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# Jason N. Rosenbaum, MD

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Hospital of the University of Pennsylvania  
Department of Pathology & Laboratory Medicine  
Center for Personalized Diagnostics  
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## Employment

- 2016-present Assistant Professor  
Division of Precision and Computational Diagnostics  
Department of Pathology and Laboratory Medicine  
University of Pennsylvania, Perelman School of Medicine
- 2017-present Associate Director  
Molecular Genetic Pathology Fellowship  
University of Pennsylvania, Perelman School of Medicine

## Education & Training

- Nov 2016 Diplomate, American Board of Pathology, Molecular Genetic Pathology
- 2015-2016 Molecular Genetic Pathology Fellowship,  
Washington University, Barnes Jewish Hospital  
Department of Pathology & Immunology
- July 2015 Diplomate, American Board of Pathology, Anatomic and Clinical Pathology
- 2011-2015 Residency Training, Anatomic and Clinical Pathology,  
University of Wisconsin Hospital and Clinics
- 2011 MD, Northwestern University Feinberg School of Medicine
- 1998 BA (Honors), Molecular and Cell Biology/Integrative Biology,  
Creative Writing minor  
University of California at Berkeley, Berkeley, CA

## Research and Development Experience

- 2016-2017 Developed and Implemented Clinical Fusion Transcript Panel  
Center for Personalized Diagnostics  
Hospital of the University of Pennsylvania

*Clinical assay using Anchored Multiplex PCR (AMP) for detection of oncogenic mRNA transcripts relevant in lung, central nervous system, thyroid, and prostate cancer.*

2015-2017 Self-Directed Research with Eric Duncavage, MD  
Department of Pathology and Immunology  
Washington University, Barnes Jewish Hospital

*Use of Next Generation Sequencing to Detect Novel ALK gene Rearrangements and Predict Therapeutic Response in Non-Small Cell Lung Cancer*

Developing NGS techniques for use in detection and interpretation of chromosomal translocations

*Genomic Landscape of Somatic Variants in Neuroendocrine Carcinoma*  
Analyzed variant calls from targeted next generation sequencing of neuroendocrine carcinoma

2014-Present Research with Darya Buehler, MD, William Rehrauer, PhD, and Jennifer Laffin, PhD  
Department of Pathology and Laboratory Medicine  
University of Wisconsin Hospital and Clinics

*Whole Exome Sequencing of Angiosarcoma*

Analyzed variant calls from whole exome sequencing of angiosarcoma tumor samples for clinico-pathologic significance

2011-Present Self-directed research with Ricardo V. Lloyd, MD, PhD and William Rehrauer, PhD  
Translational Research Initiatives in Pathology (TRIP) Laboratory  
Department of Pathology and Laboratory Medicine  
University of Wisconsin Hospital and Clinics

*Insm1 as a marker for human neuroendocrine (NE) and neuroepithelial cancer* (IRB approved and funded Pathology Department R&D Grant).  
Developed RT-PCR based strategy for quantitation of *INSM1* expression in neuroendocrine cancer. Adapted anti-*INSM1* antibody for immunohistochemistry (IHC) in human formalin-fixed paraffinized tissue. Screened patient samples to correlate expression of *INSM1* with malignancy, and evaluated *INSM1* as a marker of disease

*Identification of novel prognostic and therapeutic targets in neuroendocrine neoplasms using multivariate correlation of molecular, phenotypic, and clinical behavior* (IRB approved and funded UW Carbone Cancer Center Grant)

Use tissue microarray to test novel and developing IHC markers for NE neoplasms and correlate with clinical and pathologic properties of the neoplasms. Apply whole exome sequencing to selected cases to attempt to identify driver mutations in NE neoplasms.

- 2006-2010 Research under Jaime García-Añoveros, Ph.D.  
Department of Anesthesiology  
Northwestern University  
*INSM-1 and INSM2 in mammalian neural development and evolution.*  
Bred INSM-1 knockout mice and characterized phenotype. Cloned INSM-1 and INSM2 from primate and rodent species to compare rates of evolution and specify evolutionary differences between the species. Characterized the phenotype of INSM-1 knockout mouse in the olfactory epithelium (OE)
- 2005 Medical Training, Medical Scientist Training Program  
Northwestern University Feinberg School of Medicine
- 2002-2004 Research under Carole LaBonne, Ph.D.  
Department of Biochemistry, Molecular Biology, and Cell Biology  
Northwestern University  
*Pax-3 and Pax-7 transcription factors in Xenopus neural crest development.*  
Manipulated *Xenopus* embryos using overexpression, misexpression, and knockdown approaches to dissect the role of Pax-3 and Pax-7 homeodomain transcription factors in the induction of neural crest. Microinjection of mRNA constructs and morpholino antisense nucleotides was followed by in situ hybridization to analyze morphological changes. RT-PCR and Western blots were used to confirm embryonic results with molecular data.
- 2000-2002 Medical Training, Medical Scientist Training Program  
Northwestern University Feinberg School of Medicine
- 1998-2000 Research Assistant to Kevin Padian, Ph.D.  
Department of Integrative Biology, University of California at Berkeley  
*New material of the basal Thyreophoran Scutellosaurus lawleri from the Kayenta Formation (Lower Jurassic) of Arizona.*  
Described previously recovered fossil material from the basal thyreophoran dinosaur, *Scutellosaurus lawleri*. Cleaned and assembled fossil material from UC Museum of Paleontology collections. Photographed and sketched the prepared material for publication, and compared against the holotype specimen in Arizona. Analysis of the specimen led to slight revision of the phylogenetic placement of *S. lawleri* within the thyreophora.

## Grants & Honors

- 2018 Kevin E. Salhany, MD Award for Excellence in Clinical Teaching
- 2018 Peter C. Nowell, PhD Department of Pathology and Laboratory Medicine Award for Teaching
- 2016 Best Platform Presentation, Trainee Research Day, Washington University Department of Pathology and Immunology

- 2015-2017 Pilot Award, UWCCC Neuroendocrine Cancer Research Task Force and the Aly Wolff Memorial Fund for Neuroendocrine Carcinoma Research  
“Identification of Novel Prognostic and Therapeutic Targets in Neuroendocrine Neoplasms Using Multivariate Correlation of Molecular, Phenotypic and Clinical Behavior”
- 2014 Michael N. Hart Research Day Resident Presentation Award
- 2014 ICPI Travel Grant, USCAP Annual Meeting, 2014
- 2012-2015 University of Wisconsin Research and Development Grant
- 2013 Best Poster Finalist, Education Category, American Society for Clinical Pathology Annual Meeting, Chicago, 2013
- 2013 University of Wisconsin Hospital and Clinics Quality Improvement Award
- 2012 Michael N. Hart Research Day Resident Presentation Award
- 2010 Morton Heller Award for Exemplary Research
- 1998 BA, High Honors in Integrative Biology
- 1998 Distinction in General Scholarship
- 1994-1998 UC Berkeley Chancellor’s Scholar  
*Merit-based scholarship providing four years of tuition*
- 1994 National Merit Scholar

## **Leadership**

- 2018-present Faculty Lead, Cancer Genomics Case Conference (Molecular Tumor Board), University of Pennsylvania
- 2017-2019 Junior member, Association for Molecular Pathology Professional Relations Committee
- 2017 Moderator, Trainee Luncheon, Association for Molecular Pathology Annual Meeting, Salt Lake City, UT
- 2017-present Chair, Molecular Genetic Pathology Fellowship Genomics Curriculum Working Group, Association for Molecular Pathology
- 2017-present Alternate Delegate for Pennsylvania, College of American Pathology
- 2017-present Chair, Molecular Genetic Pathology Fellowship Clinical Competency Committee, University of Pennsylvania Perelman School of Medicine
- 2016-present Member, Molecular Genetic Pathology Fellowship Program Evaluation Committee, University of Pennsylvania Perelman School of Medicine
- 2016-present Chair, Molecular Genetic Pathology Fellowship Bioinformatics Training Committee, University of Pennsylvania Perelman School of Medicine
- 2016 Moderator, Trainee Luncheon, Association for Molecular Pathology Annual Meeting, Charlotte, NC

- 2015-2017 Junior member, Association for Molecular Pathology Training and Education Committee
- 2016 Ambassador, United States and Canada Academy of Pathology
- 2016-present Engaged Leadership Academy, College of American Pathologists
- 2015-2016 Junior member, College of American Pathologists Committee on Cancer Biomarker Reporting
- 2014 Participated in validation of microbial identification from blood cultures using MALDI-TOF
- 2012-2014 Founded and administered UW Pathology Resident Research Interest Group
- 2012 Streamlined paperwork on UWHC autopsy service
- 2011-2014 Resident Delegate to the College of American Pathologists
- 2011-2014 Founded and managed UWHC Department of Pathology and Laboratory Medicine Residency Program Wiki
- 2000-2002 Participated in Northwestern University Medical School's curriculum committee
- 2000 Founded *Dura Mater*, Northwestern University Medical School's first humor magazine
- 1995-1998 Editor-in-Chief, *The Heuristic Squelch*, University of California at Berkeley humor magazine

### **Editorial Effort**

- 2018-present Editorial Board, Human Pathology
- 2016-present Section Editor for Precision Medicine, Archives of Pathology & Laboratory Medicine
- Ad hoc reviewer Histology and Histopathology
- Ad hoc reviewer Cancer Research
- Ad hoc reviewer American Journal of Clinical Pathology
- Ad hoc reviewer Journal of Hematopathology
- Ad hoc reviewer Journal of Molecular Diagnostics
- Ad hoc reviewer Modern Pathology

### **Presentations**

- Mar 2019 Co-Moderator, Association for Molecular Pathology Companion Session, United States and Canada Association for Pathology National Meeting, National Harbor, MD
- Oct 2018 "Advanced Molecular Diagnostics," American Society for Clinical Pathology Annual Meeting, Baltimore, MD

- Oct 2018 “Basic Molecular Diagnostics,” American Society for Clinical Pathology Annual Meeting, Baltimore, MD
- Nov 2016 “Next Generation Sequencing Reveals Genomic Heterogeneity in ALK-Rearranged Non-Small Cell Lung Cancer” Poster, AMP Annual Meeting, Charlotte, NC
- Mar 2016 “Next Generation Sequencing Reveals Genomic Heterogeneity of ALK Fusion Breakpoints in Non-Small Cell Lung Cancer,” Platform Presentation, USCAP Annual Meeting, Seattle, WA
- Mar 2016 “Genomic Profiling of Neuroendocrine and Neuroepithelial Neoplasms by Targeted Next Generation Sequencing” Platform Presentation, USCAP Annual Meeting, Seattle, WA
- Nov 2015 “Actionable KIT Mutation in High-Grade Neuroendocrine Carcinoma,” Presentation, AMP Annual Meeting, Austin, TX
- Nov 2015 “INSM1 mRNA Expression Correlates With Functional Subtype in Neuroendocrine Neoplasms (NENs),” Poster, AMP Annual Meeting, Austin, TX
- Mar 2015 “Expression of the Neuroepithelial Marker INSM1 in Ewing Sarcoma and Other Small Round Cell Sarcomas” Poster, USCAP Annual Meeting, Boston, MA
- Mar 2015 “INSM1 Expression Correlates With Metastasis and Functional Hormone Production in Neuroendocrine Neoplasms” Poster, USCAP Annual Meeting, Boston, MA
- Aug 2014 “Whole Exome Sequencing of Angiosarcoma” Research presentation, Annual Michael N. Hart Research Day, Madison, WI
- Aug 2013 “INSM1 as a marker of malignancy in neuroendocrine and neuroepithelial cancer” Research presentation, Annual Michael N. Hart Research Day, Madison, WI
- Aug 2012 “INSM1 as a marker for neuroendocrine cancer” Research presentation, 1st Annual Michael N. Hart Research Day, Madison, WI
- Jan 2012 “Fulminant hepatitis in a neonate” Meriter Hospital Morbidity and Mortality conference, Madison, WI
- Jan 2010 “IA-1 in the development of the olfactory epithelium” Seminar, Cell and Molecular Neurology group meeting, Northwestern University
- Aug 2009 “IA-1 in the development of the olfactory epithelium” Seminar, Northwestern University MSTP retreat
- Apr 2008 “Transient expression from late progenitor to neuron of the conserved zinc finger gene IA-1 during embryonic and adult neurogenesis” Poster, Mouse Genetics Group Meeting, Center for Genetic Medicine, Northwestern University

- Nov 2007 “Transient expression from late progenitor to neuron of the conserved zinc finger gene IA-1 during embryonic and adult neurogenesis” Poster, Motor Day, Northwestern University Feinberg School of Medicine
- Apr 2006 “An 18 year-old male presents to the emergency room with persistent headache, nausea, tinnitus, dizziness, and insomnia following a fall with minor head injury six days ago.” MSTP Grand Rounds
- Oct 2004 “Pax-3 in Xenopus neural crest development” Seminar, Northwestern University MSTP Retreat
- Sep 2004 “Pax-3 and Pax-7 in Xenopus neural crest development” Poster Session, Northwestern University Integrated Biological Sciences Graduate Program Retreat
- Aug 2003 “Pax-3 and Pax-7 in Xenopus neural crest development” Poster Session, Northwestern University MSTP Retreat
- Oct 2002 “Pax-3 and Pax-7 in Xenopus neural crest development” Seminar, Northwestern University Integrated Biological Sciences Student Organization

## Meetings

- Oct 2018 American Society for Clinical Pathology 2018 Annual Meeting, Baltimore, MD
- May 2018 College of American Pathologists 2018 Policy Meeting, Washington, D.C.
- Mar 2018 United States and Canada Academy of Pathology Annual Meeting, Vancouver, British Columbia
- Mar 2018 College of American Pathologists Spring Meeting, Vancouver, British Columbia
- Nov 2017 Association for Molecular Pathology Annual Meeting, Salt Lake City, UT
- Oct 2017 College of American Pathologists Annual Meeting, Washington, D.C.
- Mar 2017 United States and Canadian Academy of Pathology Annual Meeting, San Antonio, TX
- Feb 2017 Diagnostic Management Team Conference, Galveston, TX
- Nov 2016 Association for Molecular Pathology Annual Meeting, Charlotte, NC
- Apr 2016 Trainee Research Day, Washington University, St. Louis, MO
- Mar 2016 United States and Canadian Academy of Pathology Annual Meeting, Seattle, WA
- Nov 2015 Association for Molecular Pathology Annual Meeting, Austin, TX
- Mar 2015 United States and Canadian Academy of Pathology Annual Meeting, Boston, MA
- Nov 2014 Association for Molecular Pathology Annual Meeting, Washington, D.C.
- Sep 2014 College of American Pathologists Annual Meeting, Chicago, IL
- Aug 2014 Michael N. Hart Research Day, University of Wisconsin Hospital and Clinics, Madison, WI
- Mar 2014 United States and Canadian Academy of Pathology Annual Meeting, San Diego, CA
- Nov 2013 Association for Molecular Pathology Annual Meeting, Phoenix, AZ

- Sep 2013 Training Residents in Genomics, Genomic Pathology Workshop, American Society of Clinical Pathology Annual Meeting, Chicago, IL
- Sep 2013 American Society of Clinical Pathology Annual Meeting, Chicago, IL
- Aug 2013 Michael N. Hart Research Day, University of Wisconsin Hospital and Clinics, Madison, WI
- Mar 2013 United States and Canadian Academy of Pathology Annual Meeting, Baltimore, MD
- Aug 2012 Michael N. Hart Research Day, University of Wisconsin Hospital and Clinics, Madison, WI
- Mar 2012 United States and Canadian Academy of Pathology Annual Meeting, Vancouver, British Columbia, Canada
- Oct 2009 Society for Neuroscience Annual Meeting, Chicago IL
- Feb 2009 American Association for the Advancement of Science Meeting, Chicago IL
- Nov 2007 Society for Neuroscience Annual Meeting, San Diego CA
- Oct 2005 University of Chicago Symposium, Developmental Basis of Evolutionary Change, Chicago IL
- Oct 2003 University of Chicago Symposium, Developmental Basis of Evolutionary Change, Chicago IL
- May 2003 Northwestern University, Signal Transduction Symposium, Chicago, IL
- Jun 2003 Stowers Institute for Medical Research, Midwest Regional Developmental Biology Conference and Singer Symposium, Kansas City, MO
- Oct 2001 University of Chicago Symposium, Developmental Basis of Evolutionary Change, Chicago IL

## **Societies and Memberships**

Diplomate in Molecular Genetic Pathology, American Board of Pathology (S-16-500)  
Diplomate in Anatomic and Clinical Pathology, American Board of Pathology (15-401)  
Pennsylvania State Medical License (MD458341)  
New Jersey State Medical License (25MA10309300)  
American Association for the Advancement of Science  
American Medical Association  
American Society of Clinical Oncology  
American Society for Clinical Pathology  
American Society of Human Genetics  
Association for Molecular Pathology  
College of American Pathologists  
Digital Pathology Association  
Endocrine Society  
Pennsylvania Association of Pathologists



Pennsylvania Medical Society  
United States and Canadian Academy of Pathology

### Lectures by Invitation

- Apr 2018 "Next-Generation Sequencing (NGS) Reveals Genomic Heterogeneity of ALK Fusion Breakpoints in Non-Small Cell Lung Cancer" Tempus, Chicago, IL
- Feb 2018 "Turning Lead to Gold: Validating the Detection of Fusion Transcripts against an Imperfect Standard - Modern Day ALKemy," TriCon 2018, San Francisco, CA
- Feb 2018 "Lessons Learned: What I Wish I Had Known Before I Started Validation," Tricon 2018, San Francisco, CA
- Nov 2017 "Case Studies of Genomic Rearrangements Detected by DNA Next-Generation Sequencing: Modern Day ALKemy," Molecular Pathology Outreach Course, AMP Annual Meeting, Salt Lake City, UT
- Aug 2017 "Next-Generation Sequencing (NGS) Reveals Genomic Heterogeneity of ALK Fusion Breakpoints in Non-Small Cell Lung Cancer" Next Generation Dx Summit, August 18, 2017 Washington D.C.
- Mar 2017 "New-in-Practice Breakout Panel Discussion," Residents' Forum, CAP Spring Meeting, San Antonio, TX
- Nov 2016 "JAK-2 Testing in Clinical Practice," Molecular Pathology Outreach Course, AMP Annual Meeting, Charlotte, NC

### Teaching

- 2017-present Medical Laboratory Scientist Program, Pennsylvania Hospital, Instructor
- 2017-present University of Pennsylvania Department of Pathology and Laboratory Medicine Genomic Medicine Primer for Anatomic Pathology
- 2017 Penn Medicine Summer Program for High School Students
- 2016-present University of Pennsylvania, Perelman School of Medicine Histology Laboratory Instructor
- 2016-present University of Pennsylvania Department of Pathology and Laboratory Medicine Resident Lectures on Genomic Medicine
- 2015-2016 Washington University Department of Pathology and Immunology Resident Board Review
- 2014 Wisconsin Center for Academically Talented Youth (WCATY), Human Body and Disease Course
- 2013-2014 Angevine Fellow (medical student) Lecture Series
- 2013-2014 Instructor, School of Cytotechnology, Wisconsin State Laboratory of Hygiene
- 2012-2014 Pathology 600 graduate course

- 2012-2014 Foundations of Medicine Instructor, University of Wisconsin School of Medicine and Public Health
- 2007-2009 Supervisor to Jennifer Ray, undergraduate research assistant in the laboratory of Dr. Jaime García-Añoveros
- 2004 Teaching Assistant, Biochemistry. Dr. Andreas Matouschek and Dr. Neil Welker, Course Directors
- 1998-2000 Instructor and Curriculum Development, The Berkeley Review MCAT Preparation Course
- 1998 Instructor and Course Design, English 198, University of California at Berkeley. Dr. Stephen Booth, Course Sponsor

### Hobbies, Activities, and Interests

- Ongoing Writing (fiction, short non-fiction); comedy; competitive trivia
- 2005-2007 Improvisational acting and comedy training, Second City and improvOlympic, Chicago, IL
- 2000-2003 Writer, director, and performer of “In Vivo” Northwestern University School of Medicine’s annual variety show, donating proceeds to local charities
- 2000-2002 Performed with and directed “The Best Medicine,” Northwestern University School of Medicine’s improvisational comedy troupe
- 1994-1999 Writer, *The Heuristic Squelch*, University of California at Berkeley humor magazine

### Published Abstracts

A. Oran, C. Paolillo, S. Deihimi, D.B. Lieberman, A. Bigdeli, A. Chitturi, J.J. Roth, **J.N. Rosenbaum**, J.J. Morrisette, R.T. Sussman. Validation of a Low Input Targeted NGS Assay for Lymphoma Across Multiple Specimen Types. AMP Annual Meeting, November 1-3, San Antonio, TX. *J Mol Diagn*, 20(6) 923, Abstract H024

C.M. Cirelli, P.D. Velu, M.D. Feldman, **J.N. Rosenbaum**. Improving the Molecular Pathology Workflow with Machine Learning: Automated Calculation of Tumor Percentages on H&E Digital Whole Slide Images. AMP Annual Meeting, November 1-3, San Antonio, TX. *J Mol Diagn*, 20(6) 958, Abstract I006

J.E. Adler, S. Shaffer, J.J. Roth, **J.N. Rosenbaum**. Interpretation of Mutational Signatures Associated With Smoking from an Amplicon-Based Clinical Oncology Sequencing Panel. AMP Annual Meeting, November 1-3, San Antonio, TX. *J Mol Diagn*, 20(6) 959, Abstract I008

A. Bigdeli, P. Velu, R. Sussman, **J.N. Rosenbaum**, J.J. Morrisette, R.B. Faryabi. Identification of Germline Mutations in Tumor DNA Samples Absent a Matched-Normal. AMP Annual Meeting, November 1-3, San Antonio, TX. *J Mol Diagn*, 20(6) 963, Abstract I024

A. Chitturi, A. Bigdeli, A. Oran, R. Sussman, **J.N. Rosenbaum**, J. Morrisette, R.B. Faryabi. Dual-Assay Demultiplexing with Preferential Read Allocation and Unequal Index Size Presents Bioinformatics Challenges. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 965, Abstract I029

P.R. Hess, **J.N. Rosenbaum**. Assessing Cancer Diagnosis from Clinical Genomics Data Using Machine Learning. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 966, Abstract I034

**J.N. Rosenbaum**, J.J. Roth, D.B. Lieberman, C. Orr, S. Deihimi, J.J. Morrisette. Virtual Case Sets for Genomics Education: Thinking Outside the Slide Box. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 967, Abstract OTH001

S.F. Priore, D. Lieberman, J.R. Milano, R.T. Sussman, **J.N. Rosenbaum**, J.J. Roth. Standardized Protocol for Salvaging Quality or Quantity Not Sufficient (QNS) Samples in an Academic NGS Laboratory. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 967, Abstract OTH002

R. Paolillo, A.R. Oran, D.B. Lieberman, **J.N. Rosenbaum**, R.T. Sussman. Clinical Validation of a Fusion Transcript Next-generation Sequencing (NGS) Panel for Sarcomas and Solid Tumors with Diagnostic, Prognostic and Therapeutic Value. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 989, Abstract ST070

C.R. Orr, R. Sussman, J. Morrisette, **J.N. Rosenbaum**. Clinically Validated Fusion Transcript Panel Identifies *TERT* Fusions. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 1004, Abstract ST117

R.T. Sussman, A. Oran, C. Paolillo, D. Lieberman, **J.N. Rosenbaum**. Dual Extraction of DNA and Total Nucleic Acid (TNA) from Single Specimens Enables Evidenced-based Therapeutic Strategy for Minute Samples. AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 1019, Abstract TT011

D. Lieberman, V. Aikawa, A.R. Oran, J.J. Roth, **J.N. Rosenbaum**, R.T. Sussman. Suitability of Formical-2000 Decalcified Paraffin Embedded Tissue for Fluorescence in situ Hybridization (FISH) and Next-Generation Sequencing (NGS). AMP Annual Meeting, November 1-3, San Antonio, TX. J Mol Diagn, 20(6) 1030, Abstract TT048

A. Meyer, R. Sussman, A. Bigdeli, **J.N. Rosenbaum**. Reproducibility of Variant Allele Frequency in Targeted Cancer Next-Generation Sequencing Assays. Modern Pathology, 31 (S2) p.791. USCAP Annual Meeting 2018; March 17-23, 2018; Vancouver, BC. Nature Publishing Group.

A. Oran, J. Grubb, D.B. Lieberman, R.T. Sussman, J.J. Morrisette, **J.N. Rosenbaum**. Comparison of ALK, RET, and ROS1 Gene Fusion Detection by Next-Generation Sequencing, Fluorescence in situ Hybridization, and Immunohistochemistry in Non-Small Cell Lung Cancer. AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract ST104

Orr, C, Morrissette, JD, **Rosenbaum, JN**. “Unburdening” Variant Review for High Tumor Mutation Burden (TMB) Cases in a Clinical Next-Generation Sequencing (NGS) Assay. AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract ST138

C. Paolillo, A. Oran, **J.N. Rosenbaum**, J.J. Morrissette, R. Sussman. Detection of MET Exon 14 Skipping in Non-Small Cell Lung Cancer (NSCLC) via RNA Anchored Multiplexed PCR and DNA Next-Generation Sequencing. AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract ST144

A. Bigdeli, R. Sussman, A. Schrank-Hacker, V. Aikawa, **J. Rosenbaum**, J.D. Morrissette, R.B. Faryabi Evaluation of Copy Number Variation Detection Methods for Amplicon Sequencing Assays. AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract I44

P. Velu, A. Bigdeli, P.R. Hess, J.J. Roth, **J.N. Rosenbaum**, J.J. Morrissette. Calculation of Mutational Burden in a Clinical Targeted Next-Generation Sequencing (NGS) Panel for Solid Tumors. AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract ST70

P.R. Hess, P.D. Velu, A. Bigdeli, J.J. Morrissette, **J.N. Rosenbaum**, J. Roth. Discordance Among Biomarkers for Anti-PD1 Therapy Response: Tumor Mutational Burden and Anti-PD-L1 Staining. AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract ST128

R.T. Sussman, A. Viaene, P. Velu, S. Schaffer, **J. Rosenbaum**, J. Morrissette, M. Nasrallah. Evaluation of Intraoperative Sampling for Genomic Analysis of Central Nervous System (CNS) Tumors by Next-Generation Sequencing (NGS). AMP Annual Meeting, November 16-18, Salt Lake City, UT. J Mol Diagn 2017, 16:699, Abstract ST151

A. Viaene, R. Sussman, **J. Rosenbaum**, R. McNamara, J. Morrissette, M. Nasrallah. Using Intraoperative Cytology Preparations for Molecular Testing in Gliomas, a Method to Reduce Tissue Use and Turnaround Times. American Association of Neuropathologists Annual Meeting 2017; June 8 – 11; Garden Grove, CA

Zhang, R, **Rosenbaum, JN**, Buehler, D, Salamat, MS, Accola, M, Rehauer, W, Lloyd, RV. Actionable Genetic Mutations Are Rare in Pituitary Carcinomas and Atypical Pituitary Adenomas. Modern Pathology, 30 (S2) p.156A. USCAP Annual Meeting 2017; March 4-10, 2017; San Antonio, TX. Nature Publishing Group.

Schwalbe, M, Hartley, C, **Rosenbaum, JN**, Roy, M, Zhang, R, Aesif, SW, Lloyd, RV, Buehler, D. Expression and Prognostic Significance of Insulinoma Associated Protein 1 (INSM1) and Orthopedia Homeobox (OTP) Transcription Factors in Pulmonary Neuroendocrine Neoplasms. Modern Pathology, 30 (S2) p.153A. USCAP Annual Meeting 2017; March 4-10, 2017; San Antonio, TX. Nature Publishing Group.

Roy, M, Zhang, R, Chu, Y-H, Schwalbe, M, Salamat, MS, Lloyd, RV, Buehler, D, **Rosenbaum, JN**. Utility of Insulinoma Associated Protein 1 (INSM1) and Orthopedia Homeobox (OTP) in Uncommon Neuroendocrine and Neuroepithelial Tumors. *Modern Pathology*, 30 (S2) p.152A. USCAP Annual Meeting 2017; March 4-10, 2017; San Antonio, TX. Nature Publishing Group.

**Rosenbaum, JN**, Bloom, R, Armstrong, J, Hiken, J, Branson, J, Cottrell, CE, Pfeifer, JD, Duncavage, EJ. Next Generation Sequencing (NGS) Reveals Genomic Heterogeneity of *ALK* Fusion Breakpoints in Non-Small Cell Lung Cancer. Association for Molecular Pathology 2016 Annual Meeting, November 9-12, Charlotte, NC, *J Mol Diagn* 2016, 18:1005, Abstract S32.

**Rosenbaum, JN**, Branson, J, Cottrell, CE, Pfeifer, JD, Kulkarni, S, Duncavage EJ. Next Generation Sequencing Reveals Genomic Heterogeneity of *ALK* Fusion Breakpoints in Non-Small Cell Lung Cancer. *Modern Pathology*, 29 (S2) p.481A. USCAP Annual Meeting 2016; March 12-19, 2016; Seattle, WA. Nature Publishing Group.

**Rosenbaum, JN**, Storer, C, Cottrell, CE, Duncavage EJ. Genomic Profiling of Neuroendocrine and Neuroepithelial Neoplasms by Targeted Next Generation Sequencing. *Modern Pathology*, 29 (S2) p.145A. USCAP Annual Meeting 2016; March 12-19, 2016; Seattle, WA. Nature Publishing Group.

**Rosenbaum, JN**, Baus, RM, Rehrauer, WM, Lloyd, RV, INSM1 mRNA Expression Correlates With Metastasis and Functional Hormone Production in Neuroendocrine Neoplasms. *Journal of Molecular Diagnostics*, 17 (6), p.817; AMP Annual Meeting, 2015; Austin, TX.

**Rosenbaum, JN**, Chaudhri, AA, Baus, RM, Lloyd, RV, Buehler, DA, Expression of the Neuroepithelial Marker INSM1 in Ewing Sarcoma and Other Small Round Cell Sarcomas. *Modern Pathology*, 28 (S2) p.24A. USCAP Annual Meeting, 2015; March 21-27, 2015; Boston, MA. Nature Publishing Group.

**Rosenbaum, JN**, Yang, R, Baus, RM, Rehrauer, WM, Huang, W, Lloyd, RV, INSM1 Expression Correlates With Metastasis and Functional Hormone Production in Neuroendocrine Neoplasms. *Modern Pathology*, 28 (S2) p.140A. USCAP Annual Meeting, 2015; March 21-27, 2015; Boston, MA. Nature Publishing Group.

Rush, PS, **Rosenbaum, JN**, Baus, RM, Bennett, DD, Lloyd, RV, INSM1: A Novel Nuclear Marker in Merkel Cell Carcinoma (Cutaneous Neuroendocrine Carcinoma). *Modern Pathology*, 28 (S2) p.125A. USCAP Annual Meeting, 2015; March 21-27, 2015; Boston, MA. Nature Publishing Group.

**Rosenbaum, JN**, Accola, MA, Pavelec, DM, Laffin, JJ, Johnson, KA, Hasenstein, J, Kozak, KR, Rehrauer, WM, Buehler, D. Whole Exome Sequencing of Angiosarcoma Identifies Novel Variants. *Journal of Molecular Diagnostics*. Association for Molecular Pathology 2014 Annual Meeting; November 2014; Washington, DC. Elsevier; 2014. p.753.

Butt, YM, **Rosenbaum, JN**, Johnson, KA, Batra, K., Kanne, JP., Torrealba, JR. Pleuroparenchymal Fibroelastosis: A Report of the First 2 Cases Diagnosed at Autopsy. Archives of Pathology and Laboratory Medicine. College of American Pathologists 2014 Annual Meeting; September 6-11; Chicago, IL. p.e44.

**Rosenbaum, JN**, Baus, RM, Werner, HS, Rehrauer, WM, Lloyd, RV. INSM1: A Novel Immunohistochemical Marker for Neuroendocrine and Neuroepithelial Neoplasms. Modern Pathology. USCAP Annual Meeting, 2014; March 1-7, 2014; San Diego, CA. Nature; 2014. p.158A.

**Rosenbaum, JN**, Who, What, Where, Wiki: Social Media and Crowd Sourcing Effectively Disseminate and Preserve Resident Community Knowledge. American Journal of Clinical Pathology. American Society for Clinical Pathology; September 18-21, 2013; Chicago, IL. 2013. p.A210.

**Rosenbaum, JN**, Baus, RM, Werner, HS, Rehrauer, WM, Lloyd, RV. The Neuroendocrine Developmental Transcription Factor INSM1 is Overexpressed in Gastrointestinal Neuroendocrine Tumors. Journal of Molecular Diagnostics. Association for Molecular Pathology 2013 Annual Meeting; November 14-16; Phoenix, AZ. Elsevier; 2013. p.906.

**Rosenbaum, J**, Huang, W, Significantly Lower Expression Levels of Androgen Receptor (AR) Are Associated with Erythroblastosis Virus E26 Oncogene Related Gene (ERG) Negative (-) Prostate Cancer (PCa). #971. United States and Canadian Academy of Pathology's 101st Annual Meeting; March 17-23, 2012; Vancouver, BC, Canada. 2012.

**Rosenbaum, JN**, Duggan, A, Madathany, T, DeCastro, SCP, Gerelli, D, Garcia-Anoveros, JG; "Transient expression from late progenitor to neuron of the conserved zinc finger gene INSM1 during embryonic and adult neurogenesis." Program No. 816.16/B10. Neuroscience 2007 Abstracts. San Diego, CA: Society for Neuroscience, 2007. Online.

## Bibliography

Robyn Sussman, Amanda Oran, Carmela Paolillo, David Lieberman, Jennifer Morrisette, **J.N. Rosenbaum** (manuscript in review) Validation of a Next-Generation Sequencing Assay Targeting RNA for the Multiplexed Detection of Fusion Transcripts and Oncogenic Isoforms.

S.F. Priore, **J.N. Rosenbaum**, J.J. Roth. (accepted manuscript) AMP Case Report: Diagnostic Pitfalls of Testing Rare Molecular Aberrations in Lung Adenocarcinomas. CAP Today.

A.N. Viaene, M. Santi, **J.N. Rosenbaum**, M.M. Li, L.F. Surrey, M.P. Nasrallah. SETD2 mutations in primary central nervous system tumors. (2018) Acta Neuropathologica Communications (accepted manuscript).

R. Sussman, S.Shaffer, E. Azzato, D. DeSloover, M. Farooqi, A. Meyer, D. Lieberman, A. Bigdeli, C. Paolillo, K. Ganapathy, S. Sukhadia, **J.N. Rosenbaum**, R. Daber, J. Morrisette.

(2018) Validation of a Next-Generation Sequencing Oncology Panel Optimized for Low Input DNA. *Cancer Genetics* Dec;228-229:55-63

**J.N. Rosenbaum**, D. Aisner. (2018) Keeping It Personal: CMS-Proposed Coverage Restrictions for NGS Challenge Innovation in Personalized Care. *IASLC Lung Cancer News* Apr; 3(2):9.

**J.N. Rosenbaum**, R. Bloom, J.T. Forys, J. Hiken, J.R. Armstrong, J. Branson, S. McNulty, P.D. Velu, K. Pepin, H. Abel, C.E. Cotrell, J.D. Pfeifer, S. Kulkarni, R. Govindan, E.Q. Konnick, C.M. Lockwood, E.J. Duncavage. (2018) Genomic Heterogeneity of ALK Fusion Breakpoints in Non-Small Cell Lung Cancer. *Modern Pathology* Jan 12. [Epub ahead of print]. PMID: 29327716

P.S. Rush, **J.N. Rosenbaum**, R.M. Baus, D.D. Bennett, R.V. Lloyd. (2018) INSM1: A Novel Nuclear Marker in Merkel Cell Carcinoma (Cutaneous Neuroendocrine Carcinoma). *Journal of Cutaneous Pathology*. Feb;45(2):129-135. PMID: 29148079

**J.N. Rosenbaum**, P. Weisman. (2017) The Evolving Role of Companion Diagnostics for Breast Cancer in an Era of Next-Generation Omics. *The American Journal of Pathology*, Oct:187 (10): 2185-2198. PMID: 28733195

E. Duncavage, R. Advani, S. Agosti, P. Foulis, C. Gibson, L. Kang, J. Khoury, L. Medeiros, R. Ohgami, D. O'Malley, K. Patel, **J. Rosenbaum**, C. Wilson. (2016) Template for Reporting Results of Biomarker Testing of Specimens From Patients With Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma. *Archives of Pathology and Laboratory Medicine*, Nov:140 (11): 1228-1230. PMID: 27081879

E. Duncavage, R. Advani, S. Agosti, P. Foulis, C. Gibson, L. Kang, J. Khoury, L. Medeiros, R. Ohgami, D. O'Malley, K. Patel, **J. Rosenbaum**, C. Wilson. (2016) Template for Reporting Results of Biomarker Testing of Specimens From Patients With Diffuse Large B-Cell Lymphoma, Not Otherwise Specified. *Archives of Pathology and Laboratory Medicine*, Nov:140 (11): 1225-1227. PMID: 27081876

**J. Rosenbaum**, Z. Guo, R. Baus, H. Werner, W. Rehrauer, R. Lloyd. (2015) INSM1: a Novel Immunohistochemical and Molecular Marker for Neuroendocrine and Neuroepithelial Neoplasms. *American Journal of Clinical Pathology*, Oct;144(4): 579-591. PMID: 26386079

R. Lloyd, **J. Rosenbaum**, L. Erickson (2015). Immunohistochemical Approach to the Diagnosis and Prognostic Evaluation of Pancreatic Neuroendocrine Neoplasms. *Pancreatic Neuroendocrine Neoplasms: Practical Approach to Diagnosis, Classification, and Therapy*, S. La Rosa, F. Sessa (eds.). DOI 10.1007/978-3-319-17235-4\_7

**J. Rosenbaum**, Y. Butt, K. Johnson, K. Meyer, K. Batra, J. Kanne, J. Torrealba. (2015) Pleuroparenchymal Fibroelastosis: a Pattern of Chronic Lung Injury. *Human Pathology*, Jan;46(1):137-46. PMID: 25454481

**J. Rosenbaum**, R. Lloyd. (2014) Pancreatic Neuroendocrine Neoplasms (Pan-NEN). Clinics Review Articles: Surgical Pathology Clinics. (7) 559–575. Available at: <http://dx.doi.org/10.1016/j.path.2014.08.005>

**J. Rosenbaum**, S. Drew, W. Huang. (2014) Significantly Higher Expression Levels of Androgen Receptor Are Associated With Erythroblastosis Virus E26 Oncogene Related Gene Positive Prostate Cancer. American Journal of Clinical and Experimental Urology 2(3):249-257. PMID: 25374927

**J. Rosenbaum**, A. Duggan, and J. García-Añoveros. (2011) Insm1 promotes the transition of olfactory progenitors from apical and proliferative to basal, terminal and neuronogenic. Journal of Neuroscience Neural Development, February 1;6:6. PMID: 21284846

**J. Rosenbaum** and K. Padian. (2000) New material of the basal Thyreophoran *Scutellosaurus lawleri* from the Kayenta Formation (Lower Jurassic) of Arizona. Paleobios 20(1):13-23