

CURRICULUM VITAE
University of Alabama at Birmingham
School of Medicine Faculty

Date: October 1, 2020

PERSONAL INFORMATION

Name: Shuko Harada, MD
Citizenship: Japan with permanent USA residency
Foreign Language(s): Japanese
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RANK/TITLE

Professor
Department: Department of Pathology
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University of Alabama at Birmingham
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HOSPITAL AND OTHER (NON-ACADEMIC) APPOINTMENTS:

08/2011- present Director of Molecular Diagnostic Laboratory, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL
10/2011- present Staff Pathologist, UAB Hospital
03/2012- 08/2013 Staff Pathologist (Contractor), VA Medical Center, Birmingham, AL
07/2012- present Molecular Genetic Pathology Fellowship Program Director, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL
12/2013- present Staff Pathologist, Baptist Montgomery Health System, Montgomery, AL
03/2015- present Staff Pathologist, Northeast Regional Medical Center, Anniston, AL
10/2017- 06/2019 Interim Director, Division of Genomics Diagnostics and Bioinformatics, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL
02/2020- present Associate Director, Division of Genomic Diagnostics & Bioinformatics, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL

EDUCATION:

Year	Degree	Institution
4/1979-3/1985	MD	University of Tokyo Faculty of Medicine, Tokyo, Japan

LICENSURE:

State of Alabama Medical License (MD 31226, issued on 9/28/2011); NPI 1699937482
Pennsylvania Medical Physician and Surgeon License (MD433413, issued on 1/10/2008; inactive)
Japanese Medical License (#288057, issued on 5/17/1985, indefinite)

BOARD CERTIFICATION:

American Board of Pathology, Anatomic and Clinical, certified on 11/7/2008 (28844), No expiration
Molecular Genetic Pathology, certified on 9/16/2011
Certified Doctor for Internal Medicine in Japan (#1651, good through 3/31/2021)

POSTDOCTORAL TRAINING:

06/1985 - 05/1987 Resident, Internal Medicine, University of Tokyo Faculty of Medicine, Tokyo, Japan

12/1990 - 01/1994 Postdoctoral Fellow, Dept. of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Dr. Leonard Jarett's Laboratory, Philadelphia, PA

08/2004 - 07/2008 Resident, Dept. of Pathology and Laboratory Medicine, Drexel University College of Medicine, Philadelphia, PA

05/2006 - 05/2006 Molecular Pathology Rotation funded by CAP Foundation Advanced Training Grant, Memorial Sloan Kettering Cancer Center, New York, NY

04/2007 - 03/2008 Chief Resident, Dept. of Pathology and Laboratory Medicine, Drexel University College of Medicine, Philadelphia, PA

08/2008 - 07/2009 Surgical Pathology Fellow with subspecialty in breast pathology, Dept. of Pathology and Laboratory Medicine University of Pennsylvania, Philadelphia, PA

08/2009 - 07/2011 Molecular Genetic Pathology Fellow, Dept. of Pathology, Johns Hopkins University, Baltimore, MD

ACADEMIC APPOINTMENTS:

10/2020 – current Professor, Division of Genomics Diagnostics and Bioinformatics, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL

10/2017 – 9/2020 Associate Professor, Division of Genomics Diagnostics and Bioinformatics, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL

10/2016 – 09/2017 Associate Professor, Division of Anatomic Pathology, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL

08/2011 – 09/2016 Assistant Professor, Division of Anatomic Pathology, Department of Pathology, University of Alabama at Birmingham, Birmingham, AL

07/1997 - 06/2004 Research Assistant Professor, Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Philadelphia, PA
(2001-2002 Co-Director of the Biomedical Imaging Core, University of Pennsylvania School of Medicine)

01/1994 - 06/1997 Senior Research Investigator, Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Dr. Leonard Jarett's Laboratory, Philadelphia, PA

04/1989 - 11/1990 Endocrine Fellow, Fourth Department of Internal Medicine, University of Tokyo Faculty of Medicine, Tokyo, Japan

03/1988 - 03/1989 Medical staff, Division of Metabolism and Endocrinology, Kanto-Teishin Hospital, Tokyo, Japan

06/1987 - 03/1988 Medical staff, Fourth Department of Internal Medicine, University of Tokyo Faculty of Medicine, Tokyo, Japan

AWARDS/HONORS:

1976-85 Nihon Ikuei-kai (The Japan Scholarship Foundation) Scholarship

1981-85 Shin-Nihon Shougaku-kai (New Japan Scholarship Foundation) Scholarship

1996 Endocrine Society Travel Award

2000 Golden Salmon Award from 5th Annual Course on 3D Microscopy of Living Cells in 2000

2005 Outstanding Clinical Resident Fellow Poster - Second Prize Discovery 2005 Drexel University College of Medicine's Annual Research Day, 2005.

2006 CAP Foundation Advanced Training Grant, Funded by the Abbott Molecular

2014 Convener of Molecular Pathology Sessions for the XXXth Congress of the International Academy of Pathology (IAP2014), Bangkok, Thailand

2016 Invited speaker for Plenary Educational Session for Japanese Society of Pathology Annual Meeting, Sendai, Japan

2017 Honorary speaker for "Precision Oncology: Clinical and genomic data from Thai patients vs. global counterparts", Bangkok, Thailand

2018 Invited Faculty for International CME in Pathology – Histopathology and Cytopathology, Goa, India

2020 Nominated for 2020 SOM Dean's Excellence Award for Diversity, Senior category

2020 Nominated for Above and Beyond Contributions During COVID-19 Response, UAB

PROFESSIONAL SOCIETIES:**MEMBERSHIPS:**

Association for Molecular Pathology (AMP); Member since 2008
United States and Canadian Academy of Pathology; Junior member 2004-10, Member since 2011
College of American Pathologists (CAP); Junior member 2004-10, Fellow member since 2011
Association of Clinical Scientists (ACS), Fellow member since 2015
American Society for Clinical Pathology (ASCP), Fellow member since 2017
Medical Association of the State of Alabama; Member since 2013
Jefferson County Medical Society; Member since 2013
The Japanese Society of Pathology; Member since 2013
The Japanese Society of Internal Medicine
The Japan Endocrine Society
The Japan Diabetes Society

COUNCILS AND COMMITTEES:

Prior to UAB:

03/10/2008 Committee member on Truncated Internal Review of the Neurology Residency Training Program, Drexel University College of Medicine, Philadelphia, PA

DEPARTMENTAL ACTIVITIES:

08/2011 – current MGP fellowship program committee (Chair of Program Evaluation Committee since July 2012 as Program Director)
09/2011 - current Advanced Pathology Testing Committee (Formerly RUO committee), UAB Department of Pathology
10/2012 – 10/2019 Residency selection committee member, UAB Department of Pathology
08/2013 - 06/2015 Mentorship committee member for Seung Lyung Park, M.D.
05/2014 -12/2016 Mentorship committee member for Dejun Shen, M.D., Ph.D.
10/2014 - 06/2016 Mentorship committee member for Daniel S Atherton, M.D.
10/2014 – 10/2017 Mentorship committee member for Jennifer B Gordetsky, M.D.
04/2016 – 7/2017 Mentorship committee member for Lei Zhao, M.D.
01/2017 – current Quality and Patient Safety Committee member
02/2017 – 11/2018 Neuropathology Division Director Search Committee member
03/2017 – current Leonard H. Robinson Endowed Chair in Pathology Search committee member
10/2017 – 10/2018 Departmental Promotion and Tenure Committee
5/2/2018 Poster Judge, 13th Annual Pathology Trainee Research Day
5/3/2018-7/10/2018 Leadership Seminar Series
10/2018 – current Lab Medicine Utilization Committee (LMUC) member
11/2018 – 4/2019 GDB Division Bioinformatics Faculty Search Committee Co-Chair
3/2019 – current Hematopathologist Search Committee member
8/16/2019 Poster Judge, Pathology Research Retreat

UNIVERSITY ACTIVITIES:

06/11/2012 Clinical Laboratory Sciences Strategic Planning Initiative
12/2011 – 12/2012 Personalized Medicine Task Force
10/2011 – current Lung Cancer Working Group
08/2014 – current Gastrointestinal Working Group
12/2013 – current Personalized Medicine Entity Development Team
06/2013 – current Undiagnosed disease program (UDP) adult consultant
06/2013 – current Molecular Tumor Board Committee
06/2015 – current Personalized Medicine Institute (PMI) Implementation Projects Committee
12/2015 – current Phase I Working Group
03/2017 – 12/2017 SOM Space Committee member, Computational Committee
04/2017 – current Comprehensive Cancer Center member
06/2017 – current Precision Oncology Working Group
11/13/2017 Poster Judge, Medical Student Research Day

11/16/2018 Poster Judge, Comprehensive Cancer Center Annual Research Retreat
10/11/2019 Poster Judge, Comprehensive Cancer Center Annual Research Retreat
12/2019– current Comprehensive Cancer Center Protocol Review Committee, Member

NATIONAL ACTIVITIES:

11/2011 – current Fellowship Program Directors Annual Face-to-Face Meeting, Association for Molecular Pathology

04/30/2016 Biomarker Oncologist Pathologist Advisory Board for Bristol-Myers Squibb

01/2017 - 12/2019 Association for Molecular Pathology (AMP) MGP Fellowship Program Directors' Council Chair-elect in 2017, Chair in 2018 and Past Chair in 2019
[Major accomplishment: Launching MGP Fellowship in-service examination]

03/2017 – 2/2020 Molecular Tumor Board member, American Society of Clinical Oncology (ASCO)'s Targeted Agent and Profiling Utilization Registry (TAPUR)

11/2017-10/2018 ASCP (American Society for Clinical Pathology) Scientific Interest Group (SIG) member in Molecular Pathology Diagnostics

03/2018-3/2019 USCAP Annual Meeting Focus Group

11/2018 – current Association of Pathology Chair (APC) Fellowship Directors Ad Hoc (FDAHC) Committee member (MGP Fellowship representative)

08/2019 – current ACGME Molecular Genetic Pathology Milestone Work Group

2/2020 – current ASCP Professional Research Panel

5/2020 – current Executive Committee member for Association of Clinical Scientists (ACS)

GRANT REVIEW:

02/2013 - 03/2013 Scientific Reviewer for Pathobiology-3 (PBY-3) review panel of the 2013 Breast Cancer Research Program for the Department of Defense Congressionally Directed Medical Research Program (CDMRP)

06/2015 - 08/2015 UAB Personalized Medicine Institute (PMI) RFA proposal review

EDITORIAL BOARD:

2016-present Annals of Clinical & Laboratory Science
2017-present Assistant Editor for Lab Medicine (one of the ASCP official Journals)
2017-present Associate Editor for Molecular Diagnostics, American Journal of Clinical Pathology
2020-present Editorial Board for Modern Pathology

Ad hoc reviewer for:

Prior to UAB (selected)
Circulation Research
Molecular Biology of the Cell
Arteriosclerosis, Thrombosis, and Vascular Biology
DNA and Cell Biology

Since 2011 (at UAB)
Modern Pathology (multiple times – 6-8 per year for past 4 years)
Prostate Cancer
Breast Cancer Research and Treatment (2020)
Oncotarget (multiple times)

Annals of Clinical & Laboratory Science (multiple times)
Lab Medicine (multiple times)
Laboratory Investigation
American Journal of Clinical Pathology
International Journal of Molecular Sciences
Drugs
Gene
Molecular Diagnosis & Therapy
Current Pharmaceutical Design

MAJOR RESEARCH INTERESTS:

1. Clinical implementation of next generation sequencing of cancer and correlation with clinical status
2. Molecular profiling and discovery of molecular markers in malignant neoplasms
3. Implementation of genotype guided decision making support into clinical workflow

RECENT TEACHING EXPERIENCE:

Graduate Medical Education at UAB

MGP fellowship mentoring as Program Director:

Kirk W Bourgeois, M.D. (2011-2012) – Faculty at Mayo Clinic, Jacksonville, FL
Katherine Messner, D.O. (2012-2013) – Dermatopathologist in Colorado
Emmanuel Agosto-Arroyo, M.D. (2013-2014) – Faculty at Moffitt Cancer Center, Tampa, FL
Qian Dai, M.D., Ph.D. (2014-2015) – VA at Birmingham, AL
Jessica A. Levesque M.D. (2015-2016) – currently maternity leave after completion of fellowship
Rance C. Siniard M.D. (2016-2017) – Faculty at University of North Carolina, NC, UAB Faculty in 2020

Diana Morlote, M.D. (2017-2018) – Hematopathology fellow (UAB) in 2018, UAB Faculty in 2019
Niru Singh, MBBS, PhD. (2018-2019) – Transfusion Medicine fellow (UAB) in 2019, UAB Faculty in 2020

Benjamin Saylor (2019-2020) – Hematopathology fellow (UAB) in 2020

Molecular Pathology

Major contributions for Molecular Genetic Pathology teaching

07/1/2012 – current Program Director of Molecular Genetic Pathology Fellowship
07/1/2012 – current Organization of Molecular Genetic Pathology Joint Conference
11/2015 – 2/2016 Organization of Molecular Pathology teaching series
09/2011 – current Teaching at daily sign out of molecular cases, review of QA/QC and test development and validation with residents and fellows
07/2013 – current Teaching rotating residents from Baptist Health System Pathology Program

Residents lectures for AP/CP didactic series

04/06/2012 Molecular Pathology Techniques and its Clinical Application
04/13/2012 Slide Review – Cases utilizing Molecular techniques
05/08/2013 Molecular Pathology Questions part 1
05/15/2013 Molecular Pathology Questions part 2
05/17/2013 Molecular Pathology Questions part 3
05/24/2013 Slide Review – Cases utilizing Molecular techniques part 1
06/07/2013 Slide Review – Cases utilizing Molecular techniques part 2
04/18/2014 Molecular Pathology Techniques and its Clinical Application
02/08/2015 CP Molecular Pathology – Review of Basic Molecular Pathology
02/15/2015 CP Molecular Pathology – Questions
08/10/2015 Research opportunity introduction to residents
11/22/2015 Introduction of basic molecular pathology
02/08/2016 Molecular Hematopathology
01/23/2017 Introduction of basic molecular pathology

02/06/2017 Molecular Hematopathology
 08/21/2017 Molecular Pathology – Introduction
 03/05/2018 Molecular Hematopathology –1
 03/12/2018 Molecular Hematopathology – 2
 04/16/2018 NGS case study (solid tumor)
 08/20/2018 Introduction of basic molecular pathology
 10/22/2018 Molecular Test for Colon Cancer
 11/12/2018 Molecular Test for Lung Cancer
 02/18/2019 Molecular Test for Breast Cancer
 08/12/2019 Introduction of basic molecular pathology
 04/13/2020 Molecular Case Review

Lectures for residents rotating molecular pathology (2011-2014):

10/07/2011 Molecular Hematopathology and Molecular Oncology (2 hour)
 12/16/2011 Molecular Hematopathology and Molecular Oncology (2 hour)
 01/17/2012 Molecular Hematopathology and Molecular Oncology (2 hour)
 03/22/2012 Molecular Hematopathology and Molecular Oncology (2 hour)
 03/28/2012 Molecular Pathology Case Studies
 07/17/2012 Molecular Hematopathology
 07/18/2012 Molecular Oncology
 07/19/2012 Molecular Pathology Case Studies
 08/09/2012 Molecular Hematopathology
 08/13/2012 Molecular Oncology
 08/14/2012 Molecular Pathology Case Studies
 02/21/2013 Molecular Hematopathology
 02/22/2013 Molecular Oncology
 03/14/2013 Molecular Hematopathology
 03/15/2013 Molecular Oncology
 03/27/2013 Molecular Pathology Question Review
 07/02/2013 Molecular Hematopathology
 07/03/2013 Molecular Oncology
 07/19/2013 Molecular Pathology Questions
 09/24/2013 Molecular Hematopathology
 09/25/2013 Molecular Oncology
 12/17/2013 Molecular Hematopathology and Molecular Oncology (2 hour)
 01/22/2014 Molecular Hematopathology and Molecular Oncology (2 hour)
 03/19/2014 Molecular Hematopathology
 03/20/2014 Molecular Oncology
 03/21/2014 Molecular Pathology Case Study and Question Review
 07/15/2014 Molecular Hematopathology
 07/17/2014 Molecular Oncology
 07/18/2014 Molecular Pathology Case Study and Question Review
 11/24/2014 Molecular Hematopathology and Molecular Oncology (2 hour)
 12/17/2014 Molecular Hematopathology
 12/18/2014 Molecular Oncology

Surgical Pathology

Residents lectures for AP/CP didactic series

10/02/2012 Breast Pathology Slide Review – benign breast pathology
 04/02/2013 Breast Pathology Slide Review
 07/02/2013 Breast Pathology Slide Review
 08/14/2013 Ancillary Studies in Anatomic Pathology: Immunohistochemistry and In-situ Hybridization (Didactic)
 10/01/2013 Breast Case Review
 01/07/2014 Breast Pathology Slide Review

03/21/2014 Breast Didactic part 1 – non-neoplastic
 03/28/2014 Breast Didactic part 2 – non-neoplastic
 05/06/2014 Breast Board Question Review
 07/29/2014 Ancillary Studies in Anatomic Pathology: Immunohistochemistry, In-situ Hybridization and Molecular (Didactic)
 09/02/2014 Breast Pathology Slide Review
 02/03/2015 Breast Pathology Slide Review
 06/02/2015 Breast Pathology Slide Review
 09/04/2015 Ancillary Studies in Anatomic Pathology: Immunohistochemistry, In-situ Hybridization and Molecular (Didactic)
 10/06/2015 Breast Pathology Slide Review
 12/04/2015 Breast Didactics part 1 – benign lesions
 12/11/2015 Unknown slide session for breast benign lesions
 02/02/2016 Breast Pathology Slide Review
 05/04/2016 Breast Pathology Board Review
 08/19/2016 Ancillary Studies in Anatomic Pathology: Immunohistochemistry, In-situ Hybridization and Molecular (Didactic)
 09/13/2016 Breast Pathology Slide Review
 02/17/2017 Breast Didactics part 1 – benign lesions
 02/24/2017 Unknown slide session for breast benign lesions
 06/06/2017 Breast Pathology Slide Review
 10/31/2017 Breast Didactics part 1 – benign lesions
 11/03/2017 Unknown slide session for breast benign lesions

09/2011–current Resident teaching at Surgical Pathology (mainly Breast pathology) sign out and intraoperative consultation (“Frozen section”)

Medical student teaching at UAB

12/09/2011 Heme/Onc Module Small group journal club
 04/23/2012 Scholarly Week Lecture “Molecular diagnostics at UAB”
 01/10/2013 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 01/10/2013 Heme/Onc Module Lecture “Illustrative cases using Molecular Techniques”
 01/25/2013 Heme/Onc Module Small group journal club
 01/09/2014 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 01/09/2014 Heme/Onc Module Lecture “Illustrative cases using Molecular Techniques”
 01/24/2014 Heme/Onc Module Small group journal club
 01/09/2015 Heme/Onc Module Lecture “ARS Graded Quiz - Basic Molecular Pathology”
 01/09/2015 Heme/Onc Module Lecture “Illustrative cases using Molecular Techniques”
 01/23/2015 Heme/Onc Module Small group journal club
 01/08/2016 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 01/08/2016 Heme/Onc Module Lecture “Illustrative cases using Molecular Techniques”
 01/22/2016 Heme/Onc Module Small group Tumor Board
 01/09/2017 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 01/09/2017 Heme/Onc Module Lecture “Illustrative cases using Molecular Techniques”
 01/11/2018 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 02/15/2019 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 02/22/2019 Heme/Onc Module Small group Tumor Board
 02/14/2020 Heme/Onc Module Lecture “Introduction to Basic Molecular Pathology”
 02/20/2020 Heme/Onc Module Small group Tumor Board

08/2015 Teaching of MD/PhD student rotating molecular diagnostic laboratory (Alex M Dussaq)
 Abstract of his project is accepted for USCAP and API presentation in 2016, and published in *J Pathol Informatics* 8:41. eCollection 2017 [PMID: 29114435]

Other health professional teaching at UAB

Public Health Master Course lecture: Epi 602 Chronic disease epidemiology, Cancer module

11/15/2016 "Pathological basis of cancer"
11/09/2017 "Pathological basis of cancer"
11/08/2018 "Pathological basis of cancer"
11/12/2019 "Pathological basis of cancer"

Laboratory Testing for the Family Practitioner Series

04/08/2013 "Molecular testing for cancer treatment" in Selma, AL
04/10/2013 "Molecular testing for cancer treatment" at UAB Family Medicine
04/08/2015 "Molecular testing for cancer treatment" at UAB Family Medicine
04/13/2015 "Molecular testing for cancer treatment" in Selma, AL
04/04/2017 "Molecular testing for cancer treatment" in Selma, AL
04/12/2017 "Molecular testing for cancer treatment" at UAB Family Medicine

Medical Technologist Teaching Lectures:

09/27/2012 "Target therapy for lung cancer and molecular testing" Continuing education programs in the clinical laboratory science for ASCLS (American Society for Clinical Laboratory Science) P.A.C.E. (Professional Acknowledgement for Continuing Education) credit
06/16/2016 "Basic overview of next generation sequencing and precision medicine" Continuing education programs in the clinical laboratory science for ASCLS P.A.C.E. credit
04/17/2017 "Lung cancer molecular testing in the era of precision medicine" presented during Laboratory Week 2017. Continuing education programs in the clinical laboratory science for ASCLS P.A.C.E. credit
05/9/2019 "Molecular Genetic Test Basics" for Magic City Coders

Medical School Health Professional

Major contribution

1/1/2014 – current Organization of Molecular Tumor Board with Dr. Eddy Yang

Teaching Lectures and Grand Rounds

10/07/2011 Molecular markers for lung cancer, presented at Lung Cancer Working Group
04/26/2012 Role of molecular testing of receptor tyrosine kinase pathways on cancer diagnosis and management – Thyroid Neoplasm and beyond, presented at *Endocrinology Grand Round*
04/06/2012 Lung Cancer Biomarker Guideline, presented at Lung Cancer Working Group
08/21/2015 Molecular Tumor Board, presented at *Hematology/Oncology Grand Round*
02/15/2018 Implementation of next generation sequencing testing in precision oncology. *Pathology Grand Round*
07/13/2018 Implementation of Next Generation Sequencing (NGS) Testing in Precision Oncology – Advantages and Challenges. *Informatics Institute Bioinformatics Power Talks Series Seminar*

Prior to UAB

Graduate Medical Education

1/5, 2/2, 3/3, 4/2/2010 Resident Lecture: "Introduction to DNA" at Johns Hopkins University
10/16/2009 Clinical Pathology Lecture Series "Introduction to DNA" at Johns Hopkins University
01/04/2011 Resident Lecture: "Introduction to DNA" at Johns Hopkins University

Medical Student Teaching

03/17 and 03/18/2010 Pathology Laboratory for second year medical student at Johns Hopkins University
01/18/2011 Pathology Laboratory for second year medical student at Johns Hopkins University
2006 - 2008 Medical Student Pathology Laboratory Course at Drexel University College of Medicine

Other Teaching

2006 - 2008 Course for Pathology Assistant students, at Drexel University College of Medicine
2006 - 2008 Course for Master (MMS) Students at Drexel University College of Medicine

11/2007

Mini-Medical School (MINI-MED II) Teaching, Drexel University College of Medicine

MAJOR LECTURES AND VISITING PROFESSORSHIPS:

- 02/03/2011 Slide Review Conference to Residents at Penn State Hershey Medical Center, Hershey, PA
- 06/14/2013 "Molecular Pathology – Current and Future" presented at Drexel University College of Medicine, Philadelphia, PA.
- 06/24/2016 "Overview of Precision Medicine and Next Generation Sequencing" presented at Drexel University College of Medicine, Philadelphia, PA.

Convener of Molecular Pathology Sessions for the XXXth Congress of the International Academy of Pathology (IAP2014), Bangkok, Thailand, 10/5-10/10/2014.

Moderator and Chair for the sessions at IAP2014:

- 10/06/2014 SY18-1 Symposium "Molecular Pathology in Genomic Era – Crossover between Research and Clinical Work"
- 10/06/2014 SY18-2 Symposium "Practical Roles of Pathologists for Molecular Targeted Cancer Therapy"
- 10/07/2014 SC18-1 Short Course "Case Presentations Utilizing Molecular Techniques"
- 10/08/2014 LC18-1 Long Course "Introduction to Basic Molecular Pathology Techniques"

Speaker in these sessions:

- 10/06/2014 Molecular Profiling of Breast ductal carcinoma in-situ. *Presented at IAP 2014 (the XXXth Congress of the International Academy of Pathology 2014)* (Symposium "Molecular Pathology in Genomic Era – Crossover between Research and Clinical Work")
- 10/07/2014 Interesting Case – Actionable Mutation in a Case with a Recurrent Pleomorphic Xanthoastrocytoma with Anaplastic Features. *Presented at IAP 2014 (the XXXth Congress of the International Academy of Pathology 2014)* (Short Course "Case Presentations Utilizing Molecular Techniques")
- 10/08/2014 Molecular testing for targeted therapy – Sequence based assay. *Presented at IAP 2014 (the XXXth Congress of the International Academy of Pathology 2014)* (Long Course "Introduction to Basic Molecular Pathology Techniques")

Invited Plenary Lectures:

- 10/09/2015 "Organizing and running a Molecular Tumor Board" invited for plenary session at Southeastern Association of Pathology Chairs and Administrators Regional Conference, Charleston, SC.
- 05/12/2016 "Maintenance of Certification (MOC) system in Pathology in USA," invited for plenary educational session at Japanese Society of Pathology Annual Meeting, Sendai, Japan.
- 03/03/2017 Honorary speaker in the "Precision Oncology: Clinical and Genomics data from Thai patients vs. global counterparts" March 2-3, 2017 Ramathibodi Hospital, Bangkok, Thailand.
1. Molecular pathology testing in lung cancer
2. Molecular pathology testing in breast cancer
3. Implication of EGFR mutation for NSCLC in clinical practice: What do we need to know?
[Lunch symposium sponsored by AstraZeneca (Thailand)]
- 05/19/2017 "Organizing and running a Molecular Tumor Board – a two year experience at the University of Alabama at Birmingham" invited for plenary session at Association of Clinical Scientists (ACS) 2017 meeting, Birmingham, AL.
- 05/20/2017 Moderator for Session E. Anatomic Pathology Track 1. Association of Clinical Scientists (ACS) 2017 meeting, Birmingham, AL.

- 02/02-04/2018 Invited Faculty for International CME in Pathology – Histopathology and Cytopathology, Goa, India
1. Implementation of NGS testing in precision oncology
 2. Colon cancer – molecular testing
 3. Immunotherapy: PD-1/PD-L1 checkpoint inhibitor
 4. Molecular pathology testing for lung cancer
- 06/12/2018 "Implementation of Next Generation Sequencing Testing in Precision Oncology" seminar at Central Research Institute for Advanced Molecular Medicine, Fukuoka University (FCAM), Fukuoka, Japan.
- 10/14/2018 "Implementation of Next-Generation Sequencing: A practical guide" invited Speaker for the XXXII IAP 2018 Congress, Dead Sea, Jordan.
- 10/5/2019 Molecular testing for hematological malignancies. Invited speaker for 2019 Tri-State Pathology Conference, Birmingham, AL.

GRANT SUPPORT (UAB – current and completed):

Faculty Development Grant Program 2012-2013 (PI: Harada)

"Molecular Profiling of Breast Ductal Carcinoma in-situ." – 8/1/2012-8/31/2013, \$8,500

Health Service Foundation General Endowment Fund Grant (PI: Limdi) **Co-PI;**

"Pharmacogenomic Resource for Improvement of Medication Effectiveness (PRIME)" – 3/1/2013-2/28/2017, \$234,960

Department of Pathology Pilot Grant (PI: Peker) **Co-investigator**

"ZEB2 gene amplification in metastatic tumors of the central nervous system" - 1/1/2015-12/31/2017, \$20,000

Center for Genomics Medicine Pilot Grant (PI: Yang) **Co-investigator**

"Refining precision oncology using complementary blood analytes" – 1/1/2018-12/31/2019, \$150,000

Pathology Clinical Pilot Grant Program (PI: Harada)

"Autophagy Related Gene GABARAPL1 in Linking Obesity and Breast Cancer Disparity" – 4/1/2018-3/31/2019, \$5,000

NIH NINDS 1R01NS107071-01-A1 (PI: Nakano) **Collaborator**

"Radiation-induced crosstalk of immune and glioma stem cells" – 5/1/2019-3/31/2024, \$215,629 (direct) \$320,209 (total)

NIH NINDS JIT R01NS113631 (PI: Nakano) **Collaborator**

"Brain tumor recurrence via signals from vascular endothelial cells" - 12/15/2019-11/30/2024, \$385,704

GRANT SUPPORT (Pending):

NIH U54 (Transdisciplinary Collaborative Centers for Health Disparities Research Focused on Precision Medicine) (PI: Limdi) Collaborator. "Precision Medicine Research Initiative for Southern Minorities (PRISM)" (submitted in 2018).

National Clinical Trial Network LAPS Program, O'Neal Comprehensive Cancer Center (PI: Edmonds) Collaborator. "A novel oncogenic miRNA in human lung squamous carcinoma" (submitted in November 2019)

UAB Center for outcomes and effectiveness research and education (COERE) health intervention grant (PI: McFarland) Collaborator. "Genotype guided antiplatelet therapy in patients undergoing peripheral vascular interventions." (submitted in March 2020)

NIH (PI: Piyathilake) Co-investigator. "HPV genotyping in anal cytology in men" (submitted in May 2020)

Archer Dx 2020 Research Grant (PI: Harada). "Detection of gene Fusion and copy number aberrations in renal cell carcinoma utilizing novel analysis of RNAseq and gene expression data" (submitted in May 2020)

UAB Comprehensive Cancer Center Pilot Grant (PI: Piyathilake) Co-investigator. "HPV genotyping in anal cytology in men" (submitted in May 2020)

Mentorship for Trainees' Research Support (Adam's Grant)

Amanda Treece "MGMT Expression in Neuroendocrine Tumor" Co-mentor with Leona Council. [2012]

Diana Morlote "A molecular profile of clear cell papillary renal cell carcinoma by next generation sequencing (NGS)" Co-mentor with Jennifer Gordetsky. [2018]

Robin Collingwood and Nirumpama Singh "Genetic subtyping of NAB2-STAT6 between metastatic and de novo hemangiopericytomas / solitary fibrous tumor." Co-mentor with Sameer Al Diffalha. [2018]

Qing Wei "Utility of cytology supernatant for molecular profiling" Co-mentor with Dr. Isam Eltoum. [2019]

GRANT SUPPORT (Completed; prior to UAB):

Diabetes Action Research and Education Foundation, (PI: Harada) 01/01/97-12/31/97, \$15,000
"Identification of component phosphoproteins in pp120, a potential alternative insulin signal transduction pathway."

NIH-DK19525: Pilot and Feasibility Grant from Diabetes and Endocrinology Research Center, University of Pennsylvania (PI: Harada) 03/01/97-02/28/98, \$18,799 and 03/01/98-02/28/99, \$23,500
"Role of Gab1 in insulin's mitogenic effects."

American Heart Association Scientist Development Grant (National), (PI: Harada) 9930210N, 01/01/99-12/31/02, \$260,000 for four years, extended through 12/31/03. "Regulation of early growth response gene-1 (*egr-1*) expression by insulin and its role in vascular endothelial cells."

American Diabetes Association, (PI: Jarett) **co-investigator**, 07/01/99-06/30/02, \$300,000 for three years
"Regulation of insulin receptor tyrosine phosphorylation and tyrosine kinase by IRS-1."

P30 CA 16520-26 Penn Cancer Center (PI: Glick, Biomedical Imaging Core) **Co-Director** \$82,000/year, 12/01/00-11/30/02

NIH DK19525-25EMM Penn Diabetes Center Grant (PI: Lazar, Biomedical Imaging Core), **Co-Director** \$118,000/year, 03/01/02-02/28/07

American Heart Association Beginning of Grant in Aid (Pennsylvania/Delaware Affiliate), (PI: Harada) 0265390U, 07/01/02-06/30/04, \$100,000 for two years.

"Early growth response gene-1 regulation by insulin and glucose in diabetic vascular complications."

CAP (College of American Pathologists) Foundation Advanced Training Grant (for Harada), Funded by the Abbott Molecular, \$2,000 one month elective rotation for molecular pathology at Memorial Sloane Kettering Cancer Center, New York, NY, 2006

5T32CA067751-13: Ruth L. Kirschstein National Research Service Award (PI: Gabrielson), **Trainee** \$57,621/year, 08/01/2010-07/31/2011

"Development of a new assay LOLA (looped ligation assay) to detect chromosomal translocations in lymphoma and leukemia."

Project Support from Genetic Translational Technology Core, Institute for Clinical and Translational Research, Johns Hopkins Medical Institutions (**Unpaid consultant**) TTC20, \$42,345 Technology Translation Core Service at: Mutation Identification in *POLR1C* and *POLR1D* in Patients negative for *TCOF1*, April 2011-March 2012

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Other Publications (letters to the author, book reviews, etc.)

1. Book Review: Guo RJ, **Harada S**. Diagnostic Pathology – Molecular Oncology by Mohammad A. Vasef & Aaron Auerbach Elsevier's ExpertConsult.com Series. *J Cyto Histol*.

BOOKS and REVIEWS:

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17. Solow BT, **Harada S**, Smith JA, White MF, Jarett L. An increase of insulin receptor tyrosine phosphorylation via inhibition of a protein-tyrosine phosphatase by IRS-1. *VIIth International Symposium on Insulin Receptors and Insulin Action, 1998.*
18. **Harada S**, Esch GL. Additive effect of insulin and glucose on immediate-early gene *egr-1* expression and DNA synthesis in rat glomerular endothelial cells. *59th Scientific Sessions for American Diabetes Association, 1999. (Diabetes 48:A437, 1999).*
19. **Harada S**, Esch GL, Holgado-Madruga M, Wong AJ, Jarett J. Grb-2 associated binder-1 (Gab1) is involved in insulin-induced *egr-1* gene expression through its PI3'-kinase binding site. *59th Scientific Sessions for American Diabetes Association, 1999. (Diabetes 48:A230, 1999).*
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27. Hasan R, **Harada S**. Differential regulation of early growth response gene-1 expression by insulin and glucose in vascular endothelial cells. *Presented at AHA Research Symposium, May 18, 2002.*
28. Hasan R, **Harada S**. Differential regulation of early growth response gene-1 (*egr-1*) expression by insulin and glucose in endothelial cells derived from rat glomeruli. *62nd Scientific Sessions for American Diabetes Association, 2002.*
29. **Harada S**, Phukan S, Khalaf DH, Smith JA, Jarett L. Insulin Receptor Substrate-1 (IRS-1) Is Necessary to Cause an Increase of Tyrosine Phosphorylation of the Insulin Receptor at Tyrosine 960 by Inhibiting Protein Tyrosine Phosphatases in H35 Rat Hepatoma Cells. *Endocrine Society's 85th Annual Meeting, 2003.*
30. **Harada S**, Hasan R, Masuda K. Insulin upregulates early growth response gene-1 (*Egr-1*) transcription through serum response element (SRE) at -418 nt -391 in human vascular smooth muscle cells. *Presented at Discovery 2005 Drexel University College of Medicine's Annual Research Day, 2005, Philadelphia, PA.*
31. Chung Y, Chung C, **Harada S**, Cao D, Rassadi S, Eisen H. Detection of heart transplant rejection using Raman Spectroscopy. *Biomedical Technology Showcase 2006, at Drexel University School of Biomedical Engineering.*
32. **Harada S**, Soundararajan S, Haber MM, Garcia FU, Chen X. Basal-Like Subtype of Invasive Mammary Carcinoma Arising in Ectopic Breast Tissue of the Axilla. *Presented at The Pathologists' Meeting CAP 2006, San Diego, CA. (Arch Pathol Lab Med. 130:1367, 2006).*
33. **Harada S**, Roses R, Niu HL, Weinstern S, Nisenbaum H, Fox KR, Czerniecki, Zhang PJ. Positive HER2 immunoreactivity in DCIS is associated with a higher incidence of invasive disease, particularly in the subsequent resection in a group of patients without radiographic evidence of invasion disease. *Presented at United States and Canadian Academy of Pathology 2009 Annual Meeting, on March 9, 2009, Boston, MA. (Mod Pathol. 22:45A, 2009).*
34. Jenab-Wolcott J, Yao Y, Wen Y, Schulte S, **Harada S**, Brensinger C, Giantonio BJ, Rustgi A, Sepulveda AR. Use of four gene panel of epigenetic markers to classify serrated colonic adenomas with CpG island methylator phenotype. *Presented at Annual Meeting for American Society of Clinical Oncology, June 2010, Chicago, IL. (ASCO Annual Meeting Proceedings 28(15_suppl): 3600, 2010).*
35. **Harada S**, Silzle E, Gocke CD. Detection of the *BCR-ABL1* translocation in Patients with Chronic Myelogenous Leukemia (CML) by DNA-based Looped Ligation Assay (LOLA). *Presented at Association for Molecular Pathology 2010 Annual Meeting, San Jose, CA. (J Mol Diag. 12:868, 2010).*
36. **Harada S**, Silzle E, Gocke CD. Development of a Novel Assay for Detection of *IGH@-BCL2* Translocation in Follicular Lymphoma. *Presented at Association for Molecular Pathology 2010 Annual Meeting, San Jose, CA. (J Mol Diag. 12:918, 2010).*

37. **Harada S**, Jenab-Wolcott J, Yao Y, Yen W, Roberts S, Aisner S, Schulte S, Brensinger C, Giantonio BJ, Rustgi A, Sepulveda AR. Combined testing with a limited CpG methylation panel and BRAF V600E mutation may be sufficient for molecular diagnosis of serrated pathway adenomas. *Presented at Association for Molecular Pathology 2010 Annual Meeting, San Jose, CA. (J Mol Diag. 12:906, 2010).*
38. Jinawath N, Murphy K, Norris A, Klein A, Yonescu R, Iacabuzzio-Donahue C, Brody J, Meeker A, Jinawath A, **Harada S**, Griffin G. *CDH10* mutation profiles in pancreatic ductal adenocarcinomas (PDAC) *Presented at American Society of Human Genetics annual meeting 2010.*
39. **Harada S**, Henderson L, Eshleman JR, Gocke CD, Burger P, Griffin CA, Batista DA. Assessment of genomic changes in gliomas utilizing single nucleotide polymorphism (SNP) array in formalin-fixed paraffin-embedded tissue. *Presented at United States and Canadian Academy of Pathology 2011 Annual Meeting, San Antonio, TX. (Mod Pathol. 24:381A, 2011).*
40. **Harada S**, Silzle E, Lin M-T, Gocke CD. Detection of *IGH@-BCL2* Translocation in Follicular Lymphoma by Novel DNA-based Looped Ligation Assay (LOLA). *Presented at United States and Canadian Academy of Pathology 2011 Annual Meeting, San Antonio, TX. (Mod Pathol. 24:299A, 2011).*
41. Munfus-McCray D, **Harada S**, Yung RC, Adams C, Askin F, Gabrielson E, Li QK. KRS and EGFR mutational rate, discordance and outcome analysis in metastatic lung adenocarcinomas in comparison to primary lung adenocarcinoma. A retrospective study of 344 cases. *J Thorac Onc. 6:S389-390, 2011.*
42. **Harada S**, Silzle E, Lemas MV, Ambinder RF, Lin M-T, Gocke CD. Identification of *MYC-IGH@* translocation in Burkitt's lymphoma by DNA-based Looped Ligation Assay (LOLA) *Presented at Association for Molecular Pathology 2011 Annual Meeting, Grapevine, TX. (J Mol Diag. 13:726, 2011).*
43. Rivera-Roman K, Bolanos-Meade FJ, Cocks CD, **Harada S**. Cell compartment discrepancies in hematopoietic stem cell transplant chimerism analysis. *Presented at Association for Molecular Pathology 2011 Annual Meeting, Grapevine, TX. (J Mol Diag. 13:732, 2011).*
44. Aisner DL, Yao Y, Easler J, **Harada S**, Uehara T, Zhang P, Ahmad N, Sepulveda AR. Identification of CpG promoter methylation gene targets in gastrointestinal stromal tumors (GISTs). *Presented at Association for Molecular Pathology 2011 Annual Meeting, Grapevine, TX. (J Mol Diag. 13:761, 2011)*
45. Chen G, Olson MT, O'Neill A, Norris-Kirby A, Beierl K, **Harada S**, Debeljak M, Rivera-Roman K, Finley S, Stafford A, Gocke CD, Lin M-T, Eshleman JR. A virtual program generator to resolve ambiguity of pyrosequencing results. *Cancer Res. 72 (8 suppl):2095, 2012.*
46. Bourgeois K, Baker A, Ewing D, Peters R, Post R, Coshatt G, Benjamin WH, **Harada S**. Using Post-Cytology ThinPrep T2000 specimens for Roche COBAS 4800 HPV Test: Validation and comparison to Digene HR-HPV HC2 Assay. *Presented at Association for Molecular Pathology 2012 Annual Meeting, Long Beach, CA. (J Mol Diag. 14:674, 2012).*
47. Wu X, Lee JW, Spitzer SG, Laser J, Reddy V, **Harada S**. Is low positive JAK2^{V617F} mutation test result clinically significant? *Presented at American Society for Clinical Pathology 2012 Annual Meeting, Boston, MA. Selected for Platform Oral Abstract Presentation.*
48. Treece A, Council L, Posey III J, **Harada S**. Methylguanine methyltransferase (MGMT) Expression in Tumors of the Gastrointestinal Tract and Pancreas. *Presented at United States and Canadian Academy of Pathology 2013 Annual Meeting, Baltimore, MD. (Lab Invest. 93:183A, 2013).*
49. Brabscorn M, Ross JR, Horton D, Rasco MS, Winokur TS, Reddy VR, Wei S, **Harada S**. Validation of Dual color HER2/chromosome 17 ISH (in-situ hybridization) - Comparison with single color CISH (chromogenic in-situ hybridization) and inter-observer reproducibility. *Presented at United States and Canadian Academy of Pathology 2013 Annual Meeting, Baltimore, MD. (Lab Invest. 93:490A, 2013).*
50. Agosto-Arroyo E, Isayeva T, Wei S, Shen D, Almeida JS, **Harada S**. Molecular profiling of breast ductal carcinoma in situ (DCIS) - Gene expression signature of HER2 positive DCIS. *Presented at UAB Faculty Development Grant Program Poster Session, October 1, 2013.*
51. Borate U, **Harada S**, Reddy V, Peker D. Therapy-related Myeloid Sarcoma as a new diagnostic entity? A 10-year Institutional Retrospective Review. *Presented at 2013 ASH (American Society of Hematology) Annual Meeting, New Orleans, LA. (Blood 122:2656, 2013).*
52. Deal TM, Brazelton JD, **Harada S**, Borate U, Reddy V, Peker D. Clinicopathological and molecular features of treatment-related myeloid sarcoma, a subtype of treatment-related myeloid neoplasms. *Presented at United States and Canadian Academy of Pathology 2014 Annual Meeting, San Diego, CA. (Lab Invest. 94:344A-345A, 2014).*

53. Agosto-Arroyo E, Branscomb MP, **Harada S**, Park SL. Archival System for Pathology Informatics, Research and Education (ASPIRE): a Web-based Image Platform for Molecular Pathology. *Presented at Pathology Informatics 2014, Pittsburgh, PA.*
54. Agosto-Arroyo E, Coshatt GM, **Harada S**, Park SL. Alchemy: A web 2.0 real-time quality assurance platform for Human Immunodeficiency Virus and Hepatitis C Virus Quantitation Tests. **Oral presentation at Pathology Informatics 2014, Pittsburgh, PA.**
55. Agosto-Arroyo E, Anderson F, Bucy RP, Reddy V, **Harada S**. JAK2 positive myeloproliferative neoplasm concomitant with marginal zone lymphoma. *Presented at College of American Pathologists 2014 Meeting. Chicago, IL.*
56. Agosto-Arroyo E, **Harada S**, Peker D. Transformation of extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue lymphoma into diffuse large B-cell lymphoma associated with myc rearrangement. *Presented at College of American Pathologists 2014 Meeting. Chicago, IL.*
57. Agosto-Arroyo E, **Harada S**, Peker D. Concomitant diffuse large B-cell lymphoma and extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue arising from the same clone and presenting as an orbital mass. *Presented at Workshop at 17th Meeting of the European Association for Hematopathology, October 2014, Istanbul, Turkey.*
58. Agosto-Arroyo E, Isayeva T, Almeida JS, **Harada S**. Molecular Pathology: SY18-1: Molecular profiling of breast ductal carcinoma in-situ. *Pathology. 46(suppl 2):S29, 2014. [PMID: 25188123].*
59. **Harada S**, Fallon KB, Reddy A, Nabors LB. Molecular Pathology: SC18-1: Interesting case - actionable mutation in a case with a recurrent pleomorphic xanthoastrocytoma with anaplastic features. *Pathology. 46(suppl 2):S28-9, 2014. [PMID: 25188122].*
60. **Harada S**. Molecular Pathology: LC18-1: Molecular testing for targeted therapy -sequencing based assay. *Pathology. 46(suppl 2):S28, 2014. [PMID: 25188121].*
61. Agosto-Arroyo E, Branscomb MP, **Harada S**, Park SL. Use of Web-based Image Platform for fluorescent in-situ hybridization images: Archival system for pathology informatics, research and education (ASPIRE). *Presented at Association for Molecular Pathology 2014 Annual Meeting. (J Mol Diag. 16:777, 2014).*
62. Agosto-Arroyo E, Coshatt GM, **Harada S**, Park SL. Real-time quality assurance platform (Alchemy) for Human Immunodeficiency Virus, Hepatitis C Virus quantitation tests and Human Papilloma Virus test. *Presented at Association for Molecular Pathology 2014 Annual Meeting. (J Mol Diag. 16:777, 2014)*
63. Dai Q, **Harada S**. Has unnecessary JAK2 V617F mutation test been ordered? – Concurrent testing and peripheral deep vein thrombosis. *Presented at Association for Molecular Pathology 2014 Annual Meeting. (J Mol Diag. 16:719, 2014).*
64. Levesque JA, Agosto-Arroyo E, Janowski KM, Coshatt GM, Eltoum, I-E, **Harada S**. Isolation of DNA from air-dried diff quik stained cytology smears for sequencing analysis in cases with acellular cell blocks. *Presented at Association for Molecular Pathology 2014 Annual Meeting. (J Mol Diag. 16:758, 2014).*
65. Zhou Y, Armstead AR, Coshatt GM, Limdi NA, **Harada S**. Validation of Cytochrome P450 (CYP) 2C19 genotype testing for antiplatelet therapy guidance. *Presented at Association for Molecular Pathology 2014 Annual Meeting. (J Mol Diag. 16:779, 2014).*
66. Agosto-Arroyo E, Isayeva T, Wei S, Almeida JS, **Harada S**. Molecular Profiling of Breast Ductal Carcinoma In Situ (DCIS) - Gene Expression Signature of HER2 Positive DCIS. *Presented at United States and Canadian Academy of Pathology 2015 Annual Meeting, Boston, MA. (Lab Invest. 95:452A, 2015).*
67. Alston E, Levesque JA, Agosto-Arroyo E, Janowski K, Coshatt G, **Harada S**, Eltoum IA. Poor Cell Block Adequacy Rate for Molecular Testing Improved with the Addition of Diff Quik Stained Smears: Need for Better Cell Block Processing. *Presented at United States and Canadian Academy of Pathology 2015 Annual Meeting, Boston, MA. (Lab Invest. 95:81A-82A, 2015).*
68. McIntosh ER, Drwiega J, Brandwein-Gensler MS, **Harada S**, Gordetsky J. Frozen Section: Guiding the Hands of Surgeons? *Presented at United States and Canadian Academy of Pathology 2015 Annual Meeting, Boston, MA. (Lab Invest. 95: 505A, 2015).*
69. Dai Q, Yang S-H, Partridge EE, Siegal GP, **Harada S**. One Year Experience of Molecular Tumor Board at UAB. **Oral presentation at Association of Clinical Scientists (ACS) Annual Meeting 2015, Salt Lake City, UT.**

70. Siniard RC, **Harada S**, Park SL. Asterism: A web 2.0 molecular diagnostics templating, reporting and analytics system. **Oral presentation at Pathology Informatics 2015, Pittsburgh, PA.**
71. Figge D, Standaert D, **Harada S**, Park SL. Informatics as Subversive Culture: A Tailored Data Sciences Experience for Molecular Diagnostics Authors. *Presented at Pathology Informatics 2015, Pittsburgh, PA.*
72. Soni A, **Harada S**, Park SL. HCV Genie: A Web 2.0 Interpretation and Analytics Platform for the Versant Hepatitis C Virus (HCV) Genotype Line Probe Assay Version 2.0. **Oral presentation at Pathology Informatics 2015, Pittsburgh, PA.**
73. Duncan VE, **Harada S**, Stevens T. Primary adenosquamous carcinoma of the colon in a patient with Lynch syndrome: a new histologic subtype associated with microsatellite instability? *Presented at CAP '15. Nashville, TN.*
74. Dai Q, **Harada S**, Peker DP. Prognostication of high grade diffuse large B-cell lymphoma and the role of MYC, BCL2, and PHL3. *Presented at American Society for Clinical Pathology 2015 Annual Meeting, Long Beach, CA. (Am J Clin Pathol. 144:A145, 2015).*
75. Dai Q, Coshatt G, **Harada S**, Park SL. Implementation and Use of a Real-Time QA Program in Monitoring and Improving Workflow in a Clinical Molecular Diagnostics Laboratory. *Presented at Association for Molecular Pathology 2015 Annual Meeting, Austin, TX. (J Mol Diag. 17:797, 2015).*
76. Dai Q, **Harada S**, Park SL. GATK from Scratch: A Customized Bioinformatics Curriculum and Practicum in Clinical Molecular Diagnostics. *Presented at Association for Molecular Pathology 2015 Annual Meeting, Austin, TX. (J Mol Diag. 17:796, 2015).*
77. Zhou Y, Armstead AR, Coshatt GM, Limdi NA, **Harada S**. Rapid CYP2C19 genotype testing: Comparison between Spartan RX CYP2C19 and Verigene CYP2C19. *Presented at Association for Molecular Pathology 2015 Annual Meeting, Austin, TX. (J Mol Diag. 17:845, 2015).*
78. Zhou Y, Armstead AR, Coshatt GM, **Harada S**, Limdi NA. Genotype-guided antiplatelet therapy in patients undergoing percutaneous coronary intervention. *Presented at Association for Molecular Pathology 2015 Annual Meeting, Austin, TX. (J Mol Diag. 17:845, 2015).*
79. Dussaq A, Soni A, Park SL, Willey CD, **Harada S**. HCV Genie: A Web 2.0 Interpretation and Analytics Platform for the Versant Hepatitis C Virus (HCV) Genotype Line Probe Assay Version 2.0. **Platform Presentation at United States and Canadian Academy of Pathology 2016 Annual Meeting, Seattle, WA. (Modern Pathol. 29(suppl 2):393A, 2016).**
80. **Harada S**, Shen D, Wei S. Impact of the change of criteria for HER2 immunohistochemistry interpretation on HER2 status in breast cancer. *Presented at United States and Canadian Academy of Pathology 2016 Annual Meeting, Seattle, WA. (Modern Pathol. 29(suppl 2):44A, 2016).*
81. Ping Z, Siegal GP, **Harada S**, Shen D. Genomic characterization of "CDH1-unaltered" invasive lobular carcinoma of breast. *Presented at United States and Canadian Academy of Pathology 2016 Annual Meeting, Seattle, WA. (Modern Pathol. 29(suppl 2):66A, 2016).*
82. Cimino JJ, Arend RC, **Harada S**, Yang ES, Alsip J. Integration of Tumor Variant Data into an Electronic Health Record System to Support Dynamic Interpretation and Decision Support. *Presented at AMIA (American Medical Informatics Association) 2016 Joint Summits on Translational Science, San Francisco, CA.*
83. Dussaq A, Soni A, Park SL, Willey CD, **Harada S**. HCV Genie: A Web 2.0 Interpretation and Analytics Platform for the Versant Hepatitis C Virus (HCV) Genotype Line Probe Assay Version 2.0. **Oral presentation at Pathology Informatics 2016, Pittsburgh, PA.**
84. Ping Z, Umphrey HR, **Harada S**. The Utility of Specimen Radiograph to Separate Breast Core Biopsies With and Without Calcifications. *Presented at CAP16, Las Vegas, NV.*
85. Peker D, Chakravarthi BVSK, Siegal GP, Varambally S, **Harada S**. Down-regulation of RUNX3 expression in solid tumors metastatic to the brain. *Presented at XXXI International Congress of the IAP and 28th Congress of the ESP, Cologne, Germany, 2016. (Virchows Arch. 469: S205, 2016).*
86. Siniard RC, Winokur TS, Dai Q, Levesque JA, Guo R, Heslin M, Nabell L, Nabors LB, Arend R, Roth KA, Partridge EE, Siegal GP, Yang ES, **Harada S**. Molecular tumor board: Two year experience at University of Alabama at Birmingham. *Presented at Association for Molecular Pathology 2016 Annual Meeting, Charlotte, NC. (J Mol Diag. 18:1021, 2016).*
87. Janowski KM, Levesque JA, Siniard RC, Coshatt GM, **Harada S**. A hybrid method for DNA extraction and purification of formalin-fixed paraffin-embedded (FFPE) tissue utilizing Zymo Research Pinpoint

- Solution and Qiagen Spin Columns – A step for automation. *Presented at Association for Molecular Pathology 2016 Annual Meeting, Charlotte, NC. (J Mol Diag. 18:1048, 2016).*
88. Cavallari LH, Denny JC, Lee CR, Beitelshes AL, Duarte JD, Kimmel SE, Voora D, McDonough CW, Gong Y, Wei W, Pratt VM, Alestock TD, Allan RW, Anderson RD, Ardadi AK, Brott B, Brown L, Ashton JN, Chumnumwat S, Clare-Salzler MJ, Coons JC, Cooper-DeHoff RM, Dillon C, Elsey AR, Hamadeh IS, **Harada S**, Hillegeass WE, Hines L, Horenstein RB, Howell LA, Jeng LJB, Kelemen MD, Kong B, Langae TY, Larson EA, Lee Y, Magvanjav O, Montasser ME, Nelson DR, Nutescu EA, Nwaba D, Owusu-Obeng A, Pakyz RE, Palmer K, Petry N, Quinn AH, Robinson SW, Schub J, Skaar TC, Sriramoju VB, Staley BJ, Starostik P, Stevenson JM, Varunok N, Vesely MR, Vo T, Wake D, Weck KE, Weitzel KW, Zhao RY, Empey PE, Kreutz RP, Limdi NA, Stouffer GA, Wilke RA, Shuldiner AR, Johnson JA, Peterson JF. Prospective clinical implementation of CYP2C19-genotype guided antiplatelet therapy after PCI: a multi-site investigation of MACE outcomes in a real-world setting. **Presented at Clinical Science Special Report Session (Premier Session) at Scientific Sessions 2016 for American Heart Association, New Orleans, LA.**
89. Londono AI, Farrukh N, Smith MK, Alvarez RD, Huh WK, Bevis KS, Leath III CA, Straughn Jr. M, Yang ES, **Harada S**, Kim KH, Arend RC. Analysis of clinical cancer gene panels by next generation sequencing in tumor and circulating cell-free DNA samples in recurrent ovarian cancer patients, *Presented at American Association for Cancer Research (AACR) Precision Medicine Series, Jan 4, 2017, San Diego, CA.*
90. Siniard RC, Janowski KM, Guo R, Winokur TS, Coshatt GM, **Harada S**. Improved DNA quality by punch from tissue block as compared to Pinpoint Extraction from unstained slides of formalin-fixed paraffin embedded (FFPE) tissue. *Oral Presentation at Association of Clinical Scientists (ACS) Annual Meeting, May 17-20, 2017, Birmingham, AL. (Ann Clin Lab Sci. 47(3): 373, 2017).*
91. **Harada S**, Dai Q, Levesque JA, Winokur TS, Guo R, Heslin M, Nabell L, Nabors LB, Arend R, Roth KA, Partridge EE, Siegal GP, Yang ES. Organizing and running a Molecular tumor board: Two year experience at University of Alabama at Birmingham. *Presented at Association of Clinical Scientists (ACS) Annual Meeting, May 17-20, 2017, Birmingham, AL (Ann Clin Lab Sci. 47(3):369, 2017).*
92. Wang K, Marbut S, **Harada S**, Guo R. Distinct molecular mutations in synchronous lung cancers. *Presented at American Society for Clinical Pathology 2017 Annual Meeting, Chicago, IL. (Am J Clin Pathol. 149(suppl 1):S54, 2017).*
93. Tawfik C, Londoño AI, Moore D, Riyue B, Cooper S, Huh WK, Bevis KS, Leath CA, Straughn MJ, Yang SH, **Harada S**, Kim KH, Arend,RC. Overcoming Chemoresistance with the Inhibition of the Wnt Pathway in Ovarian Cancer. *Poster Presentation at the annual American College of Surgeons: Clinical Congress. October 25, 2017, San Diego, CA.*
94. Guo R, Janowski KM, Coshatt GM, Siniard RC, Bryan AW, Winokur TS, **Harada S**. Next generation sequencing with HaloPlexHS Custom Panel – One work flow for both solid tumor and myeloid disease. *Presented at Association for Molecular Pathology 2017 Annual Meeting, Nov 16-18, 2017, Salt Lake City, UT. (J Mol Diag. 19(6):1051, 2017).*
95. Minata M, Yamaguchi S, Allah-Alsheikh H, Lu S, Caviello V, Forero-Torre A, Peker D, **Harada S**, Gillespie Y, Samant R, Park Y-H, Cerione RA, Tannous BA, Nakano I. High aldehyde dehydrogenase activity identifies brain metastasis-initiating cells in breast cancer. *Presented at Society for Neuro-Oncology 2017 Annual Meeting, San Francisco, CA.*
96. Allah-Alsheikh H, Minata M, Yamaguchi S, **Harada S**, Peker D, Samant R, Tannous BA, Bhat K, Cerione RA, Zhang S, Nakano I. MLK4 is required for metastasis initiation in the brain. *Presented at Society for Neuro-Oncology 2017 Annual Meeting, San Francisco, CA.*
97. I-SPY Trial Operations. Pathological complete response predicts event-free and distant disease-free survival in the I-SPY2 TRIAL. *Presented at SABCS 2017.*
98. Morlote D, Stevens TM, Qarmali M, Siegal GP, Gatalica Z, **Harada S**. Malignant Ewing-like neoplasm with EWSR1-KLF15 fusion: At the crossroads of a myoepithelial carcinoma and a Ewing sarcoma. *Presented at the 44th Annual Anatomic Pathology Conference for Florida Society of Pathologists on February 17, 2018. Orlando, FL. – Received an Award for Achieving Third Place in the 2018 Digital Poster Competition.*
99. Morlote D, Gatalica Z, Swensen J, Ellis M, Prieto-Granada C, **Harada S**, Folpe A, Stevens T. Spindle epithelial tumor with thymus-like differentiation (SETTLE): a next-generation sequencing (NGS) study.

- Presented at United States and Canadian Academy of Pathology 2018 Annual Meeting. March 19, 2018. Vancouver, Canada. (Modern Pathol. 31(suppl 2):482, 2018).*
100. Morlote D, Janowski K, Siniard RC, Guo R, Winokur TS, Coshatt GM, **Harada S**. Effects of Improved DNA Quality by Punch from Tissue Block as Compared to Pinpoint Extraction from Unstained Slides on Next Generation Sequencing Quality Metrics. **Platform Presentation at United States and Canadian Academy of Pathology 2018 Annual Meeting. March 20, 2018. Vancouver, Canada. (Modern Pathol. 31(suppl 2):783, 2018).**
 101. Morlote D, Rais-Bahrami S, **Harada S**, Gordetsky J. A molecular profile of clear cell papillary renal cell carcinoma by next generation sequencing. **Platform Presentation at United States and Canadian Academy of Pathology 2018 Annual Meeting. March 20, 2018. Vancouver, Canada. (Modern Pathol. 31(suppl 2):370, 2018).**
 102. Morlote D, Peker D, **Harada S**. Molecular and cytogenetic characterization of therapy-related myeloid neoplasms: A tertiary center experience. *Platform presentation at Association of Clinical Scientists (ACS) 2018 Annual Meeting, Houston, TX. (Ann Clin Lab Sci. 48(3): 397, 2018)* **(Morlote received Travel Grants for 2019 Meeting, based on submitted abstracts.)**
 103. Morlote D, Yemelyanova A, Guo R, De Frank (Coshatt) GM, Horton D, Grace ZB, Musgrave MD, **Harada S**. Validation of FFPE Tissue Punches for Detection of *KRAS* and *BRAF* Mutations with the Idylla PCR-based Molecular Diagnostics Assay. *Presented at Association for Molecular Pathology 2018 Annual Meeting, Nov 1-3, 2018, San Antonio, TX. (J. Mol. Diag. 20(6): 968, 2018).*
 104. Morlote D, Gordetsky J, Batista D, Rais-Bahrami S, **Harada S**. Molecular and structural variants in 22 cases of clear cell papillary renal cell carcinoma. *Presented at United States and Canadian Academy of Pathology 2019 Annual Meeting. (Modern Pathol. 32(suppl 2):102, 2019)*
 105. Morlote D, Peker D, Reddy V, **Harada S**. Utility of NGS in cytopenic patients with absent dysplasia on bone marrow biopsy. *Platform presentation at Association of Clinical Scientists (ACS) 2019 Annual Meeting, Hershey, PA. (Ann Clin Lab Sci. 49(3): 409, 2019)*
 106. Singh N, Morlote D, Vnencak-Jones C, Yemelyanova A, **Harada S**. Acute myeloid leukemia case harboring unusual *FLT3* variant: Somatic vs germline? *Presented at Association of Clinical Scientists (ACS) 2019 Annual Meeting, Hershey, PA. (Ann Clin Lab Sci. 49(3): 415, 2019)*
 107. Wei Q, Liu X, De Frank GM, Yemelyanova A, **Harada S**. Validation of extracted DNA for detection of *KRAS* mutations with Idylla PCR-based molecular diagnostic assay: Can we rescue small samples? *Presented at Association for Molecular Pathology 2019 Annual Meeting. (J. Mol. Diag. 21(6): 1200, 2019)*
 108. Singh N, Yemelyanova A, Winokur T, **Harada S**. Impact of universal screening and immunotherapy eligibility of microsatellite instability testing. *Presented at Association for Molecular Pathology 2019 Annual Meeting. (J. Mol. Diag. 21(6): 1189, 2019)*
 109. Morlote D, Reddy V, Singh N, Yemelyanova A, **Harada S**. Germline *GATA2* variants detected by next generation sequencing with myeloid comprehensive panel: Pathogenic or benign polymorphism? *Presented at Association for Molecular Pathology 2019 Annual Meeting. (J. Mol. Diag. 21(6): 1142, 2019)*
 110. Memon R, Prieto-Granada CN, **Harada S**, Winokur TS, Reddy VB, Siegal GP, Wei S. Discordance between immunohistochemistry (IHC) and in situ hybridization (ISH) to detect *HER2* overexpression/gene amplification in breast cancer (BC) in the modern age. *Accepted for United States and Canadian Academy of Pathology 2020 Annual Meeting.*
 111. Eich M-L, Rodriguez Pena MDC, Prieto-Granada CN, Magi-Galluzzi C, **Harada H**, Netto GJ. Mismatch repair gene mutations on low to intermediate risk and metastatic prostate cancer. *Accepted for United States and Canadian Academy of Pathology 2020 Annual Meeting.*
 112. **Harada S**, Janowski KM, Morlote D, Rodriguez Pena MD, Harbi D, Calio C, DeFrank G, Magi-Galluzzi C, Netto G, Mackinnon AC, Martignoni G. Validation and performance of fusion gene panel for MiT family translocation renal cell carcinomas: Quality of RNA is important for fusion detection. *Accepted for Association for Molecular Pathology 2020 Annual Meeting.*
 113. **Harada S**, Janowski KM, Morlote D, Rodriguez Pena MD, Harbi D, Calio C, DeFrank G, Magi-Galluzzi C, Netto G, Martignoni G, Mackinnon AC. Detection of renal cell carcinoma with TFEB amplification using Archer FusionPlex RNASeq gene expression data. *Accepted for Association for Molecular Pathology 2020 Annual Meeting.*

114. Wei Q, Eltoun IA, DeFrank G, Mackinnon AC, **Harada S**. De-stained cytology smears can be used for detection of *KRAS* mutations using Idylla PCR-based molecular diagnostic assay. *Accepted for Association for Molecular Pathology 2020 Annual Meeting*.
115. Singh N, Collinwood R, Eich M-L, Robinson SD, Varambally S, Al Diffalha S **Harada S**. NAB2-STAT6 Gene Fusions to identify primary/metastasis hemangiopericytoma/solitary fibrous tumors. *Accepted for Association for Molecular Pathology 2020 Annual Meeting*.
116. Rodriguez Pena MD, **Harada S**, Mackinnon AC, Netto G. Assessment of microsatellite instability on a multi-racial cohort of high grade prostate cancer using Idylla MSI test. *Accepted for Association for Molecular Pathology 2020 Annual Meeting*.
117. Morlote D, Fei F, Janowski KM, Harbi D, DeFrank G, Mackinnon AC, **Harada S**. Comparison of targeted myeloproliferative versus comprehensive myeloid panel in the evaluation of suspected BCR-ABL1- negative myeloproliferative neoplasms. *Accepted for Association for Molecular Pathology 2020 Annual Meeting*.
118. Harbi D, Iriabho EE, Flannery A, Worthey E, Basu MK, Yemelyanova A, Morlote D, Mackinnon AC, **Harada S**. Pindel as a Back-Up INDEL Caller to a GATK4 Mutect2 Based In-House Developed Somatic Secondary Analysis Bioinformatics Pipeline for a Custom Clinical Cancer NGS Panel. *Accepted for Association for Molecular Pathology 2020 Annual Meeting*.

ORAL PRESENTATIONS

Scientific Papers Presented at National and International Meetings

1. **Harada S**. Identification of Component Phosphoproteins in pp120, a Potential Alternative Insulin Signal Transduction Pathway. *Presented on March 3, 1997 at National Conference on Diabetes Research, Bethesda, MD*.
2. **Harada S**, Smith RM, Jarett L. Nuclear Translocation of Insulin. *Presented on April 7, 1997 at American Society for Investigative Pathology Annual Meeting, New Orleans, LA*.
3. **Harada S**, Solow BT, Hahn LM, Jarett L. Mechanism of Insulin Internalization: The Initial Step of Insulin Translocation to the Cell Nucleus. *Presented on April 19, 1998 at American Society for Investigative Pathology Annual Meeting, San Francisco, CA. (Published in FASEB J. 12: A163, 1998)*
4. **Harada S**, Tsiatis A, Jackson K, Rich R, Murphy K, Gocke CD, Eshleman JR. Interesting Pyrogram with multiple extra peaks in a case with *KRAS* dinucleotide mutation G12F. *Presented at Small Group Workshop "Solid Tumors: Challenging Cases and Diagnostic Dilemmas" at Association for Molecular Pathology 2009 Annual Meeting on November 20, 2009, Orlando, FL*.
5. **Harada S**, Silzle E, Gocke CD. Detection of the *BCR-ABL1* translocation in Patients with Chronic Myelogenous Leukemia (CML) by DNA-based Looped Ligation Assay (LOLA). **Platform presentation at Association for Molecular Pathology 2010 Annual Meeting, San Jose, CA.**

Scientific papers presented at local and regional meetings

1. **Harada S**, Loten EG, Smith RM, Jarett L. Non-receptor mediated nuclear accumulation of insulin in trypsin-treated H35 hepatoma cells. *Mid-Atlantic Diabetes Research Symposium, Bethesda, MD. September 1991*.
2. **Harada S**, Smith RM, Smith JA, Shah N, Jarett L. Demonstration of specific insulin binding to cytosolic proteins in H35 hepatoma cells, rat liver and skeletal muscle. *Mid-Atlantic Diabetes Research Symposium, Bethesda, MD. September 1994*.
3. Ludwinski M, **Harada S**, Smith JA, Phukan S, Jarett L. Effect of phosphorylated IRS-1 on tyrosine phosphorylation of the insulin receptor and IGF-1 receptor in MCF-7 breast cancer cells. *Mid-Atlantic Diabetes Research Symposium, Bethesda, MD. September 2002*.
4. Hasan R, Phukan S, **Harada S**. Differential regulation of early growth response gene-1 (*egr-1*) expression by insulin and glucose in endothelial cells derived from rat glomeruli. *Mid-Atlantic Diabetes Research Symposium, Bethesda, MD. September 2002*.
5. **Harada S**. Insulin – Intracellular Trafficking and its Gene Regulation. *Tenth Annual Jarett Symposium at Hospital of University of Pennsylvania, Philadelphia, PA. May 30, 2008*.
6. Morlote D, Gatalica Z, Swensen J, Ellis M, Prieto-Granada C, **Harada S**, Folpe A, Stevens T. Spindle epithelial tumor with thymus-like differentiation (SETTLE): a next-generation sequencing (NGS) study. *Presented at 2018 Pathology Trainee Research Day, UAB, Birmingham, AL, May 2, 2018 (Morlote received best poster for residents and fellow category).*

7. Wei Q, Liu X, De Frank GM, Yemelyanova A, **Harada S**. Validation of extracted DNA for detection of *KRAS* mutations with Idylla PCR-based molecular diagnostic assay. *Presented at 2019 Pathology Research Retreat, UAB, Birmingham, AL, August 16, 2019. (Wei received Clinical Trainee Award)*
8. Davenport ML, Silva AD, Hall A, Pike J, Wei Q, **Harada S**, Edmonds MD. A novel oncogenic miRNA in lung squamous carcinoma. *Presented 21st Annual Research Retreat for O'Neal Comprehensive Cancer Center, UAB, Birmingham, AL. October 11, 2019.*

Invited Lectures

1. Insulin Endocytosis and Translocation into the Cytosol and the Nucleus. *Presented on February 16, 1994, at Fourth Department of Internal Medicine, University of Tokyo Faculty of Medicine Tokyo, Japan*
2. Cell-specific Pathways for Insulin-induced Immediate-early Gene *egr-1* Expression. *Presented on January 27, 1997, at Grand Round in Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Philadelphia, PA*
3. Cell-specific Pathways for Insulin-induced Immediate-early gene Expression. *Presented on April 23, 1997, at Diabetes Forum, Tokyo Japan*
4. Cell-specific Pathways for Insulin-induced Immediate-early gene Expression. *Presented on April 28, 1997, at Fourth Department of Internal Medicine, University of Tokyo Faculty of Medicine Tokyo, Tokyo Japan*
5. Cell-specific Pathways for Insulin-induced Immediate-early gene Expression. *Presented on May 6, 1998, at First Department of Internal Medicine, University of Tokushima, Tokushima, Japan*
6. Effect of Gab1 in Insulin Induced Immediate-Early Gene *egr-1* Expression. *Presented on October 8, 1998, at Diabetes and Endocrinology Research Center, University of Pennsylvania School of Medicine, Philadelphia, PA*
7. Multiple Insulin Signal Transduction Pathways Leading to Cell-specific Responses. *Presented on November 18, 1999, at Diabetes and Endocrinology Research Center, University of Pennsylvania School of Medicine, Philadelphia, PA*
8. Insulin Signal Transduction Network and Regulation of Early Growth Response Gene (*egr-1*) Expression. *Presented on May 22, 2000, at Gunma University Institute for Molecular and Cellular Regulation, Gunma, Japan*
9. Regulation of Early Growth Response Gene-1 (*Egr-1*) by Insulin in Vascular Cells and its possible Role in Diabetic Vascular Complication. *Presented on Nov 29, 2006, at Fordham University, New York, NY.*
10. Molecular Pathology Technique and its Clinical Application in Oncology. *Presented on January 28, 2010 at Tokyo Medical and Dental University, Tokyo, Japan*
11. Molecular Pathology Technique and its Clinical Application. *Presented on April 6, 2010, at Drexel University College of Medicine, Philadelphia, PA*
12. New Approach to Molecular Oncology Diagnosis – LOLA (Looped Ligation Assay) and SNP Array. *Presented on February 3, 2011, Penn State Milton S. Hershey Medical Center, Hershey, PA*
13. New Approach to Molecular Oncology Diagnosis – LOLA (Looped Ligation Assay) and SNP Array. *Presented on February 10, 2011, University of Iowa, Iowa City, IA*
14. New Approach to Molecular Oncology Diagnosis – LOLA (Looped Ligation Assay) and SNP Array. *Presented on February 24, 2011, Baylor College of Medicine, Houston, TX*
15. New Approach to Molecular Oncology Diagnosis – LOLA (Looped Ligation Assay) and SNP Array. *Presented on March 15, 2011, Louisiana State University, New Orleans, LA*
16. New Approach to Molecular Oncology Diagnosis – LOLA (Looped Ligation Assay) and SNP Array. *Presented on March 25, 2011, University of Alabama at Birmingham, Birmingham, AL*
17. New Approach to Molecular Oncology Diagnosis – LOLA (Looped Ligation Assay) and SNP Array. *Presented on March 28, 2011, Wayne State University, Detroit, MI*
18. Role of Molecular testing: Application to clinical practice. *Presented at 2013 Tri-State Pathology Conference, 4/27-28/2013, Mobil, AL.*
19. Implementation of next generation sequencing testing in precision oncology. *Presented on August 14, 2017, Geisinger Health System, Danville, PA.*