

PERSONAL: Hispanic-American, US Citizenship.

HIGHLIGHTS:

Founder: MD Path, LLC

Governor: College of American Pathologists

Expertise: Hematopathology, Pathology Informatics, Pathology Quality Assurance

Languages (medical): English, Spanish, German

CURRENT EMPLOYMENT:

Pacific Pathology Partners, Director of Hematopathology

CURRENT LEADERSHIP ROLES:

College of American Pathologists

Board of Governors, Governor

Council on Education, Chair

Artificial Intelligence Committee, Vice-Chair

Diversity, Equity and Inclusion Committee, Board Advisor

Informatics Technology Leadership Committee, Advisor

Informatics Committee, Advisor

Investment Committee, Member

Finance Committee, Member

SNOMED Terminology Consultant: CAP Synoptic Worksheet Project

Advisory Boards: Murrieta Genomics

BOARD CERTIFICATIONS:

09/2007 **Diplomate, American Board of Pathology, Hematology Subspecialty**

11/2004 **Diplomate, American Board of Pathology, Anatomic Pathology**

10/1996 **Diplomate, American Board of Pathology, Clinical Pathology**
Specialist in Ophthalmology (Fachärztin für Augenheilkunde), Land
Brandenburg, FRG.

MEDICAL LICENSES: Alaska, Idaho, Minnesota, Montana, Nebraska, Nevada, Oregon,
South Dakota, Washington

UNIVERSITY AFFILIATIONS, DEGREES, PREVIOUS EMPLOYERS, AND MEDICAL TRAINING PROGRAM:

4/2015-4/2018 **Interpath Laboratory, Lynnwood WA, Pathologist**

11/2011-4/2015 **HematoLogics, Inc, Seattle, WA, Director of Hematopathology**

5/2010-11/2011 **Pathology Associates of Kitsap County, Silverdale, WA.**

Director of Hematopathology

Harrison Hospital, Bremerton WA. Medical Director of Clinical Laboratory

- 1/2007- 4/2010 Sanford School of Medicine, University of South Dakota**, Sioux Falls, SD. **Clinical Assistant Professor**, Department of Laboratory Medicine
- 7/2006- 4/2010 Physicians Laboratory Ltd**, Sioux Falls, SD. Anatomic and Clinical Pathology, **Director of Flow Cytometry, Molecular Diagnostics and Hematology.**
- 7/2005-6/2006 Albert Einstein Health Network**, Philadelphia, PA., Anatomic and Clinical Pathology, **Director of Flow Cytometry.**
- 7/2004- 6/2005 Thomas Jefferson University Hospitals**, Philadelphia, PA, USA. **Hematopathology Fellow**, Department of Hematopathology
- 7/2000-6/2004 Thomas Jefferson University Hospitals**, Philadelphia, PA. USA. **Pathology Resident (AP/CP)**, Department of Pathology
- 7/1999-6/2000 Texas Tech University**, El Paso, TX. USA. **Transitional Year Resident**
- 7/1991-10/1996 A.-v.-Gräfe-Haus**, Potsdam, **Achenbach Hospital**, Königs Wusterhausen, & E.-v.-Bergmann Clinic, Potsdam, FRG. **Ophthalmology Resident, Chief Resident** (1995-6).
- 6/1984-12/1990 Facultad de Medicina**, Universidad del Salvador, Buenos Aires, Argentina. **Medical Degree Program** (Médica)
- 6/1980-05/1984 Iowa State University of Science & Technology**, Ames, Ia. USA. **Bachelor of Science**, Nutrition and Related Sciences

PUBLICATIONS / WHITE PAPERS / ABSTRACTS / POSTERS, ETC.

- 02/2021 The Ethics of Artificial Intelligence in Pathology and Laboratory Medicine: Principles and Practice.** Brian R. Jackson, Ye Ye, James M. Crawford, Michael J. Becich, Somak Roy, Jeffrey R. Botkin, Monica E. de Baca, Liron Pantanowitz. *Academic Pathology*. January 2021. doi:[10.1177/2374289521990784](https://doi.org/10.1177/2374289521990784)
- 10/2020 Use of LOINC for interoperability between organisations poses a risk to safety.** Carter AB, de Baca ME, Luu HS, Campbell WS, Stram MN. *The Lancet Digital Health*. 2020;2(11):e569.
- 10/2019 A survey of LOINC code selection practices among participants of the College of American Pathologists' CGL and CRT proficiency testing programs.** Michelle Stram, Jansen Seheult, John H. Sinard, W. Scott Campbell, Alexis B. Carter, Monica E. de Baca, Andrew M. Quinn, Hung S. Luu, for the Members of the Informatics Committee, College of American Pathologists *Arch Path Lab*
<https://www.archivesofpathology.org/doi/abs/10.5858/arpa.2019-0276-OA>
- 2/2019 A model information management plan for Molecular Pathology Sequence Data using standards: From sequencer to Electronic Health Record.** Campbell, WS; Carter, AB; Cushman-Vokoun, AM; Greiner, TM; Dash, R; de Baca, ME; Routbort, MJ; Campbell, JR *Journal of Molecular Diagnostics*. [https://jmd.amjpathol.org/article/S1525-1578\(18\)30113-2/fulltext](https://jmd.amjpathol.org/article/S1525-1578(18)30113-2/fulltext)
- 11/18 CAP Pathology Resource Guide: Clinical Informatics.** de Baca ME (Senior Editor), Spinosa JC (Senior Editor), Aller R, Badizadegan K, Blouin AG, Castellani W, Chen P,

Gilbertson J, Harrison J, Henricks W, Kennedy M, Knapik C, Pantanowitz L, Reichard RR, Robb J, Stram M., Version2.0.0.0. Northfield, IL: College of American Pathologists; 2018.

- 3/17 An Opportunity for Pathology to Trailblaze: Bridging the Gender Gap in Clinical Informatics.** Alexis B. Carter, Monica E. de Baca, Mehrvash Haghighi, et al. Abstract: *Association for Pathology Informatics*
- 3/17 A Model Information Flow for Molecular Pathology Data Using Standards: from Sequencer to the EHR** W. Scott Campbell, PhD; Alexis Carter, MD; Rajesh Dash, MD; Mark Routbort, MD; Allison Cushman-Vokoun, MD; Timothy Greiner, MD; Monica de Baca, MD; James R. Campbell, MD. Abstract: *Association for Pathology Informatics*
- 7/16 CAP Pathology Resource Guide: Clinical Informatics.** Spinosa JC, Arnaout R, Berman MA, Birdsong G, Boguski MS, Booker D, Carter A, Castellani W, Chen D, Chen P, Dash RC, de Baca M, Elevitch F, Gilbertson J, Harrison J, Henricks W, Kennedy M, Knapik C, Olson JE, Robb J, Routbort M, Rudolf JW, Simpson RW, Sinard J, Wilkerson M. Version1.0. Northfield, IL: College of American Pathologists; 2016.
- 3/16 Bone Marrow Synoptic Reporting for Hematologic Neoplasms:** Guidelines From the College of American Pathologists Pathology and Laboratory Quality Center. Sever C, Abbott CL, de Baca ME, Khoury JD, Perkins SL, Reichard KK, Taylor A, Terebelo HR, Colasacco C, Rumble RB, Thomas NE. *Arch Pathol Lab Med.* 2016 Sep;140(9):932-49. doi: 10.5858/arpa.2015-0450-SA. Epub 2016 Feb 23.
- 03/14 Assessment of Erythroid Dysplasia by "Difference from Normal" in Routine Clinical Flow Cytometry Work-up** Lisa Eidenschink Brodersen, Andrew Menssen, Jamie R. Wangen, Christine F. Stephenson, Monica E. de Baca, Barbara K. Zehentner, Denise A. Wells, Michael R. Loken: *Cytometry B* 2014 Oct 21. doi: 10.1002/cytob.21199. [Epub]
- 12/14 Myeloid Cell Maturation is Disrupted by Monosomy 7 or by Gain of Additional Genetic Aberrations During Clonal Evolution in Myelodysplastic Syndromes.** Zehentner BK, Cutler J, Hartmann L, Johnson K, Bennington R, Fritschle W, Ghiradelli K, Broderson L, Chapman D, Stephenson C, de Baca M, Singleton TP, Wells D, Loken M. American Society of Hematology Annual Meeting 2014
- 09/14 Detection of Clonal Evolution in Hematopoietic Malignancies by Combining CGH/SNP Arrays.** Luise Hartmann, Christine F Stephenson, Stephanie R Verkamp, Krystal R Johnson, Bettina Burnworth, Kelle Hammock, Lisa Eidenschink Brodersen, Monica E de Baca, Denise A Wells, Michael R Loken, and Barbara K Zehentner *Clin Chem.* 2014 Oct 15. pii: *clinchem.2014.227785.* [Epub ahead of print]
- 05/14 One Disease Or Two? Untangling Identities In Clonal Populations.** Monica E. de Baca, Lisa Eidenschink Broderson, PhD; Christine F. Stephenson, PhD; Barbara K. Zehentner, PhD; Denise A. Wells, MD; Micheal R. Loken CAP '14 Poster Web-only supplement *Arch Pathol Lab Med Sept 2014*
- 05/14 Differentiating Between Malignant Erythroid Proliferations and Recovering Marrow Utilizing CD105** Andrew J. Menssen, BA; Monica E. de Baca, MD; Lisa

- Eidenschink Broderson, PhD; Christine F. Stephenson, PhD; Barbara K. Zehentner, PhD; Denise A. Wells, PhD; Micheal R. Loken, PhD CAP '14 Poster *Arch Pathol Lab Med Sept 2014*
- 12/13 Ordo ab chao: Framework for an Integrated Disease Report.** Monica E. de Baca, MD, Ramy Arnaout MD DPhil, Victor Brodsky MD, George Birdsong MD *Arch Pathol Lab Med.* 2015 Feb;139(2):165-70. doi: 10.5858/arpa.2013-0561-CP.
- 12/12 Laboratory Interoperability Best Practices, CAP White Paper.** Beckwith BA, Aller RD, Brassel JH, Brodsky VB, de Baca ME. *White Paper: Laboratory Interoperability Best Practices: Ten Mistakes to Avoid.* Northfield, IL: College of American Pathologists; 2013.
- 11/12 Intraclonal heterogeneity in concomitant monoclonal lymphocyte and plasma cell populations: Combining flow cytometric cell sorting with molecular monoclonality profiling.** Zehentner BK, de Baca ME, Wells DA, Loken MR. *Clin Lymphoma Myeloma Leuk.* 2013 Apr;13(2):214-7. doi: 10.1016/j.clml.2013.02.004. Epub 2013 Mar 13.
- 05/12 Array-based karyotyping in Plasma Cell Neoplasia following Plasma Cell Enrichment increases detection of genomic aberrations.** Zehentner BK, Hartmann L, Johnson KR, et al. *AJCP Oct 2012;138(4):579-589.*
- 11/11 Detection of genomic abnormalities in Multiple Myeloma: The application of FISH analysis in combination with various plasma cell enrichment techniques.** Luise Hartmann, Julie Sanford Biggerstaff, Douglas B Chapman, Janice M Scott, Krystal R Johnson, Keely M Ghirardelli, Wayne K Fritschle, Dolores L Martinez, Richard K Bennington, Monica E. de Baca, Denise A Wells, Michael R Loken, Barbara K Zehentner *AJCP, 2011; 136, 712-720.*
- 12/10 Phenotypic abnormalities strongly reflect genotype in patients with unexplained cytopenias.** Cutler JA, Wells DA, van de Loosdrecht AA, de Baca ME, et al. *Cytometry Part B (Clinical Cytometry) 2011;80B:150-157.*
- 6/10 Protocol for the Examination of Specimens from Patients with Non-Hodgkin Lymphoma/Lymphoid Neoplasms.** Hussong JW, Arber DA, Bradly KT, Brown MS, Chang CC, de Baca ME, Foucar K, His ED, Jaffe ES, Medeiros LJ, Perkins SL. *Arch Pathol Lab Med.* 2010 Jun;134(6):40-7.
- 6/10 Protocol for the Examination of Bone Marrow Biopsy specimens.** Hussong JW, Arber DA, Bradly KT, Brown MS, Chang CC, de Baca ME, Foucar K, His ED, Jaffe ES, McClure SP, Medeiros LJ, Perkins SL. *Arch Pathol Lab Med.* 2010 Jun;134(6):40-7
- 3/10 Protocol for the Examination of Specimens from Patients with Hematopoietic Neoplasms of the Ocular Adnexa,** Bradley KT, Arber DA, Brown MS, Chang CC, de Baca ME, Foucar K, His ED, Jaffe ES, Madeiros LJ, Perkins S, Hussong JW. *Arch Pathol Lab Med.* 2010 Mar;134(3):336-40.
- 03/10 Electronic pathology reporting: digitizing the College of American Pathologists cancer checklists.** de Baca ME, Madden JF, Kennedy M.; *Arch Pathol Lab Med.* 2010 Mar;134(3):326-30.

- 10/09 Protocol for the Examination of Specimens From Patients With Invasive Carcinoma of the Breast.** Lester SC, Bose S, Chen YY, Connolly JL, de Baca ME, Fitzgibbons PL, Hayes DF, Kleer C, O'Malley FP, Page DL, Smith BL, Tan LK, Weaver DL, Winer E. *Arch Pathol Lab Med.* 2009 Oct;133(10): 1515-1538.
- 01/09 Protocol for the Examination of Specimens from Patients with Ductal Carcinoma in situ of the Breast.** Lester SC, Bose S, Chen YY, Connolly JL, de Baca ME, Fitzgibbons PL, Hayes DF, Kleer C, O'Malley FP, Page DL, Smith BL, Weaver DL, Winer E; Members of the Cancer Committee, College of American Pathologists. *Arch Pathol Lab Med.* 2009 Jan;133(1):15-25.
- 01/06 Effects of Storage of Blood at Room Temperature on Hematologic Parameters Measured on a Sysmex XE-2100.** Monica E. de Baca, Gene Gulati, William Kocher, Roland Schwarting. *Lab Medicine,* 2006;37(1):28-36.
- 12/05 The Use of Diagnostic Electron Microscopy in Dermatopathology, in Dermatología Práctica. Chapter: Uso de la Microscopia electrónica en la Dermatología;** Monica E. de Baca, M.D., Diana Whitaker-Menezes, M.S., Martin C. Mihm, Jr., M.D., and George F. Murphy, M.D. in *DERMATOLOGIA PRACTICA Ibero-Latinoamericana Atlas*, Enfermedades sistémicas asociadas y terapéutica. Editors: Vincent Torres Lozada; Francisco M. Camacho; Martin C. Mihm; Arthur Sober; Ignacio Sanchez Carpintero 2005 Vincent Torres Lozada-Nieto Editores, SadeCV. ISBN# 968-5686-03-3
- 10/04 The Pathogenesis of Spontaneous Pneumothorax in Smokers**
Pechet, Taine T., Carr, Shamus R., Santomauro, Michael G., de Baca, Monica E., Farber, John L. *Chest Journal* 2004 126(4_MeetingAbstracts) 896S-b-897S.
- 1/04 Granular cell tumor of the trachea in pregnancy: a case report and review of literature.** Ipakchi R. Zager WH. de Baca ME. Bloedon E. McCue PA. Zwillenberg D. *Laryngoscope.* 114(1):143-7, 2004 Jan
- 10/03 Use of Web-based Surveys for Gathering and Distribution of Immunohistochemistry Protocols.** Monzon, FA, de Baca ME, Goldstein N, and Eisen R. Presented at Advancing Practice, Instruction, and Innovation through Informatics Conference (APIII), Pittsburgh, PA
<http://www.archivesofpathology.org/doi/full/10.1043/1543-2165%282004%29128<1089%3AAPIAIT>2.0.CO%3B2>
- The Pennsylvania Cancer Alliance Bioinformatics Consortium (PCABC): A Common Web-based Data Entry and Query Tool for a Statewide Virtual Biorepository.** Ashokkumar A. Patel, Monica E. de Baca, Rajnish Gupta, Yimin Nie, John Gilbertson. Presented APIII, Pittsburgh, PA.
<http://www.archivesofpathology.org/doi/full/10.1043/1543-2165%282004%29128<1089%3AAPIAIT>2.0.CO%3B2>
- University Translational Research Opportunities in Bio- and Medical Informatics Seminar Bioinformatics in the Pathology Workplace: The Pennsylvania Cancer Alliance Bioinformatics Consortium (PCABC)** , Monica E. de Baca, Ashokkumar A. Patel, Rajnish Gupta, Yimin Nie, John Gilbertson.

- 09/03 Cytokeratin Profiles in Breast Cancer in Young Women.** M. E. de Baca, F.A. Monzon-Bordonaba, J.P. Palazzo. Abstract Presented at CAP '03, San Diego CA.
<http://www.archivesofpathology.org/doi/full/10.1043/1543-2165%282004%29128<139%3AAFTCOA>2.0.CO%3B2>
- 05/03 Role of tumor necrosis factor-alpha in graft-versus-host disease and graft-versus-leukemia responses.** Korngold R, Marini JC, de Baca ME, Murphy GF, Giles-Komar J. *Biol Blood Marrow Transplant.* 2003 May;9(5):292-303.
- 4/02 Knockout Mäuse als transgene Nagermodelle der humanen autosomale rezessiven polyzystischen Nierenerkrankung (Knockout Mice as transgenic rodent model for human autosomal recessive polycystic kidney disease).** M. de Baca, S. Matthiesen, M. Moser, T. Eggerman, K. Zerres, R. Buettner. Presented at the 86th Tagung der Deutschen Gesellschaft für Pathologie, Vienna, Austria.
- 11/02 Spectrum of Mutations in the Gene for Autosomal Recessive Polycystic Kidney Disease (ARPKD/PKHD1).** Carsten Bergman, Jan Senderek, Beate Sedlacek...Monica de Baca.... *J Am Soc Nephrol* 2003 Jan; 14(1); 76-89

WEBINARS / COURSES, ETC.

- 04/22 **CAP Pathology Leadership Summit:** Towards Laboratory Data Democratization and Artificial Intelligence: Underlying standards and what Pathologists need to know. M. E. de Baca, Matthew Hanna, Alexis Carter, Hung Luu.
- 04/22 **CAP House of Delegates Meeting: Ethics in AI** with Dr. Brian Jackson
- 01/2022 **MEDLAB Middle East Conference:** Being Intelligent about Artificial Intelligence
- 03-09 2020 **Sysmex America Webinars:** SARS-CoV2/COVID19: The 1918 pandemic of 2020
- 2018 **Pathology Informatics Essentials for Residents (PIER)** curriculum, Contributing Editor
- 12/2014 **CAP Webinar:** Integrated Disease Reporting: Order from (Almost) Chaos, Faculty (with George Birdsong)
- 02/2014 **API/Sunquest Webinar:** Integrated Disease Reporting: Order from (Almost) Chaos, Faculty (with George Birdsong)

MEMBERSHIPS, LEADERSHIP POSITIONS and VARIED EXPERIENCES:

- 11/2021- CAP, CAP Learning Management System Replacement Working Group, Member
- 09/2021- CAP, Executive Committee, Member
Council on Education, Chair
Investment Committee, Member
ITLC, Member
AI Committee Working Groups (Ethics, Products, Gap Analysis, Regulatory Affairs), Member
- 09/2021 CAP, Inspection Team Leader, Mexico City, Mexico
- 06/2021- CAP, SHIELD Initiative, Board Lead
- 5/2021- CAP, Mobile App Education Working Group, Member
- 04/2021- CAP, Diversity, Equity and Inclusion Committee, Member
- 01/2021- CAP, Artificial Intelligence Committee, Vice-Chair
- 01/2021- CAP, Finance Committee, Member
- 01/2021-09/21 CAP, ITLC, Advisor

12/2020- CAP, Council on Education (COE), Member
 4/20-12/20 CAP, Board of Governors, Governor
 4/2020 CAP, House of Delegates, Alternate
 2/2020-8/2020 Murrietta Genomics, Advisory Committee
 2020 Ruleout.org, Principle
 6/2019-10/2021 Association for Pathology Informatics, Past-President
 Association for Molecular Pathology Bioinformatics in silico Validation Working Group
 6/2019 -10/2021 Gestalt Diagnostics, Advisory Committee
 3/2019-2020 CAP Informatics Technology Leadership Committee (ITLC) , Member
 1/2019-12/2019 Association for Pathology Informatics, President
 7/2018- TRUU-Lab Initiative, Member
 10/2018- CAP, Informatics Committee Liaison to SNOMED International
 04/2018 Clinical Laboratory Improvement Advisory Committee (CLIAC)
 Nontraditional Testing Workflow Model Workgroup
 01/2018 Association of Pathology Informatics (API), President Elect
 11/2017- SNOMED CT Cancer Synoptic Reporting Working Group
 6/2016- Journal of Pathology Informatics Editorial Board, Member
 10/2014-4/2018 Clinical Laboratory Improvement Advisory Committee (CLIAC), Centers for Disease Control and Prevention
 10/2014-2017 Association of Pathology Informatics (API), Membership Committee Member
 03/2014 CAP, Breast Cancer Protocol Review Panel
 11/2013-1/2017 DoveMed.Com Medical Editorial Board Member
 10/2013 CAP, Inspector Team Leader
 05/2103-12/2015 Publishers Weekly: Reviewer of Health-Related Publications
 12/2012- American Society of Hematology, Member
 10/2012 Guest Lecturer: Jornada Internacional de Genética Humana, Universidad Nacional Pedro Ruiz Gallo, Lambayeque, Peru.
 9/2011-3/16 CAP Center, Bone Marrow Synoptic Reporting Committee Member
 4-11/2011 Harrison Medical Center Oncology Advisory Board Member
 3-11/2011 Harrison Medical Center Cancer Committee, Member
 3-11/2011 Harrison Medical Center, Medical Director of Clinical Laboratory
 6/2011- Pacific Northwest Society of Pathology, Member
 5/2010 CAP Inspector Team Leader
 09/09 Expert Panel on Cancer Reporting Information Technology College of American Pathologists and The Altarum Institute, Washington, DC
 2009-2011 AJCC Informatics Committee, Member
 2009-2010 CAP, Pilot Mentor Program
 2008-2017 CAP, Diagnostic Intelligence Health Information Technology Committee (DIHIT) Informatics Committee, Member
 2006-2010 CAP, Pathology Electronic Reporting Committee, Founding Co-Chair
 2006- Society for Hematopathology, Member
 2006-2012 CAP, Cancer Committee, Hematolymphoid Cancer Protocol Review Panel
 2006-2012 CAP, Cancer Committee, Liaison to NAACR
 2006-2012 CAP, Cancer Committee, Member
 2005- College of American Pathologists, Fellow
 American Society of Clinical Pathology, Fellow

- 9/2005-6/06 Albert Einstein Health Information Management Quality Assessment & Improvement Committee, Member
- 9/2005- American Society of Clinical Pathology, Member
- 01/04-12/05 SNOMED International Editorial Board Junior Member
SNOMED International Editions Validation Committees: Spanish & German
- 10/02-05/2005 Pennsylvania Cancer Alliance CDE Committee, Member
- 7/02-05/2005 Pennsylvania Cancer Alliance IRB Committee, Member
- 8/02-6/04 TJUH Ethics Committee, House Staff Representative
- 5/02-5/04 CAP-Resident's Forum, Delegate for Pennsylvania
- 3/02- Association for Pathology Informatics, Member
- 3/02-1/05 Society for Applied Immunohistochemistry, Member
- 7/2002 CAP Inspector
- 9/01-7/02 TJUH Infection Control Committee, House Staff Representative
- 7/00-7/05 CAP, USCAP, Junior Member
- 8/99-7/00 Transitional Year Program, Texas Tech University, Resident Representative
- 10/1996-1997 Research & Patents (Reichenwalde, FRG). Vice President
Medical product development and Patent research.
- 03/1987-12/1989 Department of Pathology, Universidad del Salvador, Tutor.
- 03/1986-12/1986 Editorial Panamericana (Buenos Aires, Argentina), Translated Aspiration Biopsy by L. Koss into Spanish

RESEARCH EXPERIENCES:

- 8/2003 University of Pittsburgh, Department of Molecular Diagnostics.** Factor V Leiden and Prothrombin Mutations in Hepatic Allograft Transplantations with Jeffrey Kant, MD PhD
- 9-10/2001 Research Fellow: Universität-Bonn (Germany) Department of Pathology.** (RWTH Aachen Lab) Molecular Pathology Research: Spectrum of Mutations in the Gene for Autosomal Recessive Polycystic Kidney Disease (ARPKD/PKHD1) with Prof. Dr. Reinhardt Büttner
- 11/1998-06/1999 Visiting Associate Faculty Researcher: University of Iowa, Center for Macular Degeneration (Iowa City, Ia.).** Morphological Study of Granule type and distribution in Retinal Pigment Epithelium of AMD and non-AMD donor tissues with Gregory Hagemann PhD

LANGUAGE SKILLS: fluent in medical and vernacular English, Spanish, and German.