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EDUCATION

Central High School, Philadelphia, Pennsylvania, B.A.

Pennsylvania State University, University Park, Pennsylvania, B.S.

Jefferson Medical College, Philadelphia, Pennsylvania, M.D., Cum Laude.

POSTDOCTORAL TRAINING

Chestnut Hill Hospital, Philadelphia, Pennsylvania, Rotating Internship, July 1971 to June 1972

Thomas Jefferson University, Philadelphia, Pennsylvania, Resident Anatomic and Clinical Pathology, July 1972 to July 1976

Scripps Clinic and Research Foundation Department of Molecular Immunology,
La Jolla, California, Research Fellow, July 1976 to June 1977

LICENSURE AND CERTIFICATION

California State Medical License, G31880, June 1976

Anatomic and Clinical Pathology, Board Certified, May 1976

Immunopathology, Board Certified, May 1983

CURRENT POSITIONS

President 5H Products, December 2018 to present. Hair loss prevention product.

Member Health Subcommittee, San Diego Human Trafficking & CSEC Advisory Council,
December 2018 to present.

Medical Director AristaMD, October 2017 to present. eHealth Solutions for Primary Care
Physician Referrals.

Medical Advisor Epione Medical Labs, January 2017 to present. Precision Medicine Laboratory
specializing in targeted therapies for cancer and metabolic disorders.

Medical Advisor Genovo Molecular Diagnostics, January 2017 to present. Precision Medicine
Laboratory specializing in targeted therapies for cancer and metabolic disorders.

Medical Advisor New Zealand Technology and Trade Association, December 2016 to present. Private
sector advisor acting as a mentor to provide insights into growing internationally successful business.

Medical Advisor, Phagotech LLC, December 2014 to present. Principal investigator for biomedical device
utilizing bacteriophage and electro-conductance to detect bladder cancer biomarkers in urine.

Progenity, Principal Investigator, October 2015 to present. Gastric capsule device safety study.

Consultant Kaufman Associates, December 2014 to present. Advisor to principal on compensation and contracting for hospital-based physicians.

Pathologist Consultant, Crown Bioscience, January 2015 to Present. Review human cancer models for cancer drug studies.

Productivity Advisors, Principal, June 2013 to Present. Develop information systems for boutique, clinical laboratories systems.

Inspector, College of American Pathologists, 1988 to present. Inspect CAP accredited laboratories.

FORENSIC EXPERIENCE

I have provided forensic expert testimony in medical malpractice, product liability, civil litigation, and criminal cases.

I have provided expert testimony for over 40 years.

Currently, provide expert forensic pathology consultations for plaintiffs and defense attorneys.

Areas of expertise include pharmacology, toxicology, autopsy pathology, clinical laboratory medicine, cancer diagnosis, prognosis, and treatment modalities.

CLINICAL LABORATORY EXPERIENCE

Laboratory	Position held	Years in position
National Health Labs San Diego	Medical Director	1977 to 1982
National Health Labs Pasadena	Medical Director	1977 to 1982
Diagnostic Immunology Lab Orange	Medical Director	1979 to 1981
Cabrillo Medical Center San Diego	Medical Director	1976 to 1981
Sharp Cabrillo Hospital San Diego	Medical Director	1981 to 1994
Sharp Memorial Hospital San Diego	Medical Director	1994 to 2009
Pacific Rim Pathology Lab	President	1995 to 2009
Genoptix	Medical Director	2002 to 2004
Sharp Rees Stealy Labs	Medical Director	2000 to 2008
Sequenom Center Molecular Medicine	Medical Director	2010 to 2011
Pediatric Bioscience	Medical Director	2011 to 2014
Molecular Response Lab	Medical Director	2013 to 2014
Genalyte Clinical Laboratory	Medical Director	2015 to 2016

MEMBERSHIPS IN SOCIETIES

Fellow, College of American Pathologists, 1980 to present

Member, American Association for Clinical Chemistry, 2001 to present

Member, California Association Laboratory Technology, 2010 to present

Member, California Society of Pathologists, 1995 to present

Member, American Medical Association, 2010 to present

MAJOR RESEARCH INTERESTS

Cancer, molecular and proteomic technologies, diagnosis and targeted therapies

Melanoma, molecular diagnosis

Prostate cancer, molecular markers for prognosis and prediction of outcome

Breast cancer, molecular markers for prognosis and prediction of outcome

Hepatitis C Virus, molecular biology, serology and histopathology

Renal disease, histopathology, immunopathology and ultrastructural findings

Laboratory developed tests and laboratory accreditation

Toxicology and pharmacology of drugs of abuse

Transfusion medicine, indications, risks and benefits

BOARD ACTIVITIES

Board of Directors, Sharp Health Care Foundation, December 2006 to January 2016

Advisory Board, City National Bank, 2006 to present

President, Board of Directors, San Diego Blood Bank, January 2008 to December 2009

President, Board of Directors, Pacific Rim Pathology, June 1994 to May 2009

Board of Trustees, San Diego Hospital Association, July 1990 to July 1992

Board of Trustees - Sharp Cabrillo Hospital, July 1987 to July 1992

Board of Directors - American Cancer Society, San Diego Unit, January 1984 to 1991

Board of Directors - American Cancer Society, California Division, September 1986 to 1987

PREVIOUS APPOINTMENTS

Medical Director Continuing Medical Education, Sharp Health Care, 1993 to December 2013.

Secretary Treasurer, Medical Executive Committee, Sharp Memorial Hospital, January 2008 to December 2009.

Medical Director Laboratory Services, Sharp Memorial Hospitals, May 1994 to December 2009
Chairman Pathology Department, Sharp Memorial Hospital, 1994 to 2002, and 2008 to 2009
Director, Blood Bank, Sharp Memorial Hospital, January 1982 to December 2007
Chairman, Pharmacy & Therapeutics Committee, Sharp Memorial Hospital, 1994 to December 2009
Quality Assurance Committee, Sharp Memorial Hospital, 1989 to 2011
Member Executive Medical Board, Sharp Memorial Hospital, 1992 to 2002 and 2008 to 2009
Executive Medical Committee, Sharp Cabrillo Hospital, July 1984 to July 1995
Chief of Medicine, Sharp Cabrillo Hospital, San Diego, California, July 1984 to July 1988
Chief of Staff, Sharp Cabrillo Hospital, San Diego, California July 1990 to July 1992

AWARDS AND HONORS

Alpha Omega Alpha, Jefferson Chapter, Philadelphia Pennsylvania, 1970
Mosby Scholarship Book Award, 1971
William C. Felch Award, Alliance Continuing Medical Education, 1991
Golden Staff Award Sharp Cabrillo Hospital, 1994
Physician Recognition Award by Peers, San Diego Magazine, 2004 and 2008

OTHER PROFESSIONAL APPOINTMENTS

Pathologist, Coroner's Office, San Diego County, September 1978 to June 1982
Chairman, Professional Education Committee, American Cancer Society, San Diego Unit, January 1984 to September 1985
Chairman, Professional Education Committee, American Cancer Society, California Division, Area III, May 1986 to May 1987
President, American Cancer Society, San Diego Unit, September 1988 to September 1989
Chairman, Public Issues Committee, California Division, American Cancer Society, September 1989 to August 1990
Vice President for Community Services, American Cancer Society, San Diego Unit, September 1990 to August 1991

BIBLIOGRAPHY

Books

1. Robin, H.S., Michelson, J.B.: Atlas of Medical Complications of Drug Abuse. Yearbook Publisher, 1988

Book Chapters

1. Michelson, J.B., Robin, H.S., Nosik, R.E.: Nonocular Manifestations of Parenteral Drug Abuse; Seminars in Ophthalmology May 1986.
2. Robin, H.S., Immunologic Aspects of AIDS. In: Kolins, J. and Metinkoff, J. ed's. Acquired Immune Deficiency Syndrome, Washington, D.C., AABB Publishers, 1986.

Articles

1. Gerami P, Alsobrook JP, Palmer TJ, Robin HS. Development of a novel noninvasive adhesive patch test for the evaluation of pigmented lesions of the skin. *J Am Acad Dermatol.* 2014 Aug;71(2):237-44. doi: 10.1016/j.jaad.2014.04.042. Epub 2014 Jun 4.
2. Vener T, Derecho C, Baden J, Wang H, Rajpurohit Y, Skelton J, Mehrotra J, Varde S, Chowdary D, Stallings W, Leibovich B, Robin H, Pelzer A, Schäfer G, Auپرich M, Mannweiler S, Amersdorfer P, Mazumder A. Development of a multiplexed urine assay for prostate cancer diagnosis. *Clin Chem.* 2008 May;54(5):874-82. doi: 10.1373/clinchem.2007.094912. Epub 2008 Mar 13.
3. Ma XJ, Patel R, Wang X, Salunga R, Murage J, Desai R, Tuggle JT, Wang W, Chu S, Stecker K, Raja R, Robin H, Moore M, Baunoch D, Sgroi D, Erlander M. Molecular classification of human cancers using a 92-gene real-time quantitative polymerase chain reaction assay. *Arch Pathol Lab Med.* 2006 Apr;130(4):465-73.
4. Overstreet K, Barone RM, Robin HS. Secondary amyloidosis and gastrointestinal stromal tumors. A case report and discussion of pathogenesis. *Arch Pathol Lab Med.* 2003 Apr;127(4):470-3.
5. Kawakami M, Kawakami K, Stepensky VA, Maki RA, Robin H, Muller W, Husain SR, Puri RK. Interleukin 4 receptor on human lung cancer: a molecular target for cytotoxin therapy. *Clin Cancer Res.* 2002 Nov;8(11):3503-11.
6. Cowper SE, Su LD, Bhawan J, Robin HS, LeBoit PE. Nephrogenic fibrosing dermopathy. *Am J Dermatopathol.* 2001 Oct;23(5):383-93.
7. Cowper SE, Robin HS, Steinberg SM, Su LD, Gupta S, LeBoit PE. Scleromyxoedema-like cutaneous diseases in renal-dialysis patients. *Lancet.* 2000 Sep 16;356(9234):1000-1.
8. Pronovost AD, Rose SL, Pawlak JW, Robin H, Schneider R. Evaluation of a new immunodiagnostic assay for Helicobacter pylori antibody detection: correlation with histopathological and microbiological results. *J Clin Microbiol.* 1994 Jan;32(1):46-50.
9. Travis WD, Kalafer ME, Robin HS, Luibel FJ. Hypersensitivity pneumonitis and pulmonary vasculitis with eosinophilia in a patient taking an L-tryptophan preparation. *Ann Intern Med.* 1990 Feb 15;112(4):301-3.
10. Ho DD, Moudgil T, Robin HS, Alam M, Wallace BJ, Mizrachi Y. Human immunodeficiency virus type 1 in a seronegative patient with visceral Kaposi's sarcoma and hypogammaglobulinemia. *Am J Med.* 1989 Mar;86(3):349-51.

11. Gresham LS, Molgaard CA, Elder JP, Robin HS. Breast cancer and mammography: summary of the educational impact of a low-cost mammography program. *Health Educ.* 1988 Jun-Jul;19(3):32-5.

12. Michelson JB, Robin HS, Nozik RA. Nonocular manifestations of parenteral drug abuse. *Surv Ophthalmol.* 1986 Mar-Apr;30(5):314-20.

13. Robin HS, Barnhart F, Shaw R, Raasch F. Hepatitis B and the coroner's office. *Am J Forensic Med Pathol.* 1982 Sep;3(3):281-2.

Abstracts

1. Robin, H.S.: Structural Independence of LDL-In Receptor from Fc, SIg, C3b, C3d, and E rosette Receptors. *Fed. Proc.* 36:1235, 1977.
2. Robin, H.S., Myers, B., Pileggi, V., Winkelman, J.: Simultaneous Detection of HBsAg/Anti-HBs by a Combination Solid-Phase Sandwich and Sequential Competitive Binding Assay. Abstract presented at the Annual Meeting of Academy of Clinical Laboratory Physicians and Scientists, May, 1978.
3. B. Martin, Robin, H.S., R. Williams, W. Ornelas: Neonatal Graft Versus Host Disease Following Transfusion of Maternal Platelets. *AABB* November 1984.
4. Wormsley, S., Robin, H.S., A. Cohen, P. Goldfarb: Flow Cytometry of Body Fluids. *International Conference of Analytical Cytology*, November 1985.
5. Robin, H.S., Wormsley, S., A. Raney, D. Zusman, J. Peter: Immunologic Monitoring Of Heart Transplant Patients By Flow Cytometry. *AABB*, November 1986.
6. Wormsley, S.B., and Robin, H.S.: Characterization of Breast Carcinoma by Flow Cytometry; 2nd *International Workshop on Monoclonal Antibodies and Breast Cancer*, November 1986.
7. B. Myers, T. Stern; Behring Diagnostics, La Jolla, CA and H. Robin, Sharp Cabrillo Hospital, San Diego, CA. Antibody to Hepatitis B Core Antigen as a Diagnostic and Prognostic Marker for Hepatitis B Viral Infection. *ASM Annual Meeting*, Atlanta, GA. March, 1987.
8. S.B. Wormsley, H.S. Robin, A.A. Raney, D.R. Zusman, B.E. Jaski, S.C. Smith, J.W. Bonar, J.B. Stewart, J.B. Peter; Flow Cytometric Immune Monitoring (FCIM) for Prediction of Rejection, Infection and Lymphoproliferative Disorders in Cardiac Allograft Recipients. *International Society for Heart Transplantation, Seventh Annual Scientific Sessions*, March 1987, New Orleans, LA.
9. A.A. Raney, S.B. Wormsley, H.S. Robin, D.R. Zusman, B.E. Jaski, S.C. Smith, J.W. Bonar, J.B. Stewart, J.B. Peter; Flow Cytometric Immune Monitoring (FCIM) As and Indicator for the Timing of Endomyocardial Biopsy. *International Society for Heart Transplantation, Seventh Annual Scientific Sessions*, March 1987, New Orleans, LA.
10. Wormsley, S.B; Robin, H.S.; Adamson, R.M.; Dembitsky, Wp. P.; Daily, P.O.; Raney, A.A.; Zusman, D.R.; Jaski, B.E.; Smith, S.C.; Hoagland, P.; Bonar, J.W.; Stewart, J.B.; Saiget, S.;

- Grover, T.L.; Coburn, J.A. Immunologic Recognition of Rejection. First Canadian Conference on Cardiac Transplantation, May 1988.
11. Robin, HS., Eberhardt, JS., Gaertner, R., Armstrong, M. Application of multivariate probabilistic (Bayesian) networks to the interpretation of diagnostic assays. May 2005.
 12. Wu L, Robin HS, Gallarda JL, Eberhardt JS, Muller WD, Sadeghi S, Clark RC. Prognostic value of p53 specific mutations in low-risk HER-2/neu negative primary breast cancers. December 2005.
 13. Jack Groskopf¹, Siobhan Miick¹, Chris Wixom², Alexis Parton², Mark Reynolds¹, Harry Rittenhouse¹, Howard Robin², and Mahul B. Amin³. Direct Detection of TMPRSS2: ETS Family Gene Fusion mRNAs in Prostatectomy Tissue: Prevalence and Correlation with Clinicopathologic Data.
 14. Anthony. L. James¹, Zephyr Fors¹, Siobhan Miick¹, Alexis N. Parton², Howard S. Robin², Harry Rittenhouse¹ and Jack Groskopf¹. Quantitation of PSA mRNA from FFPE prostate tissue: specific mRNA extraction, transcription-mediated amplification and detection in ~6 hours.
 15. Siobhan M. Miick¹, Zephyr Fors¹, Anthony N. James¹, Chris Wixom², Priya Nigwekar³, Ghee Young Kwon³, Yousef E. Tadros³, Ruta Gupta³, Alexis N. Parton², Mark Reynolds¹, Harry Rittenhouse¹, Howard S. Robin², and Mahul B. Amin³, Jack Groskopf¹. Detection of mRNA fusion transcripts of TMPRSS2: ETS family chromosomal rearrangements in radical prostatectomy tissue from 100 cases.
 16. Siobhan M. Miick¹, Zephyr Fors¹, Anthony James¹, Mark Reynolds¹, Chris Wixom², Priya Negwakar³, Ghee Young Kwon³, Alexis Parton², Harry Rittenhouse¹, Howard S. Robin², and Mahul B. Amin³, Jack Groskopf¹. Morphologic Correlates of Individual splice variants of TMPRSS2: ETS family prostate Cancer (PCA) detected by Transcription-mediated amplification (TMA) in Radical Prostatectomy Specimens.
 17. Siobhan M. Miick¹, Zephyr Fors¹, Anthony James¹, Mark Reynolds¹, Chris Wixom², Priya Negwakar³, Ghee Young Kwon³, Alexis Parton², Harry Rittenhouse¹, Howard S. Robin² and Mahul B. Amin³, Jack Groskopf¹. Detection of mRNA fusion Transcripts of TMPRSS2: ETS family. Chromosomal Rearrangements in Prostate Cancer measured in Radical Prostatectomy Tissue from 100 Cases.
 18. S. Miick¹, GY Kwon², C Wixom³, P Nigwekar², Y Tadros², R Gupta², H Robin³, MB Amin², H Rittenhouse¹, J Groskopf¹. Direct detection of TMPRSS2: ETS family Gene Fusion mRNAs in Prostatectomy Tissue: Prevalence and Correlation with Clinicopathologic Data.
 19. Groskopf J., Miick S., Kwon G.Y., Wixom C., Nigwekar P., Tadros Y., Gupta R., Robin H.S., Rittenhouse H., Amin M.B. Direct detection of tmprss2:ets gene fusion mRNAs in prostatectomy tissue: prevalence and correlation with pathologic features page . 2008 European Association of Urology. Published by Elsevier B.V 141.
 20. S. Miick, P. S. Nigwekar, H. Rittenhouse, J. Groskopf, G. Kwon, Y. E. Tadros, R. Gupta, H. S. Robin, M. B. Amin. Morphologic correlates of individual splice variants of TMPRSS2:Ets^{family} prostate cancer (PCa) detected by transcription-mediated amplification (TMA) in radical prostatectomy specimens.
 21. H.Robin, T. Palmer, J. Alsobrook. Reproducibility and Accuracy of RTQPCR Testing Cross Platform for the Detection of mRNA from Surface Squamous Cells Overlying Pigmented Skin Lesions. Association Molecular Pathology Annual Meeting November 2013.

