

Curriculum Vitae

Name: *Awadh Amir Binhazim, D.V.M., M.S., Ph.D.*

Title and Affiliation:

Academic appointment:

Professor of Pathology
Meharry Medical College
School of Medicine
Department of Pathology
Nashville, Tennessee

Home Address: 7052 Still Spring Hollow
Nashville, TN 37221

Phone: (615) 673-2590

Office Address: Meharry Medical College
1005 D.B. Todd Blvd
Nashville, TN 37208, USA

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Citizenship: U.S.A.

Education:

Ph.D.	1992	Comparative Pathology	University of Georgia, Georgia
M.S.	1987	Pathology and Microbiology	University of Nairobi, Kenya
D.V.M.	1983	Veterinary Medicine	King Faisal University, Saudi Arabia

Postgraduate Training:

05/17/92 - 06/17/92 Special training - SIV Laboratory, Dept. of Microbiology
Tulane Regional Primate Research Center, Tulane University
Covington, Louisiana, USA. Sponsor: Dr. M. Murphey-Corb

01/84 - 08/84 Special training - US Army Medical Research Unit
Walter Reed Army Institute of Research

Nairobi, Kenya Sponsor: US Army Medical Research Unit

Academic and Professional Appointments:

03/01/08 to present

Professor Meharry Medical College, Department of Pathology, Nashville, Tennessee.

12/15/97 – 02/28/08

Associate Professor Meharry Medical College, Department of Pathology, Nashville, Tennessee. Tenure Track appointment.

6/1/98 to present

Adjunct Associate Professor of Pathology Vanderbilt University Medical Center, Department of Pathology Nashville, Tennessee.

12/01/93 - 12/30/97

Assistant Professor and Chief, Section of Comparative Pathology The University of Texas M.D. Anderson Cancer Center Science Park Campus, Bastrop, Texas, Tenure Track position

09/01/93 - 12/30/97

Adjunct Assistant Professor The University of Texas, College of Pharmacy Department of Pharmacology, Austin Campus, Austin, Texas

04/01/92 -4/01/93

Research Associate The University of Texas M.D. Anderson Cancer Center Department of Carcinogenesis, Smithville, Texas

03/90 - 02/91

Head of Department Department of Pathology, Institute of Primate Research Nairobi, Kenya

02/91 - 03/92

Resident Pathologist
Ph.D. candidate

Department of Pathology,
University of Georgia, Georgia, USA

09/87 - 03/90

Ph.D. Graduate student

Department of Pathology
University of Georgia, Georgia, USA

10/83 - 09/87

Clinical Veterinarian/
Resident Pathologist

Department of Pathology, Institute of Primate Research
Nairobi, Kenya

Administrative Appointments:

Director, Animal Care Facility, Meharry Medical College, Nashville, Tennessee, December 1997 to present.

Chief, Section of Comparative Pathology, The University of Texas, M. D. Anderson Cancer Center. Science Park Campus, November 1993 to December 1997

Consultant appointments:

Consultant

Pathology and Laboratory Services
Department of Veterans Affairs
Alvin C. York Medical Center
Murfreesboro, Tennessee
1998 - 2001

Consultant/Advisory Board

Alamogordo Primate Facility
A Charles River Company
Holloman Air Force Base
Alamogordo, New Mexico
2003 - present

Other Community and Academic Appointments:

1. Appointed as Commissioner by the Mayor of Nashville to serve as a member of the Board of Commissioners in the Metro Action Commission. 2004 - 2008. Office of the Mayor, Nashville, TN. Purpose of Commission is securing and expending federal grants in accordance with regulations regarding the eradication of poverty
2. Appointed as member of the Advisory Board of Diversity in Dialogue. 2002 - 2005. Scarritt Bennett Center, Nashville, TN. Purpose is to create stronger communities through dialogue of people from diverse background.
3. Appointed Board of Directors of Interfaith Alliance of Middle Tennessee. 2002 - 2008. Nashville, TN. Purpose is to foster alliance and stronger ties between individuals of different religious backgrounds and communities.
4. Appointed as Adjunct Professor of Africana Studies. 1998 - 2007. Tennessee State University, Department of Africana Studies. Teaching courses on ad-hoc basis in Swahili culture, language, and customs.
5. Appointed as Vice President, Board of Directors, Islamic Center of Nashville, 2002 – 2006
6. Appointed as President, Olive Tree Education, Nashville, TN, 2006 to present. Organization focuses on engaging the public in various spheres of life on issues relating to Islam and Muslims, and to bring a greater awareness and clear knowledge of Islam to the American Public.

Committee Memberships:

National:

- National Institute of Health, NCRR, Scientific and Technical Review Board for Biomedical and Behavioral Research Facilities, Ad-Hoc member, Bethesda, Maryland, USA. 2000 - present
- Veterinary Steering Committee, Tennessee Mouse Genome Consortium, Oak Ridge National Laboratory, Tennessee. USA. 2000 - present
- Research and Development Committee, Department of Veterans Affairs, Alvin C. York VA Medical Center, Murfreesboro, TN, USA. 1998 - 2001
- Alamogordo Primate Facility Advisory Committee, A Charles River Company, Holloman Air Force Base, New Mexico, USA. 2003 - present

Institutional:

- Research Centers for Minority Institutions, NIH-NCRR, Internal Advisory Committee, Meharry Medical College, Nashville, TN, USA.
- Institutional Animal Care and Use Committee, Meharry Medical College, Nashville, TN, USA
- Appointment and Promotions Committee, Department of Pathology, Anatomy and Cell Biology, Meharry Medical College, Nashville, TN, USA
- Institutional Biosafety Committee, Meharry Medical College, Nashville, TN, USA.
- Research Advisory Committee, Meharry Medical College, Nashville, TN, USA.

Honors and Awards:

Awarded scholarship by "German Academic Exchange Service", Bonn, West Germany, October 1983
(To pursue Master's of Science degree at University of Nairobi, Kenya)

Awarded scholarship by World Health Organization (WHO), Geneva, Switzerland
(To pursue Ph.D. in Comparative Pathology at The University of Georgia, Georgia, USA)

Professional Society Memberships:

United States and Canadian Academy of Pathology
American Veterinary Medical Association
American Association for Laboratory Animal Science
The Appalachian Branch, AALAS

Bibliography:

a. **Published, accepted, and submitted articles in refereed journals (reverse order):**

1. Githure, J.I., Reid, G.D., **Binhazim, A.A.**, Anjili, C.O., Shatry, A.M., and Hendricks, L.D. *Leishmania major*: The suitability of East African nonhuman primates as animal models for cutaneous leishmaniasis. *Experimental Parasitology* 64:438-447, 1987
2. **Binhazim, A.A.**, Githure, J., Muchemi, G., and Reid, G.D. The isolation of *Leishmania major* from a naturally infected vervet monkey (*Cercopithecus aethiops*) caught in Kiambu district, Kenya. *Journal of Parasitology* 73:1278-1279, 1987
3. **Binhazim, A.A.**, Tarara, R.P. and Suleman, M.A. Spontaneous external endometriosis in a De Brazza's monkey. *Journal of Comparative Pathology* 101:471-474, 1989.
4. **Binhazim, A.A.**, Chapman, W.L., and Isaac, W. Multiple spontaneous lesions in an aged spider monkey. *Laboratory Animal Science* 39:355-357, 1989.

5. Otto, C.M., Mahaffey, M., Jacobs, C., and **Binhazim, A.A.** Cor triatrium dexter with Budd-Chiari syndrome and a review of ascites in young dogs. *Journal of Small Anim Practice* 31:385-389, 1990.
6. **Binhazim, A.A.**, Chapman, W.L., Latimer, K.S., Styles, M., and Comer, K. Canine leishmaniasis in two Labrador retrievers. *Journal of Veterinary Diagnostic Investigation* 4:299-305, 1992.
7. **Binhazim, A.A.**, Harmon, B.G., Roberson, E.L., and Boener, M. Hydatid disease in a horse. *JAVMA* 200:958-960, 1992.
8. **Binhazim, A.A.**, Shin, S.S., Chapman, W.L., and Olobo, J. Comparative susceptibility of the African green monkey (*Cercopithecus aethiops*) to experimental infection with *Leishmania leishmania infantum* and *Leishmania leishmania donovani*. *Laboratory Animal Science* 43:37-47, 1993.
9. **Binhazim, A.A.**, Chapman, W.L., Shin, S.S., and Hanson, W.L. Experimental infection of hamsters and dogs with *Leishmania leishmania infantum* of canine origin. *Amer Journal of Vet Research* 54:113-121, 1993.
10. **Binhazim, A.A.**, and Buchl, S.J., Hydranencephaly in two rhesus monkeys (*Macaca mulatta*). *Journal of Medical Primatology* 23:312-313, 1994.
11. **Binhazim, A.A.**, Coghlan, L.G., and Walker, C. Hemangiosarcoma in the tail of a long-evans rat bearing the Eker mutation. *Laboratory Animal Science* 44:191-194, 1994.
12. **Binhazim, A.A.**, Alford, P., and Miller, M. Ventricular Septal Defect in an Infant Chimpanzee (*Pan troglodytes*). *Journal of Medical Primatology* 23:362-364, 1994.
13. Alford, P.L., Lee, R. L., **Binhazim, A. A.**, Hubbard, G. B., and Matherne, C. Naturally acquired leprosy in two wild- born chimpanzees. *Laboratory Animal Science* 46:341-346, 1996.
14. **Binhazim, A. A.**, Rizvi, T., Coghlan, L. G., Schmidt, R., Lew, K., and Wong, P. K. Y. Rhesus thymic/liver xenografts in severe combined immunodeficient mice: Immunologic reconstitution and intrathymic infection with simian immunodeficiency virus. *Laboratory Investigation* 75:339-348, 1996.
15. Wrona T.J., Johnston, D., **Binhazim, A.A.**, and Dudley, J.P. Mutational and functional analysis of the C-terminal region of the C3H MMTV. *Journal of Virology*. 72:4746-4755, 1996.
16. **Binhazim, A.A.**, Lee, D.R., Bernacky, B.J., and Rizvi, T.A. Spontaneous anaplastic large cell lymphoma in a chimp: A clinicopathological and immunohistochemical study. *Journal of Medical Primatology* 26:260-266, 1997
17. Hassenbusch, S., Gradert, T, Satterfield, W., **Binhazim, A.A.**, and Payne, R. Preclinical toxicity study of intrathecal administration of the pain-relievers dextrophan, dextromethorphan and memantine in the sheep model. *Neuromodulation*. 4:401-415, 1999.
18. Hubbard, G.B., Lee, D. R., Steele, K. E. Lee, S., **Binhazim, A. A.**, and Brasky, K. M., Spontaneous Amyloidosis in Twelve Chimpanzees, *Pan troglodytes*. *Journal of Medical Primatology*. 30:260-267, 2001
19. Kundranda, M.N., Henderson, M., Carter, K.J., Gorden, L., **Binhazim, A.**, Ray S., Baptiste, T., Shokrani M., Leite-Browning, M.L., Jahnen-Dechent, W., Matrisian, L.M., and Ochieng, J. The Serum glycoprotein Fetuin-A promotes Lewis lung carcinoma tumorigenesis via

adhesive-dependent and adhesive-independent mechanisms. *Cancer Research*. 65: (2) 499-507, 2005.

20. Mohsen Ghadami, Ebtehal El-Demerdash, Dong Zhang, Memmy H. Hassan, Manubai Nagamani, **Awadh A. Binhazim**, Anthony E. Archibong, Xinlei Chen, Billy R. Ballard, M. Ram Sairam, Ayman Al-Hendy - Bone marrow transplantation restores ovarian folliculogenesis and steroid hormones production in an ovarian failure mouse model. *Molecular Therapy*, 16:S359, 2008.
21. Mohsen Ghadami, Ebtehal El-Demerdash, Dong Zhang,, Memmy H. Hassan, Manubai Nagamani, **Awadh A. Binhazim**, Anthony E. Archibong, Xinlei Chen, Billy R. Ballard, M. Ram Sairam, Ayman Al-Hendy - An adenovirus expressing human FSH receptor restores folliculogenesis in FSHR knock out mouse. *Molecular Therapy*, 16:S27, 2008.
22. **Binhazim, A.**; Zhao, W., Berthaud, V. Toxicity of Nucleoside reverse transcriptase inhibitors in (NRTI) mice. *American Journal of Tropical Medicine and Hygiene*. Manuscript in preparation.

c. **Published and accepted book chapters:**

1. Shatry, A.M., Anjili, C.O., Mullama, P., **Binhazim, A.A.**, Reid, G., Hendricks, L.D., and Else, J.G. Infectivity of *Leishmania donovani* amastigotes and promastigotes for East African vervet monkeys. *In: S.N. Kinoti, D.K., Koech, and P.M. Tukei (eds.), Advances in the Diagnosis, Treatment, and Prevention of Immunizable Diseases in Africa*, pp. 253-257. Nairobi, Kenya: Africa Book Service, Ltd., 1987.

d. **Manuals, teaching aids, and other publications:**

1. Binhazim, A.A. Retroviruses of primates, mini-symposium, Texas A&M University, College Station, Texas, USA, November 11 1994.
2. Binhazim, A.A. The role of cytokines in diseases: A self-tutorial program. Written and integrated in the International Pathology Slide Bank, Department of Pathology, University of Georgia, Athens, GA, 1991.
3. Binhazim, A.A., Farah, I.O., Njamunge, G., and Wanja, M. Atypical lymphocytes in the African green monkey. *In: Proceedings of the First African Anglophone Conference on Medical Laboratory Technology*, Nairobi, Kenya, November 1990.

e. **Abstracts:**

1. Binhazim, A.A., Shatry, A., Else, J.G. Visceral leishmaniasis in the Sykes (*C. mitis*) and vervet

(*C. aethiops*) monkeys: Hematology and pathology. *In*: Proceedings of the IX International Congress of Infectious and Parasitic Diseases, pp. 263, Munich, West Germany, July 20-26, 1986.

2. Binhazim, A.A., Coghlan, L.G., and Walker, C. Spontaneous Hemangiosarcoma in the Tail of a Long-Evans Rat Bearing the Eker Mutation. American Association for Laboratory Animal Science 44th Annual Meeting, Nashville, Tennessee, November 14-18, Abstract No. P14. 1993.
3. Binhazim, A.A., Hassenbusch, S., Satterfield W., Gradert, T., Costello, G., and Payne R. Neuropathologic effects following intrathecal administration of dextropropofol, dextromethorphan and memantine in the sheep model. Eight RCMI International Symposium on Health Disparities, Honolulu, Hawaii, Abstract No. 124, December 8-11, 2002.
4. Binhazim, A.; Zhao, W., Berthaud, V. Toxicity of Nucleoside reverse transcriptase inhibitors in (NRTI) mice. 55th Annual meeting of American Society of Tropical Medicine and Hygiene, Atlanta, Georgia, Abstract No. 978, November 12 – 16, 2006.
5. Binhazim, A. Primates in Biomedical Research. Spring Quarter meeting of the American Association of Laboratory Animal Science, Nashville, TN, April 27, 2007.
6. Mohsen Ghadami, Ebtehal El-Demerdash, Dong Zhang, Memmy H. Hassan, Manubai Nagamani, **Awadh A. Binhazim** , Anthony E. Archibong , Xinlei Chen, Billy R. Ballard, M. Ram Sairam, Ayman Al-Hendy - Bone Marrow Transplantation Restores Ovarian Folliculogenesis and Steroid Hormones Production in an Ovarian Failure Mouse Model. 11th Annual meeting of The American Society of Gene Therapy, Boston, MA. May 28 – June 1, 2008
7. Mohsen Ghadami, Ebtehal El-Demerdash, Dong Zhang,, Memmy H. Hassan , Manubai Nagamani, **Awadh A. Binhazim** , Anthony E. Archibong , Xinlei Chen, Billy R. Ballard, M. Ram Sairam, Ayman Al-Hendy - An Adenovirus Expressing Human FSH receptor Restores Folliculogenesis in FSHR Knock out Mouse. 11th Annual meeting of The American Society of Gene Therapy, Boston, MA. May 28 – June 1, 2008

Grant and Contract Support:

National Institute of Health - NCI (1 SC1 CA134018-01)

July 2007 – July 2009

Total budget - \$ 250,000 direct cost per year.

Title: Role of fetuin-A in tumor cell growth.

P.I. Josiah Ochieng.

Dr. Binhazim's role: Histopathologist.

National Institute of Health – NCR. Research Center for Minority Institution G12 RR03032-18S1

9/30/02 – 7/30/04 – Total Budget - \$611,722
Supplement grant for Animal Care Facilities
P.I. Awadh A. Binhazim

National Institute of Health – NCRR. Research Facility Improvement Grant G20 RR15272-01
Developing and Improving Institutional Research Resources
9/30/00 – 9/21/01 – Total Budget - \$337,280
P.I. Awadh A. Binhazim

National Institute of Health – NCRR. Research Facility Improvement Grant G20 RR14226-01
Developing and Improving Institutional Animal Resources
9/01/99 – 8/31/00 – Total Budget - \$149,073
P.I. Awadh A. Binhazim

National Cancer Institute, Cancer Center Support CORE Grant CA-16672
Vet. Resources Support Facility Shared Resource
7/01/78 - 6/30/97 - Current Annual Budget - \$149,765
P.I. - M. Keeling
Effort: 15% - Pathologist - Awadh A. Binhazim

National Institute of Health - NIAID Contract No. NO1-AI-05060
Housing, Maintenance and Testing of AIDS-Infected Chimpanzees
12/27/95 - 12/26/2000 - Total budget - \$2,142,315
P.I. - W. Satterfield
Effort: 5% - Pathologist - Awadh A. Binhazim

National Institute of Health Grant 5 U42 RR 05080-07 - SPF Rhesus Breeding and Research Program
09/30/93 - 09/29/98 - Total Budget - \$3,052,164
P.I. - M. Keeling
Effort: 5% - Pathologist - Awadh A. Binhazim

National Institute of Health Contract No. 263-94-C0028 - Chimp Reserve for AIDS Research.
09/27/94 - 09/30/99 - Total budget - \$2,113,153
P.I. - W. Satterfield
Effort: 5% - Pathologist - Awadh A. Binhazim

Veterinary Medical Station, The University of Georgia, Georgia
Studies on the pathogenesis and chemotherapy of canine leishmaniasis.
1988-1989 - \$4000
P.I. - Awadh A. Binhazim

World Health Organization Special Program for Research & Training in Tropical Diseases
Studies on the pathogenesis of human and canine leishmaniasis.

1990 - 1991- \$20,000
P.I. Awadh A. Binhazim

World Health Organization Special Program for Research & Training in Tropical Diseases
East African nonhuman primates as models of cutaneous leishmaniasis
1986-1987 - \$30,000
P. I. - J. Githure
Co-Investigator - Awadh A. Binhazim

German Academic Exchange Services, Bonn, West Germany
The susceptibility of Sykes and vervet monkeys to experimental infection
with *L. donovani*
1986 - \$10,500
P. I. - Awadh A. Binhazim

Pending Grant Support for 2008/2009:

- National Institute of Health – NCRR. Research Facility Improvement Grant 1 G20 RR024012-01A1. Developing and Improving Institutional Research Resources
Previous Score: 190 (currently pending)
Total Budget - \$650,000
Project Period begin date 04-01-08
Project Period end date 03-30-09
P.I. Awadh A. Binhazim
- NIH Support of Competitive Research Advancement Award (SC1)
“The Aryl Hydrocarbon Receptor and breast Cancer”
The goal of this research is to define the causal role of AhR in invasive breast cancer progression.
Dr. Binhazim Role: Collaborator as one of the pathologists on the study.
P.I. Sakina Eltom
Dr. Binhazim’s Role: Pathologist.
- NIH Complementary and Alternative Medicine at Minority/Health Disparities Research Centers (R21)
“Chemo-preventive and anticancer effect of a desert medicinal herb on breast cancer”
The goal of this research is to determine the effectiveness of a desert medicinal herbal agent in the prevention and treatment of breast cancer.
P.I. Sakina Eltom,
Dr. Binhazim’s Role: Collaborator as one of the pathologists on the study.

Formal Teaching:

- a. **Courses taught at Meharry Medical College:**

Research Ethics course for graduate students, School of Graduate Studies
-Use of Animals in Biomedical Experimentation
2000 – 2004

American Association of Laboratory Animal Science, Animal Care Facility, Office of Research
-Technician Certification Courses
2001 to present.

Microanatomy for Freshman Medical Students, School of Medicine
-Skin, urinary system, liver, gall bladder, pancreas, gastrointestinal tract
2003 to 2004.

Pathology for Sophomore Medical and Dental Students, School of Medicine
-Pathology of infectious diseases
-Clinical correlations of immunodeficiency diseases
1998 to 2001.

b. Teaching of Research Faculty and Staff at Meharry Medical College:

Conduct Seminars and variety of workshops and as well as individual training programs for research faculty, graduate students, and laboratory personnel

Topics taught:

- 1) Animal biomedical Research
- 2) Research techniques in animal experiments
- 3) Animal models of human diseases
- 4) Surgical techniques in animal research
- 5) Comparative Pathology of laboratory animals
- 6) Zoonosis and biohazards in laboratory animals
- 7) USDA Animal Welfare Laws & NIH-OLAW regulations in animal research

c. Teaching at Other Institutions:

Veterinary Residents, Department of Comparative Medicine, University of Tennessee Health Science Center, Memphis, TN. 2003-2004

- 1) Retroviruses of nonhuman Primates
- 2) Diseases of nonhuman Primates

Principles of Pathology for Pharmacy Students, College of Pharmacy, University of Texas at Austin -1994 to present.

- 1) Pathology of bacterial diseases
- 2) Pathology of viral diseases
- 3) Pathology of fungal and other infectious diseases

Pathophysiology - honors course, College of Pharmacy, U.T. at Austin. 1997.

Post-graduate students, Laboratory Animal Seminar Series, Center for Comparative Medicine, Baylor College of Medicine, Texas, USA - 1993-1994

- 1) Diseases of Retroviruses
- 2) Zoonotic Diseases

Sophomore and senior students, College of Veterinary Medicine, University of Georgia, Georgia, USA; 07/89 - 03/92

- 1) General Pathology
- 2) Anatomic Pathology
- 3) Diagnostic Pathology

Continuing Education Programs and Training:

a. Laboratory workshops attended:

1. 13th Annual Charles River Laboratories Annual Short Course. Conducted by Charles River Laboratories, June 21 – 25, 1999, Andover, Massachusetts.
2. IACUC 101 workshop. Conducted by AALAS and PRIM&R. March 19, 1999, San Diego, California.
3. Charles River Laboratories Annual Short Course. Conducted by Charles River Laboratories, June 22 – 25, 1998, Andover, Massachusetts.
4. Biopsy/PAP smear correlation: Application to the diagnosis of cervical intraepithelial lesions. Conducted by United States and Canadian Academy of Pathology (USCAP), CMLE credit 6 hr. March 6, 1997, Orlando, Florida.
5. Problems in Uterine Pathology. Conducted by USCAP, CMLE credit 6 hr. March 7, 1997, Orlando, Florida.
6. Cellular Morphology of Wright Stained Fluids. Conducted by American Society of Clinical Pathologists (ASCP) and College of American Pathologists (CAP), CMLE credit 6.5 hr, December 1, 1995, San Antonio, Texas.
7. Red Cell Disorders. Conducted by ASCP/CAP, CMLE credit hours 6.5 hr, June 27, 1995. Chicago, Illinois.
8. Opportunistic Pathogens. Conducted by ASCP/CAP, CMLE credit hours 6.5 hr, June 29, 1995, Chicago, Illinois.

9. Diseases of Laboratory Species and Research uses: A Pathologist's perspective - presented by Dr. C. B. Clifford of Charles River Laboratories, January 18, 1995. Baylor College of Medicine, Houston, Texas.
10. Practical Application of Immunoperoxidase Techniques. Conducted by ASCP/CAP. CME credit hours 3.5 hr, April 11, 1994, Seattle, Washington.
11. Flow Cytometry: A Practical tool for Clinical and Anatomical Pathologists. Conducted by ASCP/CAP. CME credit hours 3.5 hr, April 13, 1994, Seattle, Washington.

b. **Scientific meetings attended in the last 5 years:**

1. Attended the 58th American Association of Laboratory Animal Science National Meeting, Charlotte, NC, USA. October 14 -18, 2007
2. Attended the 55th annual meeting of the American Society of Tropical Medicine and Pathology. Atlanta, GA, November 11 -16, 2006
3. Attended the 94th annual meeting of the United States and Canadian Academy of Pathology. San Antonio, TX, February26 – March 4, 2005
4. Attended the 54th American Association of Laboratory Animal Science National Meeting, Seattle, WA, USA. October, 2003
5. Attended the RCMI International Symposium on Health Disparities 2002, Honolulu, Hawaii, USA. December, 2002
6. Attended the Management and Technology Conference 2002. Memphis, TN, USA. February 7-9, 2002 (served as a member of the organizing and planning committee).
7. Attended the 7th National Symposium on Biosafety; Managing Risks in Animal Care and Use. Atlanta, GA, USA. January 26-30, 2002
8. Attended the Management and Technology Conference 2002. Memphis, TN, USA. (served as a member of the organizing and planning committee).

c. **National Meeting Organizing Committees:**

- The Spring Quarter meeting of the American Association of Laboratory Animal Science, Nashville, TN. April 27, 2007. Sponsored by the Appalachian branch AAALAS. Nashville, TN.
- Balancing Animal Welfare and Regulatory Compliance Issues in Preclinical Studies. Organizing Committee Member. June 29 - 30, 2004. Sponsored by OLAW, FDA, USDA, AAALAC, and Department of Pharmacology and Toxicology at Michigan State University. Detroit, MI, USA.
- Management and Technology Conference 2001-2002. Organizing Committee member. Sponsored by American Association of Laboratory Animal Science and NIH-OLAW. Memphis, TN, USA.
- Biology, Diseases and the Use of Nonhuman Primates as Animal Models of Human Diseases. Chair of the Organizing Committee. March 30, 1995. The University of Texas, M. D. Anderson Cancer Center, Science Park, Bastrop, TX, USA

d. **Other educational programs:**

Supervise the implementation of **EXCEL** an external comparative evaluation of laboratories program. A program committed to excellence in laboratory testing. Administered by the College of American Pathologists. 1994 to 1997

Seminar invitations from other institutions:

1. Binhazim, A.A. The Clinical and Pathologic Manifestations of Malaria and Leishmaniases, Baptist Hospital, Department of Medicine, Nashville, Tennessee, November 2002
2. Binhazim, A.A. Primate Retroviral diseases. Presented at University of Tennessee Health Science Center, Department of Comparative Medicine, Memphis, Tennessee, March 2002.
3. Binhazim, A. A. The SCID-rh chimeric mouse as a model of retroviral diseases. Meharry Medical College, Nashville, Tennessee. April 1997.
2. Binhazim, A.A. Retroviral diseases. Presented at Texas A&M University, Department of Pathobiology, College Station, Texas, November 1994.
3. Binhazim, A.A. Retroviral diseases. Presented at Baylor College of Medicine, Center of Comparative Medicine, Houston, Texas. July 1993.

Professional Societies - Recent meeting presentations:

1. Binhazim, A; Primates in Biomedical Research. Spring Quarter meeting of the American Association of Laboratory Animal Science, Nashville, TN, April 27, 2007.
2. Binhazim, A.; Zhao, W., Berthaud, V. Toxicity of Nucleoside reverse transcriptase inhibitors in (NRTI) mice. 55th Annual meeting of American Society of Tropical Medicine and Hygiene, Atlanta, Georgia, Abstract No. 978, November 12 – 16, 2006
3. Binhazim, A.; Hassenbusch, S., Satterfield W., Gradert, T., Costello, G., and Payne R. Neuropathologic effects following intrathecal administration of dextropropofol, dexromethorphan and memantine in the sheep model. Eight RCMI International Symposium on Health Disparities, Honolulu, Hawaii, Abstract No. 124, December 8-11, 2002.

Research Expertise:

- Experimental Laboratory animal pathology and associated techniques
- Routine Histology and Specialized Histopathology procedures
- Specialized animal models of infectious diseases, cardiovascular studies, wound healing, surgery, toxicology, etc.
- Specialized Research techniques including: Flow cytometry, PCR and agarose gels, cellular immunology assays, tissue culture techniques, ELISA, western blots, reverse transcriptase assay for retroviruses, antigen capture assays, parasite cultures, animal experimentation and inoculation techniques, animal models of human diseases, toxicology studies and GLP requirements.

Career and research interests:

- Directing and managing Laboratory Animal Research Facilities
- Animal models of human diseases and associated pathology
- The pathogenesis of visceral and cutaneous leishmaniasis, and tropical protozoal diseases.
- The pathology and pathogenesis of AIDS and other retroviruses
- Experimental laboratory animal pathology and research

References

Dr. Josiah Ochieng
Professor of Biochemistry
Deputy Director of RCMI
Meharry Medical College
School of Medicine
1005 D. B. Todd Blvd
Nashville, TN 37208

Dr. K. Page Carmichael
Professor of Pathology
Associate Dean of Academic Affairs
The University of Georgia
College of Veterinary Medicine
Athens, GA 30602

Dr. Mohammad Maleque
Professor of Pharmacology
Meharry Medical College
School of Medicine
1005 D. B. Todd Blvd
Nashville, TN 37208

Dr. Keith Norris
Professor and Vice President of Research
Charles Drew University of Medicine and Science
11705 Deputy Yamamoto Place, Suite B
Lynwood, CA 90262

Dr. George Hill
Professor and Associate Dean for Diversity in Medical Education
Department of Microbiology and Immunology
Vanderbilt School of Medicine
301 Light Hall
Nashville, TN 37232