13(3):252-62.
52. Amador-Ortiz C; Chen L; Hassan A; Frater JL; Burack R; Nguyen TT; Kreisel F. "Combined core needle biopsy and fine-needle aspiration with ancillary studies correlate highly with traditional techniques in the diagnosis of nodal-based lymphoma." *American journal of clinical pathology*. 2011;135(4):516-24.
53. Cooper AR; Burack WR; Allerton JP. "A case of Kaposi sarcoma-associated herpesvirus/human herpesvirus 8-unrelated but Epstein-Barr virus-positive primary effusion lymphoma-like lymphoma in the setting of human immunodeficiency virus and hepatitis C virus infection." *Leukemia & lymphoma*. 2010;51(12):2303-5.
54. Ferrantino M; Eichelberger J; Burack HR; Li F; Lee FE. "A 48-year-old woman with a large mediastinal mass." *Chest*. 2010;138(5):1260-4.
55. Bennett JM; Pryor J; Laughlin TS; Rothberg PG; Burack WR. "Is the association of 'cup-like' nuclei with mutation of the NPM1 gene in acute myeloid leukemia clinically useful?" *American journal of clinical pathology*. 2010;134(4):648-52.
56. Burack WR; Laughlin TS; Friedberg JW; Spence JM; Rothberg PG. "PCR assays detect B-lymphocyte clonality in formalin-fixed, paraffin-embedded specimens of classical hodgkin lymphoma without microdissection." *American journal of clinical pathology*. 2010;134(1):104-11.
57. Hilchey SP; Kobie JJ; Cochran MR; Secor-Socha S; Wang JC; Hyrien O; Burack WR; Mosmann TR; Quataert SA; Bernstein SH. "Human follicular lymphoma CD39+ infiltrating T cells contribute to adenosine-mediated T cell hyporesponsiveness." *The Journal of immunology : official journal of the American Association of Immunologists*. 2009;183(10):6157-66.

58. Bernstein SH; Burack WR. "The incidence, natural history, biology, and treatment of transformed lymphomas." *Hematology*. 2009;
59. Vomastek T; Iwanicki MP; Burack WR; Tiwari D; Kumar D; Parsons JT; Weber MJ; Nandicoori VK. "Extracellular signal-regulated kinase 2 (ERK2) phosphorylation sites and docking domain on the nuclear pore complex protein Tpr cooperatively regulate ERK2-Tpr interaction." *Molecular and cellular biology*. 2008;28(22):6954-66.
60. Halldórsdóttir AM; Frühwirth M; Deutsch A; Aigelsreiter A; Beham-Schmid C; Agnarsson BA; Neumeister P; Richard Burack W. "Quantifying the role of aberrant somatic hypermutation in transformation of follicular lymphoma." *Leukemia research*. 2008;32(7):1015-21.
61. Halldórsdóttir AM; Zehnbauer BA; Burack WR. "Application of BIOMED-2 clonality assays to formalin-fixed paraffin embedded follicular lymphoma specimens: superior performance of the IGK assays compared to IGH for suboptimal specimens." *Leukemia & lymphoma*. 2007;48(7):1338-43.
62. Seo J; Chung YS; Sharma GG; Moon E; Burack WR; Pandita TK; Choi K. "Cdt1 transgenic mice develop lymphoblastic lymphoma in the absence of p53." *Oncogene*. 2005;24(55):8176-86.
63. Markiewicz MA; Carayannopoulos LN; Naidenko OV; Matsui K; Burack WR; Wise EL; Fremont DH; Allen PM; Yokoyama WM; Colonna M; Shaw AS. "Costimulation through NKG2D enhances murine CD8+ CTL function: similarities and differences between NKG2D and CD28 costimulation." *The Journal of immunology : official journal of the American Association of Immunologists*. 2005;175(5):2825-33.
64. Tu PH; Giannini C; Judkins AR; Schwalb JM; Burack R; O'Neill BP; Yachnis AT; Burger PC; Scheithauer BW; Perry A. "Clinicopathologic and genetic profile of intracranial marginal zone lymphoma: a primary low-grade CNS lymphoma that mimics meningioma." *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*. 2005;23(24):5718-27.
65. Burack WR; Shaw AS. "Live Cell Imaging of ERK and MEK: simple binding equilibrium explains the regulated nucleocytoplasmic distribution of ERK." *The Journal of biological chemistry*. 2005;280(5):3832-7.
66. Lee KH; Dinner AR; Tu C; Campi G; Raychaudhuri S; Varma R; Sims TN; Burack WR; Wu H; Wang J; Kanagawa O; Markiewicz M; Allen PM; Dustin ML; Chakraborty AK; Shaw AS. "The immunological synapse balances T cell receptor signaling and degradation." *Science*. 2003;302(5648):1218-22.
67. Burack WR; Lee KH; Holdorf AD; Dustin ML; Shaw AS. "Cutting edge: quantitative imaging of raft accumulation in the immunological synapse." *The Journal of immunology : official journal of the American Association of Immunologists*. 2002;169(6):2837-41.
68. Hailman E; Burack WR; Shaw AS; Dustin ML; Allen PM. "Immature CD4(+)CD8(+) thymocytes form a multifocal immunological synapse with sustained tyrosine phosphorylation." *Immunity*. 2002;16(6):839-48.
69. Nguyen A; Burack WR; Stock JL; Kortum R; Chaika OV; Afkarian M; Muller WJ; Murphy KM; Morrison DK; Lewis RE; McNeish J; Shaw AS. "Kinase suppressor of Ras (KSR) is a scaffold which facilitates mitogen-activated protein kinase activation in vivo." *Molecular and cellular biology*. 2002;22(9):3035-45.
70. Holdorf AD; Lee KH; Burack WR; Allen PM; Shaw AS. "Regulation of Lck activity by CD4 and CD28 in the immunological synapse." *Nature immunology*. 2002;3(3):259-64.
71. Burack WR; Dibble AR; Biltonen RL. "The relationship between compositional phase separation and vesicle morphology: implications for the regulation of phospholipase A2 by membrane structure." *Chemistry and physics of lipids*. 1997;90(1-2):87-95.

72. Burack WR; Dibble AR; Allietta MM; Biltonen RL. "Changes in vesicle morphology induced by lateral phase separation modulate phospholipase A2 activity." *Biochemistry*. 1997;36(34):10551-7.
73. Burack WR; Sturgill TW. "The activating dual phosphorylation of MAPK by MEK is nonprocessive." *Biochemistry*. 1997;36(20):5929-33.
74. Burack WR; Gadd ME; Biltonen RL. "Modulation of phospholipase A2: identification of an inactive membrane-bound state." *Biochemistry*. 1995;34(45):14819-28.
75. Burack WR; Biltonen RL. "Lipid bilayer heterogeneities and modulation of phospholipase A2 activity." *Chemistry and physics of lipids*. 1994;73(1-2):209-22.
76. Burack WR; Yuan Q; Biltonen RL. "Role of lateral phase separation in the modulation of phospholipase A2 activity." *Biochemistry*. 1993;32(2):583-9.
77. Lathrop BK; Burack WR; Biltonen RL; Rule GS. "Expression of a group II phospholipase A2 from the venom of *Agkistrodon piscivorus piscivorus* in *Escherichia coli*: recovery and renaturation from bacterial inclusion bodies." *Protein expression and purification*. 1992;3(6):512-7.

---

### **BOOKS AND CHAPTERS**

- W. Richard Burack. "The Roles of Molecular Techniques in the Diagnosis and Management of Follicular Lymphoma". *Molecular Pathology of Hematolymphoid Disease*. Springer, 2010.
- W. Richard Burack John D. Pfeifer. "Non-imaging Cell and Tissue Techniques and Tissue Banking". *Translational and Experimental Clinical Research*. Daniel P. Schuster and William J. Powers. Philadelphia, PA: Lippincott Williams and Wilkins, 2005. 413-434.

---

### **LETTERS**

- O'Dwyer, K. M., & Burack, R. (2022). When Is a Needle Not Enough? Exploring the Limits of Cytology and Core Biopsies. *The Hematologist*, 19(2). doi.org/10.1182/hem.V19.2.2022217 | March 2022
- Burack WR. "Symposium on Myeloid Neoplasms" on June 9, 2012 in honor of Dr. John M. Bennett. *Leukemia research*. 2012; 36(12):1440. | 2012

---

### **REVIEW ARTICLES**

- Bromley SK; Burack WR; Johnson KG; Somersalo K; Sims TN; Sumen C; Davis MM; Shaw AS; Allen PM; Dustin ML "The immunological synapse." *Annual review of immunology*. 2001; 19():375-96.
- Burack WR; Cheng AM; Shaw AS "Scaffolds, adaptors and linkers of TCR signaling: theory and practice." *Current opinion in immunology*. 2002; 14(3):312-6.
- Burack WR; Shaw AS "Signal transduction: hanging on a scaffold." *Current opinion in cell biology*. 2000; 12(2):211-6.

---

### **PATENTS - EXTERNAL**

03/16/2012

6-2079

Methods of Predicting Clinical Outcome of Chronic Lymphocytic Leukemia

Jan Spence and Richard Burack

Issue Date: 03-16-2012