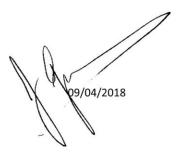
CURRICULUM VITAE

Revised: 9/2018

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4. Citizenship: USA

5. Current Titles and Affiliations:

a. Academic appointments:

I. Primary appointments:

Professor Department of Pathology and Laboratory Medicine Emory University School of Medicine September 2012--

II. Joint and secondary appointments:

Professor, Department of Medicine (Infectious Diseases) Emory University School of Medicine

Professor, Hubert Department of Global Health Emory Rollins School of Public Health

b. Other administrative appointments:

Associate Director of Emory Medical Laboratories 2017-

Medical Director of the Clinical Laboratories at Emory University Hospital Midtown 2014-present

Guest Researcher, Centers for Disease Control and Prevention April 2007 – present

6. Previous Academic and Professional Appointments:

1990- 1996	Professor of the pathology section in the "Preparation to the Mexican Residency Competency Exam" (equivalent to USMLE 1 and 2 combined) at the La Salle School of Medicine, Mexico City.
1992- 1996	Professor of the Specialty in Clinical Biochemistry in the School of Chemistry at the National Autonomous University, Mexico City.
1994- 1996	Professor of the clinical pathology course in the Specialty in Clinical Biochemistry in the School of Chemistry at the National Autonomous University, Mexico City.
1999-2007	Adjunct appointment, Emory School of Medicine (Problem Based Learning mentor for M1 and M2)
2007-2012	Associate Professor Department of Pathology and Laboratory Medicine Emory University School of Medicine

7. Previous Administrative and/or Clinical Appointments:

1989- 90	Staff Pathologist at the Department of Anatomic Pathology,
	Instituto Nacional de Cancerologia, México City
1990- 93	Director of the Clinical Laboratory, Instituto Nacional de
	Cancerologia, México City

1993- 96	Division Director of Ancillary Diagnostic and Therapeutic Services, Instituto Nacional de Cancerologia, Mexico City.
1996	Staff Pathologist at the Veterans Affairs Medical Center, Atlanta, Georgia
1997- 2007	Medical Officer (staff pathologist) at Infectious Disease Pathology Branch, Centers for Disease Control and Prevention, Atlanta, Georgia
2007-2009	Director of Clinical Laboratories at Children's Healthcare of Atlanta, Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, GA
2007- present	Faculty at Emory University, School of Medicine, Department of Pathology and Laboratory Medicine

8. Licensures/Boards:

February 1995	Georgia Medical License
December 1984	FLEX (Federation Licensing Examination)
September 1982	VISA Qualifying Examination
January 1981	ECFMG (Educational Commission for Foreign Medical
	Graduates)

9. Specialty Boards:

February 1988	Mexican Board of Anatomic Pathology
November 1987	American Board of Pathology (anatomic and clinical
	pathology)

10. Education:

1971-77	Baccalaureate, Colegio Oxford, México City
1977-83	Medical School, La Salle School of Medicine, México City

11. Postgraduate Training:

1983-87 Residency training in Anatomic and Clinical Pathology at

Emory University, Atlanta Ga.

1987-89 Fellow in Surgical Pathology, Emory University, Atlanta Ga.

Leadership training:

2008 Mid-career women faculty professional development

seminar sponsored by the Association of American Medical

Colleges in Scottsdale, AZ Dec 6-9, 2008

2009 Pediatric Executive Program sponsored by The Emory

Children's Center, Atlanta, GA January-May 2009

2010 Quality Academy, extended program. Sponsored by Emory

Healthcare, Atlanta GA, February –May 2010.

12. Committee Memberships:

a. National and International:

United States and Canada Academy of Pathology (USCAP), Abstract reviewer, 2002-05

Binford-Dammin Society of Infectious Disease Pathology, education committee, 2004-2007

Latin American Pathologists Foundation, President, 2006-2007

Binford-Dammin Society of Infectious Disease Pathology, Secretary/Treasurer, 2008- 2014

Binford-Dammin Society of Infectious Disease Pathology, Committee to select the Jerry Smith Award (best resident presentation of an Infectious Disease Pathology poster or proffered session at USCAP), 2008 and 2011

Science Advisory Committee for the Department of Defense on the Collaborative Research Laboratory in the Republic of Georgia, 2011- 2012

Academy of Clinical Laboratory Physicians and Scientists, member of the Program Committee for the 2013 Annual Meeting.

Infectious Diseases Society of America, Education Committee, 2012-present

United States and Canada Academy of Pathology (USCAP), Abstract reviewer, 2013-16

Binford-Dammin Society of Infectious Disease Pathology, elected President elect-elect, 2014

Binford-Dammin Society of Infectious Disease Pathology, President, 2017-2018

b. Institutional:

Diversity Committee at the National Center for Infectious Diseases, CDC, 1998-2006

Committee on Infectious Causes of Chronic Diseases, CDC, 1998-2006

Transfusion Committee, CHOA, 2007-2009

Emory University Parent Council, 2007-2010

Advisory Committee for the Emory Healthcare Medical Technologist Program, 2007- present

CoPath (Laboratory Information System for Pathology at Emory Healthcare) Steering Committee, 2009, 2011

Laboratory Operations (LabOps) Committee, 2010-present

Millennium (Laboratory Information System for the Clinical Laboratory at Emory Healthcare) Steering Committee, 2011-2013

Emory School of Medicine Committee on Community and Diversity (faculty retention and development section), 2009-2011

Emory School of Medicine Faculty Committee for Appointment and Promotions (FCAP) 2010-2013

Department of Pathology and Laboratory Medicine Faculty Committee for Appointment and Promotions (FCAP) 2013-present

Operating Room Committee at Emory University Hospital Midtown 2014-

Medical Practice Committee at Emory University Hospital Midtown 2014-

Point of Care testing Committee for the Emergency Departments for the Emory University Hospitals 2014-

Infection Control Committee at Emory University Hospital Midtown 2014-

Faculty Advisory Committee to the Dean of the School of Medicine, Emory University 2014—2017

Emory University Curriculum Committee, 2015-

Department of Pathology Clinical Competency Committee, 2015-

Medical Practice Committee at Emory University Hospital 2017-

Program Evaluation Committee (PEC) for the Department of Pathology and Laboratory Medicine, 2017-

Co-chair of the Clinical Pathology component of the PEC, 2018-

13. Consultantships:

Medical Education Partnership Initiative and African Society of Laboratory Medicine, Assessment of Pathology and Laboratory Services at the Black Lion Hospital (Addis Ababa University) and curriculum development of a Clinical Pathology Residency Program, 2011

Instituto Nacional de Cancerologia, Mexico City, Consultant for the Clinical Laboratory, 2011

American Society of Clinical Pathology (ASCP), Assessment of Pathology and Laboratory Services in Bolivia 2012

14. Editorial Boards:

Associate editor for American Journal of Clinical Pathology, 2014present

Associate editor for virology for Archives of Pathology and Laboratory Medicine, 2016- present

Section editor for Education and Training, and Review articles for American Journal of Clinical Pathology, 2017- present

Histopathology, 2016- present
American Journal of Clinical Pathology, 2013-present
Journal of Clinical Virology, 2009- present
Case Reports in Medicine, 2009-2011
AIDS Research and Human Retroviruses, 2011- present
Archives of Medical Research, 2011- present
Human Pathology, 2011- present
Pediatric and Developmental pathology, 2012- present

15. Manuscript reviewer

Infection and Drug Resistance 2018 -present Molecular Histology and Medical Physiology 2017-present Oxford Medical Case Reports 2016-present Journal of Clinical Laboratory Analysis 2016-present European Journal of Medical Research 2015-present Expert Review of Anti-infective Therapy 2015-present Advances in Medical Education and Practice, 2014- present British Microbiological Research Journal, 2014--present Journal of Virological Methods, 2014- present Diseases (MDPI open journal), 2014- present Placenta, 2014- present Mycoses, 2014- present Journal of Microbiology and Antimicrobials, 2014- present Virology and Mycology, 2013-present Journal of Eukaryotic Microbiology, 2013- present Clinical Microbiology and Infection, 2013- present Journal of Clinical Microbiology, 2013-present American Journal of Clinical Pathology, 2012-present BMC Infectious Diseases, 2012-present

European Infectious Diseases, 2012-present Archives of Pathology and Laboratory Medicine, 2011- present Journal of Infection, 2011- present Medical Mycology, 2011- present European Journal of Echocardiography, 2010- present Open Access Bioinformatics, 2010- present Diagnostic Microbiology and Infectious Diseases, 2010- present Modern Pathology, 2010- present Scholarly Research Exchange, 2009- present Cancer, 2009- present Journal of Molecular Diagnostics, 2009- present International Journal of Laboratory Hematology, 2009- present Pediatric Pulmonology, 2009- present Pediatric and Developmental Pathology, 2008- present Human Pathology, 2008- present Infection, 2008- present Indian Journal of Pathology and Microbiology, 2008- present Journal of Clinical Virology, 2008- present Digestive Diseases and Science, 2008- present AIDS Research and Human Retroviruses, 2006-present Emerging Infectious Diseases, 2006- present

16. Honors and Awards:

1982: National Autonomous University, Mexico City Honorable mention in professional exam

1983: La Salle University, Mexico City Top 5% of class in medical school (class of 120)

1989: Fundacion Mexicana para la Salud, Mexico City Repatriation award, competition to recruit foreign trainees

1990: National Autonomous University, Mexico City Aida Weiss Award in cancer research

1990-1996: Sistema Nacional de Investigadores, Mexico City Named a national researcher, a competitive system in Mexico

1999: Health and Human Services (HHS) Secretary Award, USA

Sudden deaths in children during outbreaks of Hand, Foot, and Mouth Disease in Malaysia and Taiwan

2000: Health and Human Services (HHS) Secretary Award, USA Discovery of Nipah virus in Malaysia and Singapore

2001: Health and Human Services (HHS) Secretary Award, USA Outbreak of West Nile virus in the Northeast United States

2001: Health and Human Services (HHS) Secretary Award, USA Outbreak of Ebola hemorrhagic fever in Uganda between October 2000 and February 2001

2002: Health and Human Services (HHS) Secretary Award, USA Public health emergency response to the World Trade Center and Pentagon terrorist attacks and the anthrax investigation

2002: James Nakano citation Award by the Centers for Disease Control and Prevention (CDC), USA. Publication: Jernigan JA, et al. Emerg Infect Dis 7: 933-44, 2001

2003: Charles C Shepard Science Award in Laboratory Methods by the CDC, USA. Publication: Ksiazek TG, et al. N Eng J Med 348:1953-66, 2003

2006: James Nakano citation Award by the Centers for Disease Control and Prevention (CDC), USA. Publication: Srinivasan A, et al. N Eng J Med 352:1103-11, 2005

2006: James Nakano citation Award by the Centers for Disease Control and Prevention (CDC), USA. Publication: Fischer M, et al. N Eng J Med353:2352-60,2005

2008: Honor Award by the National Center for Preparedness, Detection and Control of Infectious Diseases, HHS, USA Providing superior service and protecting the health of the public by a national, multi-agency investigation and response to pregnancy associated fatal toxic shock syndrome.

2010: Emory Milipub Club - Having a publication with more than 1000 citations: N Engl J Med 2003; 348: 1953-1966.

2014: Emory Women's First and Outstanding women—Emory chooses two women faculty every year to highlight their accomplishments.

2014: Elected to the American Clinical and Climatological Association.

17. Society Memberships:

American Society of Clinical Pathology (since 1985)

United States and Canadian Academy of Pathology (since 1986)

Consejo Mexicano de Medicos Anatomopatologos (1988)

Binford-Dammin Society of Infectious Disease Pathology, (since 1996)

(Secretary/Treasurer 2008-present; President elect 2016)

Latin American Pathologists Foundation, President (2006-2007)

Mexican Association of Immunohistrochemistry and Molecular Pathology (since 2007, founding member)

Infectious Diseases Society of America (2010, elected fellow in 2016)

Southern Society for Clinical Investigation (elected in 2011)

Academy of Clinical Laboratory Physicians and Scientists (elected 2013)

American Clinical and Climatological Association (elected 2014)

18. Organization of National or International Conferences:

IX Mexican National Congress of the Anatomic Pathology Federation, Coordinator of Infectious Disease Case Seminar, San Luis Potosi, Mexico, November 2010.

United States and Canada Academy of Pathology (USCAP), Moderator of Infectious Disease Pathology Evening Specialty Session, 2010- 2012

Latin American Society of Pediatric Pathologists (SLAPPE), Coordinator of the Infectious Disease Pathology Symposium for the XV Meeting of the SLAPPE held in Maceió, Brazil 2011.

Convener of 1 session for the 2012 African Society for Laboratory Medicine, Cape Town, South Africa, December 2012: Strengthening Clinical Laboratory Pathology in Africa.

Convener of 2 sessions for the 2014 African Society for Laboratory Medicine, Cape Town, South Africa, December 2014:

- 1. Strengthening the Practice of Laboratory Medicine and Pathology in Africa, and
- 2. The Role of Anatomic Pathology in Improving Health Care in Sub-Saharan Africa.

Convener of symposium for the 2016 African Society for Laboratory Medicine, Cape Town, South Africa, December 2016: "Strengthening the Practice of Laboratory Medicine and Pathology in Africa."

United States and Canada Academy of Pathology (USCAP), Moderator of Potpourri Session, Vancouver, BC, March 2018.

19. Research focus:

Use of immunohistochemisty and molecular methods to study the pathology and pathogenesis of infectious agents. Study of the acute and chronic pathologic effects of infectious agents, in particular *Helicobacter pylori*. Implementation of diagnostic methods using paraffin embedded tissue for the diagnosis of Class A infectious diseases agents.

Quality improvement of laboratory processes.

20. Patents:

Issued:

Publication No. US 7776521 B1 published on 17 Aug 2010

Application No. US 11/748359 filed on 14 May 2007

Patent references US 2005/0181357 A1, High-throughput diagnostic assay for the human virus causing severe acute respiratory syndrome (SARS). web site: http://ip.com/patent/US7776521 accessed September 1st, 2010

21. Grant Support:

Current Support:

1U19GH001583-01 CDC

02/02/2015 - 02/01/2020

Emory Partnership for Global Health Security Training (Emory PGHST). This project will help build capacity to respond to public health emergencies of international concern such as Ebola in Western Africa.

Role: Investigator (1.2 calendar-months)

Previous Support:

Emory Educational grant to expand computerized interactive learning modules to encompass other areas of the laboratory 2012-2013

Emory Educational grant to computerize clinical microbiology vignettes 2010-2011

NIH RO1 DK053708-06A1 grant: 2004-08. Host factors in *Helicobacter pylori* infections in children. Principal investigator: Benjamin Gold. Multicentric study that includes: Egleston Children Hospital, Cleveland Clinic, Toronto's Hospital for Sick Children, and Centers for Disease Control and Prevention. Role: co-investigator.

CDC/NCID (Infectious Causes of Chronic Diseases Group). 2001 – 2003 Gastric Atrophy and Intestinal Metaplasia caused by *Helicobacter pylori*: Evaluation of Preneoplastic Markers PI. J. Guarner

NIH RO1 HIC470-94C grant: 1997-2001 Study of *Helicobacter pylori* in children. Principal investigator: Benjamin Gold. Multicentric study that includes: Egleston Children Hospital, Cleveland Clinic, Toronto's Hospital for Sick Children, and Centers for Disease Control and Prevention. Role: co-investigator.

NIH RO1 CA67488-01 grant: 1995- 2000 Intervention study for the eradication of *Helicobacter pylori* to decrease the incidence of preneoplastic gastric lesions in Chiapas. Principal investigator: Julie Parsonnet. Multicentric study between the Centro Interdisciplinario de Estudios del Sureste (CIES), Instituto Nacional de Cancerologia (both in Mexico) and Stanford University in the United States. Role: co-investigator.

22. Clinical Service Contributions:

As Director of the Clinical Laboratory of the National Cancer Institute in Mexico City:

Installed the first laboratory computer network in the National Cancer Institute.

Wrote the first laboratory policy and procedure manuals for the laboratory.

Installed a flow cytometry laboratory.

Installed the cytogenetics laboratory.

Validated and implemented serologic tumor markers such as Ca 125, Ca 15.3, and cyfra 21.1.

Together with the National Autonomous University in Mexico City, developed a program of clinical laboratory research so that chemistry students could come to the laboratory at the National Cancer Institute to perform their thesis.

Remodeled the laboratory.

At the Infectious Diseases Pathology Activity in the Centers for Disease Control and Prevention, developed and implemented immunohistochemical assays for the following infectious agents:

Trypanosoma cruzi

Neisseria meningitidis

Streptococcus pneumoniae

Yersinia pestis

Group A Streptococcus

Clostridium sp.

Staphylococcus aureus

Free living ameba

Haemophilus influenzae

As Director of the Clinical Laboratories in Children's Healthcare of Atlanta:

Moved laboratory at Egleston Hospital to new location

Installed flow cytometry

Installed mass spectrometry

Developed molecular testing for Bordetella pertussis and enteroviruses

At Emory University Hospital:

Delineating workflows for all the processes in the entire Anatomic and Clinical Pathology Laboratories

Reorganizing the immunology rotation for pathology residents

Served as quality support for anatomic pathology from 2010-2011 (performing quality improvement projects, writing procedures, performing root cause analysis when problems arise)

Interpretation of protein electrophoresis and other related immunologic studies (performed 7 days out of each month until 2014), fluorescent insitu hybridization studies (FISH) for hematologic and other neoplasias (perform 1-2 weeks a month), and interpretation of coagulation study panels (perform one week a month)

Creation of templates to standardize pathologists' sign out of coagulation using guidelines

Design of a peer-review system to monitor and standardize pathologists' interpretations of immunology studies.

As Director of the Clinical Laboratory at Emory University Hospital Midtown, Atlanta:

Process improvement of Gram stain competencies for Core Laboratory Technologists,

Implementation of Point of Care troponin in the Emergency Room, Implementation at huddle "5 minute education topics for techs", Implementation of IQCP

Validation of line, chemistry and immunochemistry analyzers Move of core clinical laboratory to new location Validation of Urinalysis instruments

23. Formal Teaching:

a. Medical Student Teaching:

Lecturer for the Pathology section of the "Mexican Residency Competency Exam" (equivalent to USMLE 1 and 2 combined) at the La Salle School of

Medicine, Mexico City (30 hours a year), 1990-1996.

Mentor for Problem Based Learning (PBL) at Emory University School of Medicine for M1 (23 hours a year), 1999-2007.

Mentor for Problem Based Learning (PBL) at Emory University School of Medicine for M2 (25 hours a year), 2007-2008.

Leader for the Medical Student Clinical Laboratory Experience (MSCLE) during CAPSTONE: For one day and a half the entire medical student class (126 students) tour the laboratories of the Emory System and solve cases with an emphasis in Clinical Pathology, 2011- present.

Reorganization of medical student elective pathology rotation. Worked with residents and the Residency program Director and Co-Director to have a rotation where the students have more responsibility (carry a surgical pathology case from grossing to sign out) and can showcase better what is done in clinical pathology, 2011.

Director of the Pathology Elective for medical students, 2011-2016.

b. Graduate Program:

Residency program:

Presentation of interesting infectious disease cases seen at the Centers for Disease Control and Prevention to the residents at the Wednesday morning weekly conference at the Veterans Administration Hospital (30 hours a year), 1997- 2007.

Created a one month pediatric clinical chemistry rotation in the core laboratory at Children's Healthcare of Atlanta for pathology residents and clinical chemistry fellows, 2007- 2009.

Created a 3 week rotation through the clinical laboratory for pediatric residents, 2008- 2009

Course Director for the practical portion of the immunology section for Pathology Residents and Clinical Chemistry Fellows, Emory University 2009 to present.

Created 50 microbiology vignettes to teach clinical microbiology and infectious diseases pathology to pathology and medicine residents, medical students, and infectious diseases fellows during microbiology rounds, 2009- present.

Organize a career seminar series for pathology residents. This series includes 4 formal lectures on interviewing for jobs, contracts, financial considerations, and mentoring. In addition, a 4 hour panel with pathologists from the community and academia present the path they followed to get to where they are now, what they suggest residents should to do to prepare themselves for when they finish their residency training, and what they enjoy the most and least about their jobs. 2009- present.

Organize a monthly 1 hour lecture on different laboratory topics for internal medicine residents and a monthly tour of the Emory Hospital Laboratory, 2009- 2013.

Pathologist responsible for the Infectious Diseases Division CPCs (4 to 6 per year).

Microbiology vignettes on-line: created multiple choice questions for each of the vignettes that have been created for microbiology rounds, placed them in a web-based system so that these can be accessed remotely by residents, fellows and students in the school of medicine and school of public health. Received two educational grants awarded by Emory University for this project, 2010-2011 and 2012-2013.

Teaching coagulation to residents with 2 lectures (one hour each) that occur every three months during their blood bank training and one lecture that occurs every year, 2011-present. For this last lecture we play coagulation bingo. I designed 4 of the 5 boards used for this activity.

Emory Pathology elearning Portal: created a web page where conferences given by residents are converted into learning modules by adding multiple choice questions that have immediate feedback. Received an educational grant award by Emory University for this project, 2012-2013.

Course Director for the rotation on Laboratory Administration for Pathology Residents and Clinical Chemistry Fellows, Emory University

2014 to present.

Other post-graduate training for pathologists and clinicians

Short courses on Laboratory Medicine for Clinicians. Presented in 2014, 2015 and 2016: Directed and organized 4 day courses in Addis Ababa University, Ethiopia, as part of MEPI (Medical Education Partnership Initiative—NHI funded) on Laboratory Medicine for Clinicians. For this we created 12 problem-based cases that highlighted 4 Clinical Laboratory areas including Chemistry, Hematology, Blood Bank and Microbiology. In addition, 4 interactive cases that highlight the Laboratory Foundations have been posted in the EPeP website. Also included in the course were lectures and tours of the laboratories at Black Lion Hospital in Addis Ababa.

NCI PAR15: Co-Investigator. Comparison of case-based learning to power point presentations to teach African pathologists synoptic reporting of cancers. Nairobi, Kenya January and May 2016.

Course Director: "Leadership Principles" in Addis Ababa University as part of the MEPI-Jr, January 30-February 1, 2018.

c. Other categories:

i) Medical technologists:

Organized a series for Continual Education of Medical Technologists at Children's Healthcare of Atlanta by Clinical Pathology Faculty. Lectured 2 hours per year, 2007 –2009.

Lectures for the Medical Technologist Certification Program at Emory University: 14 hours on general principles of anemia, megaloblastic anemia, aplastic anemia, anemia associated to inflammation, platelet disorders, serology for viral infections, and clinical pathways 2008-present.

ii) Physician Assistant Program:

Seven 1 hour lectures on basic principles in immunology, 2011 and 2012.

iii) Masters in Public Health:

One hour lecture on diagnostic methods for infectious diseases in GH511 (Global Infectious Diseases in the School of Public Health), 2011- present.

24. Supervisory Teaching:

a. Post-doctoral fellows directly supervised:

Julie Gutman, MD, Pediatric Infectious Disease Fellow in a 1 year project reviewing ten years of pediatric malaria cases seen at CHOA, 2007-08. Current position: instructor in the Pediatric Infectious Disease Department of Emory University School of Medicine. Current position: Assistant Professor in the Pediatric Infectious Disease Department of Emory University School of Medicine.

Gillian Genrich, BA, Fellow in Emerging Infectious Diseases Program at the Centers for Disease Control and Prevention, Atlanta GA, 2004-2005. One year project developing an immunohistochemical assay for the detection of *Plasmodium falciparum* in tissue sections. Current position: Pathology resident at University of San Francisco.

Fernando Torres-Velez, DVM, Fellow in Emerging Infectious Diseases Program at the Centers for Disease Control and Prevention, Atlanta GA, 2000- 2003. Two year project developing an immunohistochemical assay for *Babesia* sp and study of human tissues and animal models for the detection of an extraerythocytic phase. Current position: Director of Laboratory Services at Plum Island, New York.

Annette Schwartz, DVM, Fellow in Emerging Infectious Diseases Program at the Centers for Disease Control and Prevention, Atlanta GA, 1999-2000. One year project developing an immunohistochemical assay for *Chlamydia pneumoniae* to establish an animal model for atherosclerosis. After finishing the CDC fellowship she trained in veterinary pathology at the New England Regional Primate Research Center, Harvard Medical School, Southboro, Massachusetts.

Walter Abitia, BA, thesis chair for degree of Specialist in Clinical Biochemistry by the Universidad Nacional Autonoma de Mexico, Mexico

City, 1994-1996. Thesis: The use of lactic deshydrogenase in oncologic patients. Currently working at the Instituto Nacional de Cancerologia, Mexico City.

Antonieta Molina, BA, thesis chair for degree of Specialist in Clinical Biochemistry by the Universidad Nacional Autonoma de Mexico, Mexico City, 1994-1996. Thesis: Use of tumor marked CYFRA 21-1 in carcinoma of the uterine cervix.

Jaime Pablo Linares-Acha, MD, thesis advisor for masters in neuroscience by the Universidad Nacional Autonoma de Mexico, Mexico City, 1995. Thesis: Flowcytometry of astrocytomas.

Elsa C Ramirez, BA, thesis chair for degree of Specialist in Clinical Biochemistry by the Universidad Nacional Autonoma de Mexico, Mexico City, 1992-1994. Thesis: Use and abuse of serum protein electrophoresis. Working at the Instituto Nacional de Cancerologia, Mexico City.

Maria Guadalupe Alvarez, MD, thesis chair for degree in Specialist in Clinical Biochemistry by the Universidad Nacional Autonoma de Mexico, Mexico City, 1992-1994. Thesis: Productivity in a clinical laboratory before and after a computarized information system was installed. Currently working at the Instituto Mexicano del Seguro Social, Mexico City.

b. Other:

Thesis advisor to obtain chemistry/biology major:

Adriana Romero-Serrano, biology major from the Universidad Nacional Autonoma de Mexico, Mexico City, 1997. Thesis: Study of bacterial load in-vitro using the Bactec 9120 system and correlation with blood cultures in patients at the Instituto Nacional de Cancerologia, Mexico.

Maria Sotera Chavez-Jacal, biology major from the Universidad Nacional Autonoma de Mexico, Mexico City, 1997. Thesis: Quantification of the effect of IL-2, IL-3, IL-4, and GM-CSF in cytogenetic studies of patients with hematologic malignancies.

Leticia Magalli Segura-Figueroa, chemistry major from the Universidad Veracruzana, Xalapa, Veracruz, Mexico, 1997. Thesis: Yeasts as a cause of diarrhea in oncologic patients.

Mariblanca Solis-Elias, chemistry major from the Universidad Veracruzana, Xalapa, Veracruz, Mexico, 1997. Thesis: Correlation of lactic dehydrogenase with CA 125 in patients with ovarian tumors.

Isela Santiago-Roque, chemistry major from the Universidad Veracruzana, Xalapa, Veracruz, Mexico, 1996. Thesis: Use of beta 2 microglobulin as a marker for malignant hematologic malignancies at the Instituto Nacional de Cancerologia, Mexico.

Claudia Veronica Aguilera-Mendez, chemistry major from the Universidad Autonoma de Yucatan, Merida, Mexico, 1996. Thesis: Use of tumor marker Ca 19-9 in patients with gastrointestinal tumors.

Maria Rocio Valdes-Gomez, chemistry major from the Universidad Motolinia, Mexico City, 1996. Thesis: Normal values for the Autoanalyzer Spectrum (Abbott).

Trinidad Matilde-Nava, chemistry major from the Universidad Autonoma de Puebla, Mexico, 1995. Thesis: Frequency of intestinal parasites, especially of *Isospora* sp., in adult cancer patients in México.

Raul Fernando Villaseñor-Flores, chemistry major from the Universidad Autonoma de Puebla, Mexico, 1995. Thesis: Frequency of intestinal parasites, especially of *Isospora* sp., in adult cancer patients in México.

Patricia Montoya, chemistry major from the Universidad Motolinia, Mexico City, 1995. Thesis: Comparison of two blood culture methods: trypticasein soy broth and lysis centrifugation.

Luz-Maria García-Rodriguez, chemistry major from the Universidad Motolinia, Mexico City, 1995. Thesis: Cytogenetic analysis of pleural fluid and aspiration biopsies of patients with lung adenocarcinoma.

Lorena Quezada-Camarena, chemistry major from the Universidad Motolinia, Mexico City, 1994. Thesis: Bacteriologic study of oral flora in patients with leukemia or lymphoma before and after treatment.

Enrique Alejandro Velasco, chemistry major from the Universidad Nacional Autonoma de Mexico, Mexico City, 1993. Thesis: Alfa feto

protein and chorionic gonadothropin in patients with testicular germ cell tumors.

25. Lectureships, Seminar Invitations, and Visiting Professorships (last 5 years):

Visiting Professor at the Hospital Central in San Luis Potosi, Mexico on May 29, 2015. Presented lecture entitled: "Role of pathology in diagnosis of infectious diseases." Reviewed cases with residents.

Invited lecturer, Grand Rounds at Aga Khan University Hospital, Nairobi, Kenya. Topic: "Laboratory Medicine Education". May 24, 2016.

Invited lecturer, GA Tech Health Services, Atlanta GA. Topic: "Infections without borders", April 2018.

Team lead for Quality Seminar for Pathologists and Cytologists in Cali, Colombia, May 3-4, 2018. Sponsored by the International Union against Cancer of the World Health Organization (WHO). Topics presented included: External Evaluation of Quality, Audits, Accreditation Agencies, Documents, Quality improvement techniques, Customer Service, Organization and others.

Invited lecturer to the Academy of Medicine in Buenos Aires, Argentina, to present the lecture: "Incorporating Pathology into the Infectious Diseases Practice". June 26, 2018.

26. Invitations to National or International Conferences (last 5 years):

Lecture: "The infectious disease physician and the microbiology laboratory" at the 39th Remington Winter Course on Infectious Diseases, Beaver Creek, CO, February, 2013.

Invited speaker to the Binford Dammin Society of Infectious Disease Pathologists (companion USCAP society): "Optimizing Recovery of Microorganisms at Autopsy during Epidemiologic Investigations", Baltimore, MD, March, 2013.

Invited speaker to the XXXVIII National (Mexican) Infectious Diseases and Microbiology Congress: "MALDI-TOF-MS, advantages and disadvantages of its use." Guadalajara Mexico, June, 2013.

Course entitled: "Infections without borders", at the 2013 American Society for Clinical Pathologists (ASCP) Annual Meeting, Chicago, IL September, 2013.

Course entitled: "Team Approach to the diagnosis of fungal infections", at the 2013 American Society for Clinical Pathologists (ASCP) Annual Meeting, Chicago, IL September, 2013.

Plenary session entitled: "Histopathologic diagnosis of fungal infections in the 21st century." at the XXIX meeting of the Society of Latin American Pathologists, Oaxaca, Mexico October, 2013.

Invited speaker at the infectious disease symposium of the XXIX meeting of the Society of Latin American Pathologists: "Do you know the cause of this granuloma?", Oaxaca, Mexico October, 2013.

Lecturer at the Short Course on Laboratory Medicine for Clinicians, Addis Ababa University, January 2014. Title of lectures: "Basics of hematology instrumentation" and "Urinanalysis and other examination of other fluids".

Speaker at the symposium: Educating the consumers: teaching clinical micro to clinicians with the presentation entitled "Web curriculum in clinical microbiology" at the American Society of Microbiology 2014 meeting, Boston, MA, May 17-20, 2014.

Course entitled: "Infections without borders", at the 2014 American Society for Clinical Pathologists (ASCP) Annual Meeting, Tampa,FL October, 2014.

Invited speaker: "Ebola, an update." At the 127th Annual Meeting of the American Clinical and Climatological Association, Tucson AZ, October 2014.

Plenary session entitled: "Infections without borders." At the XXXI Meeting of the Central American and Caribbean Pathologists, Managua, Nicaragua, November 2014.

Plenary session entitled: "Ebola, an update." At the XXXI Meeting of the Central American and Caribbean Pathologists, Managua, Nicaragua, November 2014.

Plenary session entitled: "A consult case from Mexico: role of telepathology, special stains and molecular diagnosis." At the XXXI Meeting of the Central American and Caribbean Pathologists, Managua, Nicaragua, November 2014.

Presentation entitled "The need for clinical laboratory support in the care of patients with non-communicable diseases" in the African Society for Laboratory Medicine 2014, Cape Town, South Africa, November 30 to December 4, 2014.

Lecturer at the Short Course on Laboratory Medicine for Clinicians, Addis Ababa University, January 2015. Title of lectures: "Basics of hematology instrumentation", "Urinanalysis and other examination of other fluids", and "Introduction to Microbiology".

Presentation entitled "Incorporating pathology in the practice of Infectious Diseases: Myths and reality." at the Infectious Disease Association of California, Costa Mesa, CA. May 2, 2015.

Plenary session entitled: "Role of Pathology in the Diagnosis of Infectious Diseases" in the XL Mexican National Congress of Infectious Diseases and Microbiology, May 28, 2015.

Session entitled: "Systemic mycosis that present in the surface" at the Microbiology symposium in the XL Mexican National Congress of Infectious Diseases and Microbiology, May 28, 2015.

Presentation entitled: "Pathologists in cases of bioterrorism." At the Infectious Disease Pathology Course of the XXX Congress of the Society of Latin American Pathologists, Santa Cruz, Bolivia, October 1st, 2015.

Presentation entitled: "Mycosis and immune deficiencies." At the Infectious Disease Pathology Course of the XXX Congress of the Society of Latin American Pathologists, Santa Cruz, Bolivia October 1st, 2015.

Presentation entitled: "Case presentation: systemic mycosis." At the Infectious Disease Pathology Course of the XXX Congress of the Society of Latin American Pathologists, Santa Cruz, Bolivia October 1st, 2015.

Meet the Professor: "Infectious Disease Pathology." At IDWeek 2015, San Diego, CA, October 10, 2015.

Course entitled: "Team approach to diagnosis of fungal infections", at the 2015 American Society for Clinical Pathologists (ASCP) Annual Meeting, Long Beach, CA, October, 29, 2015.

Long and short courses entitled: "Team approach to diagnosis of fungal infections" at the XXVIII World Congress of the World Association of Societies of Pathology and Laboratory Medicine (WASPaLM), Cancun, Mexico, November 18-21, 2015.

Lecture entitled: "Emergent infectious diseases. The pathologist's role" at the XXVIII World Congress of the World Association of Societies of Pathology and Laboratory Medicine (WASPaLM), Cancun, Mexico, November 18-21, 2015.

Plenary session entitled: "Transplant transmitted infections" at the XXVIII World Congress of the World Association of Societies of Pathology and Laboratory Medicine (WASPaLM), Cancun, Mexico, November 18-21, 2015.

Lecturer at the Short Course on Laboratory Medicine for Clinicians, Addis Ababa University, January 2016. Title of lectures: "Basics of hematology instrumentation" and "Urinanalysis and other examination of other fluids".

Invited speaker to the International Congress of Guadalajara's Civil Hospitals, presentation entitled: "Role of pathologists in diagnosis of infectious diseases" February 2016

Invited speaker to the Binford Dammin Society of Infectious Disease Pathologists (companion USCAP society): "Fungal infections of the lung: histopathology and molecular diagnosis" Seattle, WA, March, 2016. (Mentored Andrew Bryan, MD, PhD, a PGY3 in clinical pathology from University of Washington as we did the presentation together).

Session entitled: "Infectious Diseases of the Traveler" at the Microbiology symposium in the XLI Mexican National Congress of Infectious Diseases and Microbiology, May 27, 2016.

Course entitled: "Team approach to diagnosis of fungal infections", at the 2016 American Society for Clinical Pathologists (ASCP) Annual Meeting, Las Vegas, NV, September 14, 2016.

Course entitled: "Infections without borders", at the 2016 American Society for Clinical Pathologists (ASCP) Annual Meeting, Las Vegas, NV, September 14, 2016.

Course entitled: "Differential diagnosis of skin ulcers and eschars" in the symposium entitled Neoplasias in Africa, at the 2016 American Society for Clinical Pathologists (ASCP) Annual Meeting, Las Vegas, NV, September 15, 2016.

Infectious Disease session at the XXXII Meeting of the Central American and Caribbean Pathologists, 3 presentations entitled:

- 1. "Mycosis in the Central Nervous System";
- 2. "Infectious Disease Pathology seen in Africa; and
- 3. "Slide seminar."

Havana, Cuba, November 2016.

Presentations at the African Society for Laboratory Medicine 2016, Cape Town, South Africa, December, 2016, entitled:

- 1. "Strengthening communication between diagnostic laboratories and the clinical team" in the symposium "The need for clinical laboratory support in the care of patients with non-communicable diseases"; and
- 2. "The role of anatomic pathology in improving healthcare in Sub Saharan Africa" oral presentation.

32nd Annual Congress of Mexican Pathologists, Merida, Mexico. May 2017 presentations entitled "Myths and realities of infectious disease pathology" and "Case of an immunocompetent woman with pigmented hyphae in the central nervous system".

Invited speaker to the XLII National (Mexican) Infectious Diseases and Microbiology Congress: "Pathology of Zika virus." Puebla, Mexico, May, 2017.

Invited speaker to the XLII National (Mexican) Infectious Diseases and Microbiology Congress for the joint Emory AMIMC: "Pathology of Ebola virus, tuberculosis and influenza." Puebla, Mexico, May, 2017.

Session coordinator and presenter of one case for the XVIII Meeting of the Society of Latin American Pediatric Pathologists, Cartagena, Colombia, August 8-9, 2017.

Four presentations at the XXXI Meeting of the Society of Latin American Pathologists, Cartagena, Colombia, August 8-12, 2017, entitled:

- 1. Round table on granulomas of the gastrointestinal tract
- 2. Case presentation for the gastrointestinal pathology session
- 3. Helicobacter pylori and cancer
- 4. Case presentation for the infectious disease pathology session

Course entitled: "Team approach to diagnosis of fungal infections", at the 2017 American Society for Clinical Pathologists (ASCP) Annual Meeting, Chicago, September 6-9, 2017.

Course entitled: "Infections without borders", at the 2017 American Society for Clinical Pathologists (ASCP) Annual Meeting, Chicago, September 6-9, 2017.

Presentation entitled: "Unusual infections of the gastrointestinal tract" in the symposium entitled "Infectious Diseases of the Gastrointestinal Tact", at the 2017 American Society for Clinical Pathologists (ASCP) Annual Meeting, Chicago, September 6-9, 2017.

Video microscopy presentation of two cases in the symposium entitled "A Practical Approach to Common and Uncommon Gastrointestinal Infections" at the 2017 American Society for Clinical Pathologists (ASCP) Annual Meeting, Chicago, September 6-9, 2017.

Presentation entitled: "Case based learning for pathologists: Kenya project" in the symposium entitled "Educational Approaches and Models for Capacitation Pathology in Africa", at the 2017 American Society for

Clinical Pathologists (ASCP) Annual Meeting, Chicago, September 6-9, 2017.

Lecture presentation: "Pathology: role in cancer care" for the ASCP symposium presented at the International Union Against Cancer (UICC), Mexico City, November 15, 2017.

Key note address: "The role of the clinical laboratory in patients with cancer" presented at the X Medical Resident Symposium of the National (Mexican) Institutes of Health, Mexico City, November 17, 2017.

Invited speaker to the Binford Dammin Society of Infectious Disease Pathologists (companion USCAP society): "Interdisciplinary approach to infectious disease pathology diagnosis". Vancouver, BC, March, 2018.

Invited speaker to the IV Annual Congress of Mexican Pathologists and LX Congress of the Mexican Association of Pathologists: "Chagas disease Animal models". Ixtapa-Zihuatanejo, Mexico, April 27-May 1st, 2018.

Invited speaker to the XLIII National (Mexican) Congress of Infectious Diseases and Clinical Microbiology: "Cases of difficult diagnosis", interactive session presented in conjunction with Emory University. Merida, Yucatan, May 23-26, 2018.

Infectious Diseases Pathology pre-meeting seminar in the Winter Argentinian Society Meeting: "Infections in patients with hematological malignancies". June 27, 2018.

Invited speaker to the 2018 Winter Argentinian Society Meeting: "Infections without borders". June 29, 2018.

27. Invitations to Regional or Local Conferences (last 5 years):

Emory University Infectious Diseases Seminar: "Incorporating pathology in the practice of Infectious Diseases: Myths and reality." Atlanta, GA, September 2014.

Emory University Coursera on Ebola: "Diagnosis of patients under investigation for Ebola and pathology and pathogenesis caused by the Ebolavirus" Atlanta, GA, April 2015.

Emory University, Gastrointestinal Diseases Grand Rounds: "From common to unusual GI infectious diseases". September, 2015.

Emory University Academy of Internal Medicine Educators: "Turning an education idea into an academic study" November, 2016.

28. Other Activities:

Grant Reviewer: AXA Research Fund doctoral grants, a European agency that funds projects related to socio-economic, environmental and life risks (grants regarding Nipah virus), 2011

29. Bibliography:

- a. Published and accepted research articles (clinical, basic science, other) in refereed journals:
- * Indicates first author was in training when the manuscript was prepared.
- 1. Reyes E, **Guarner J**. Idiopathic chronic ulcerative colitis, clinicopathological correlation of 80 cases. Patologia 1984;22: 257-70. (Spanish)
- 2. * **Guarner J**, Austin GE, Nassar VH, Sarma PR, Boedecker E. Biclonal gammopathy (IgG kappa and IgG lambda) in a patient with non-Hodgkin's lymphoma. Arch Pathol Lab Med 1986;110: 445-8.
- 3. * **Guarner J**, Robey SS, Gupta PK. Cytologic detection of *Pneumocystis carinii*: A comparison of papanicolau and other histochemical stains. Diagn Cytopathol 1986;2: 133-7.
- 4. * Guarner J, del Rio C, Slade B. Tuberculosis as a manifestation of the acquired immunodeficiency syndrome. JAMA 1986;256: 3092.
- 5. * **Guarner J**, Hanzlick R. Suicide by hanging. A review of 56 cases. Am J Forensic Med Pathol 1987;8: 23-6.
- 6. * **Guarner J**, Brynes RK, Chan WC, Birdsong G, Hertzler G. Primary non-Hodgkin's lymphoma of the heart in two patients with the acquired immunodeficiency syndrome. Arch Pathol Lab Med 1987;111: 254-6.

- 7. * Guarner J, Cohen C. Vulvar Paget's disease. Cytologic and immunohistologic diagnosis of a case. Acta Cytologica 1988;32: 727-30.
- 8. * del Rio C, **Guarner J**, Honig EG, Slade B. Sputum examination in the diagnosis of *Pneumocystis carinii* pneumonia in the acquired immunodeficiency syndrome. Arch Pathol Lab Med 1988;112: 1229-32.
- 9. * Guarner J, Cohen C, DeRose PB. Histogenesis of extramammary and mammary Paget cells. An immunohistochemical study. Am J Dermatopathol 1989;11: 313-8.
- 10. * Guarner J, Grossman B, Judd R, Wideman C, Evatt B. Multiple arteriovenous malformations of the small intestine in a patient with protein S deficiency. Am J Clin Pathol 1989;92: 374-8.
- 11. * **Guarner J**, del Rio C, Williams P, McGowan JE. Case report: fungal peritonitis caused by *Curvularia lunata* in a patient undergoing peritoneal dialysis. Am J Med Sci 1989;298: 320-3.
- 12. * **Guarner J**, del Rio C, Hendrix L, Unger ER. Composite Hodgkin's and non-Hodgkin's lymphoma in a patient with AIDS. Cancer 1990;66: 796-800.
- 13. * **Guarner J**, Unger ER. Association of Epstein-Barr virus in epithelioid angiomatosis of AIDS patients. Am J Surg Pathol 1990;14: 956-60.
- 14. **Guarner J**, Dominguez-Malagon HR, Meneses-Garcia A. Ossifying fibromyxoid tumor. Am J Surg Pathol 1990;14: 1167-9.
- 15. **Guarner J**, del Rio C, Carr D, Hendrix LE, Eley JW, Unger ER. Non-Hodgkin's lymphomas in patients with human immunodeficiency virus infection. Presence of Epstein-Barr virus by in situ hybridization, clinical presentation, and follow-up. Cancer 1991;68: 2460-5.
- 16. **Guarner J**, Mohar A, Parsonnet J, Halperin D. The association of *Helicobacter pylori* with gastric cancer and preneoplasic gastric lesions in Chiapas, Mexico. Cancer 1993;71:297-301.

17. Cohen C, **Guarner J**, DeRose PB. Mammary Paget's disease and associated carcinoma, an immunohistochemical study. Arch Pathol Lab Med 1993;117: 291-4.

- 18. **Guarner J**, Barrientos MC, Verástegui E, Volkow P, Mohar A. Beta 2 microglobulin levels in Mexican patients with AIDS: association with stage of the disease. Rev Inst Nal Cancerol (Mex) 1993;39: 1911-15. (Spanish)
- 19. Salles MT, Sobrevilla P, **Guarner J**, Reynoso E, Acosta MA. Cytogenetic findings in chronic myelogenous leukemia and prognostic correlation in patients of the Instituto Nacional de Cancerologia, México. Gac Med Mex 1994;130: 1-6. (Spanish)
- 20. Sobrevilla P, Acosta A, Lopez-Karpovitch X, Salles MT, Reynoso E, **Guarner** J. Response to treatment and survival of adults with acute leukemia classified by immunophenotype and cytochemistry. Rev Invest Clin (Mex) 1994;46: 399-406. (Spanish)
- 21. **Guarner J**, Izazola JA, del Rio C. The problems when counting CD4 positive T-lymphocytes. Rev Invest Clin (Mex) 1994;46: 163-4. (Spanish)
- 22. * Alvarez MG, **Guarner J**, Terres A. Laboratory productivity before and after installing a computer system. Rev Invst Clín (Mex) 1995;47: 29-34. (Spanish)
- 23. * Velasco-Escobar EA, **Guarner J**, Dominguez-Malagon H, Mendoza A, Zinser JW. Evaluation of alpha fetoprotein and chorionic gonadothropin in the diagnosis of 290 testicular germ cell tumors. Rev Inst Nal Cancerol (Mex) 1995;41: 73-78. (Spanish)
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- 26. del Rio C, **Guarner J**, Izazola-Licea JA. The use of oral fluid to determine HIV-1 prevalence rates among men in Mexico City. AIDS 1996;10: 233-235.

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- 28. Ramirez-Amador V, Esquivel-Pedraza L, Mohar A, Reynoso-Gomez E, Volkow-Fernandez P, **Guarner J**, Sanchez-Mejorada G. Chemotherapy-associated oral mucosal lesions in patients with leukemia or lymphoma. Eur J Cancer 1996;32B:322-27.
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f. Manuals, videos, computer programs, and other teaching aids:

Editor of the Microbiology vignette website: http://www.path.emory.edu/Vignettes/
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Editor of the Emory Pathology eLearning Portal website: http://path.emory.edu/EPeP/ Username and Password: EPeP

g. Other publications:

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