

**PATRICIA PURDON HAMBY, M.S.**

PRESENT AFFILIATION: International Forensic Science Laboratory & Training Centre  
5601 Fortune Circle S., Suite C  
Indianapolis, Indiana 46241  
317.243-3894 or 243-2789 (FAX)

PRESENT POSITION: Forensic Science Consultant

CURRENT DUTIES: Providing expertise in the forensic areas of Criminalistics, serology and DNA.

EDUCATION: Mount Clemens High School  
Mount Clemens, Michigan  
September 1954 to June 1959  
Diploma

Capital University  
Columbus, Ohio  
September 1959 to June 1961  
(Transferred to Michigan State University after 2 years)

Michigan State University  
East Lansing, Michigan  
September 1961 to December 1963  
B.S. Degree in Police Science (Criminalistics)

Michigan State University  
East Lansing, Michigan  
March 1974 to June 1980  
M.S. Degree in Criminal Justice (Criminalistics)

PROFESSIONAL EXPERIENCE: Cuyahoga County Coroner's Laboratory  
Trace Evidence Department  
Cleveland, Ohio  
January 1964 to May 1973  
Police Science Technician in Criminalistics

Michigan Department of Public Health  
Division of Crime Detection  
Lansing, Michigan  
May, 1973 to October, 1977  
Forensic Scientist in Criminalistics  
(Division transferred to the Michigan State Police – Oct. 1977)

Michigan Department of State Police  
Forensic Science Laboratory  
East Lansing, Michigan  
October, 1977 to August, 1978  
Forensic Scientist in Forensic Serology

Virginia Division of Consolidated Laboratory Services  
Bureau of Forensic Sciences  
Roanoke, Virginia  
September, 1978 to November, 1980  
Forensic Scientist in Forensic Serology

Illinois Department of Law Enforcement  
Bureau of Scientific Services (Forensic Sciences)  
Joliet, Illinois  
November, 1980 to July, 1986  
Forensic Scientist in Forensic Serology

Indianapolis-Marion County Forensic Services Agency  
40 South Alabama Street  
Indianapolis, Indiana  
July 1986 to February 1996  
Forensic Scientist in Forensic Serology and DNA

AIT Laboratories (American Institute of Toxicology)  
5601 Fortune Circle S. Suite C  
Indianapolis, IN 46241  
March, 1996 to Present  
Forensic Science Consultant in Criminalistics, Serology and DNA

#### PROFESSIONAL ACADEMIES AND SCIENTIFIC SOCIETIES:

American Academy of Forensic Sciences	Fellow
Canadian Society of Forensic Science	Member
Forensic Science Society of Great Britain	Member
Midwestern Association of Forensic Scientists	Charter Member, Past Secretary-Treasurer, Past Vice-President, Historian

#### HONORS AND AWARDS:

Midwestern Association of Forensic Scientists	Distinguished Service Award (October, 1997 – Des Moines, IA)
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#### TEACHING EXPERIENCE:

Guest Lecturer on topics in Forensic Science (primarily related to Death Investigation, Sexual Assault Investigation, Forensic Serology and DNA).  
Law Medicine Center, Case Western Reserve University  
(Cleveland, Ohio)  
Ohio Peace Officer Training Program (Cleveland, Ohio)  
Corning Community College (Corning, New York)  
Crawford County Sheriff's Department (Grayling, Michigan)  
Allegheny County (Pittsburgh, Pennsylvania)  
Delta College, (Bay City, Michigan)  
Lansing Police Department (Lansing, Michigan)  
Ingham Co. Medical Hospital (Lansing, Michigan)  
Listening Ear Crisis Intervention Center (Lansing, Michigan)  
Lansing Nurses Association (Lansing, Michigan)  
Federal Bureau of Investigation/Michigan State Police  
(Lansing and Ludington, Michigan)  
Southfield Business and Professional Women Club  
(Southfield, Michigan)  
Michigan State University (East Lansing, Michigan)  
Virginia Polytechnic Institute and State University  
(Blacksburg, Virginia)  
Forensic Science Academy (Richmond, Virginia)  
Bureau of Forensic Science (Claypool Hill, Virginia &  
Roanoke, Virginia)  
Bureau of Scientific Services (Joliet, Illinois)  
Seminar for Child Abuse Counselors, Indianapolis Police Training  
Academy (Indianapolis, Indiana)

Rape Protocol Training Seminar for Emergency Room Physicians of University Hospitals and Wishard Hospital, (Indianapolis, Indiana)  
 Rape Evidence Collection for Emergency Room Nurses of area hospitals, (Indianapolis, Indiana)  
 Rape Protocol Training Seminars (4), Emergency Room Nurses Association, (Indianapolis, Indiana)  
 Laboratory Orientation Seminars for Law Enforcement Officers, (Indianapolis, Indiana)  
 Update on Serology, Indiana Prosecutors Association, (Indianapolis, Indiana)  
 Forensic DNA Update, Indiana Coroner's Association, (Indianapolis, Indiana)  
 Biology Instructors of small Indiana Colleges, (Huntington, Indiana)  
 MAFS Introduction to Forensic Serology 3 day Workshop, (Indianapolis, Indiana)  
 Forensic DNA Update, Family Advocacy Center Personnel, (Indianapolis, Indiana)  
     Indiana Fire School (Indianapolis, IN)  
     Indiana Law Enforcement Academy (Plainfield, IN)  
     Forensic Serology Methods for Staff and Interns of AIT Labs, (Indianapolis, IN)  
 Evidence Technician-Phase I. Overview of Evidence Collection, Crime Lab and Toxicology (IN Law Enforcement Academy, Plainfield, IN)  
 Evidence Technician-Phase II, Biological Evidence Collection, Serology and DNA Analysis Update (Institute for Forensic Imaging at IN-LEA, Plainfield, IN and IUPUI, Indianapolis, IN)  
 Evidence Technician Training: Collection and Analysis of Biological Evidence for Serology and DNA Analysis, (6), Institute for Forensic I Imaging, (Indianapolis, IN)  
 Serology/DNA Analysis of Biological Evidence (4), (St Joseph College, Rensselear, IN)  
 Serology/DNA Analysis of Biological Evidence (2), (Purdue University, West Lafayette, IN)

SPECIALIZED TRAINING:

Midwestern Assoc. of Forensic Scientists  
 Kansas City, Missouri

Semen Identification and Analysis Workshop  
 October, 1973

McCrone Research Institute at Michigan Dept. of Public Health  
 Lansing, Michigan

Microscopy of Fibers and Explosives  
 November, 1973

University of Michigan  
 Genetics Department Laboratory  
 Ann Arbor, Michigan

Use of Thick Starch Gel Electrophoresis Procedures  
 July, 1975

Michigan Dept. of State Police  
 Forensic Science Laboratory  
 Northville, Michigan

Electrophoresis Methods Workshop  
 December, 1975

Michigan Dept. of State Police  
 Training Academy  
 Lansing, Michigan

Identification of Skeletal Remains  
 June, 1976

Federal Bureau of Investigation  
 Training Academy  
 Quantico, Virginia

Biochemical Methods (Electrophoresis) and Serological Methods of Bloodstain Analysis  
 September, 1976

Helena Company Detroit, Michigan	Advanced Clinical Electrophoresis Workshops on the use of Cellulose Acetate Membrane Electrophoresis and Immunoelectrophoresis Methods May, 1977 and September, 1976
Michigan Dept. of State Police Training Academy Lansing, Michigan	Serology Workshops on Electrophoresis Methods October, 1977 and April, 1976
Federal Bureau of Investigation Training Academy Quantico, Virginia	Hair and Fiber Examination June, 1979
Virginia Bureau of Forensic Science Forensic Science Academy Richmond, Virginia	Seminar on Blood Spatter (blood stain pattern) Evidence Interpretation September, 1980
Ill. Dept. of Law Enforcement Training and Applications Lab Joliet, Illinois	Formal Serology Orientation Program Winter, 1980/1981
Ill. Dept. of Law Enforcement Training and Applications Lab Joliet, Illinois	Physical Match Examination Spring, 1981
Ill. Dept. of Law Enforcement Training and Application Lab Joliet, Illinois	Stab Hole Interpretation Spring, 1981
Ill. Dept. of Law Enforcement Training Academy Springfield, Illinois	Blood Spatter Interpretation Training June, 1981
Ill. Dept. of Law Enforcement Training and Application Lab Joliet, Illinois	Fiber Analysis Fall, 1981
Ill. Dept. of Law Enforcement Training Academy Springfield, Illinois	McCrone Advanced Fiber Analysis Course September, 1981
Ill. Dept. of Law Enforcement Joliet, Illinois	Round Table Discussion in Serology October, 1981
Ill. Dept. of Law Enforcement Training Academy Springfield, Illinois	Advanced Serology Workshop: Capillary tube Lewis typing, Mathematics in Serology, Biochemistry of Genetic Markers August, 1982
Ill. Dept. of Law Enforcement Training Academy Springfield, Illinois	Casework Efficiency and Quality Assurance September, 1983
FBI / Northeast Regional Training Center Governors State University University Park, Illinois	Interpersonal Violence/Sex Crimes January, 1984
Midwestern Association	Fiber Analysis Workshon

Ohio Peace Officers Training Academy, London, Ohio	April, 1984
Ill. Dept. of Law Enforcement Training Academy Springfield, Illinois	OSHA Course on Laboratory Safety, March 1985
Midwestern Association Of Forensic Scientists Michigan State Police Training Academy Lansing, Michigan	Workshop: "Textiles: Fibers to Products" May, 1985
Ill. State Police Training Academy Springfield, Illinois	Serology Workshop: Isoelectric Focusing July, 1985
Midwestern Association Of Forensic Scientists Indianapolis, Indiana	Microscopy Workshop: Cytology, etc. October, 1985
FBI Training Academy Quantico, Virginia	Symposium on Forensic Serology June, 1986
Ill. State Police Training Academy Allo-type Genetic Testing, Inc. Springfield, Illinois	Human Immunoglobulin Allotyping Procedures, Serology Workshop July, 1986
Midwestern Association Of Forensic Scientists Tri State Labs Columbus Police Department Columbus, Ohio	Workshop - Isoelectric Focusing Procedures June, 1987
California Assoc. of Criminalists Berkeley, California	Workshop - Extraction Procedures for RFLP and PCR Methods of DNA Analyses May, 1988
IUPUI / Dr. Lees Indianapolis, Indiana	Topics in Bacteriology (Bio 532 - audit) (Recombinant DNA from 1970 to present) Fall Term, 1988
Midwestern Association Of Forensic Scientists War Memorial Blood Bank Minneapolis, Minnesota	Workshop - Methods for Detecting DNA Polymorphisms (Non-isotopic detection) October, 1988
Perkin Elmer / Cetus / Dr. Christian Oste Indianapolis, Indiana	"Optimization of PCR Reaction Conditions" "Detection and Quantitation of PCR Products" May, 1989
FBI Training Academy Quantico, Virginia	International Symposium on Forensic Aspects of DNA Analysis June 1989
University of California Berkeley, California	Forensic DNA Analysis (1 CE Unit) (Public Health X 430) July, 1989

Cetus Corp. held at Serological Research Institute Richmond, California	Forensic DNA Amplification and Typing August, 1990
Midwestern Association Of Forensic Scientists / Cetus Corporation Indianapolis, Indiana	Workshop-PCR-DQa Amplitype Method for blood and hair (audit / Lab assistant) October, 1990
Midwestern Association Of Forensic Scientists / Lifecodes Indianapolis, Indiana	Workshop-DNA extraction Procedures October, 1990
FBI Training Academy Quantico, Virginia	University of Virginia (6 graduate credits) "Forensic Applications of DNA Typing Methods" (CJ534) "Laboratory Application of DNA Typing Methods" (CJ535) November-December, 1990
Promega Corporation Madison, Wisconsin	Second International Symposium on Human Identification April, 1991
Polaroid Corporation Indianapolis, Indiana	Seminar - Polaroid Law Enforcement Imaging September, 1991
Midwestern Association Of Forensic Scientists / Analytical Genetic Testing Cent. Mission, Kansas	Workshop-PCR/AMFLP (ApoB) October, 1991
American Academy of Forensic Sciences / Cyril E. Wecht Boston, Massachusetts	Seminar - Admissibility of Medical and Forensic Science Evidence in Court Cases: The <u>Erye</u> Test and proposed New Federal Rules of Evidence February, 1993
FBI Training Academy Quantico, Virginia	Second International Symposium on the Forensic Aspects of DNA March, 1993
Midwestern Association of Forensic Scientists / Cellmark MO S.H.P. Training Academy	Workshop - Forensic DNA Autorad Interpretation April, 1993
FBI Training Academy Quantico, Virginia	Advanced Aspects of Forensic DNA Analysis April, 1993
Midwestern Association of Forensic Scientists / Promega Madison, Wisconsin	Workshop - Non-isotopic Analysis of Polymorphic Short Tandem Repeats (STR) Loci October, 1993
Midwestern Association of Forensic Scientists/ Dr. Bruce Weir Madison, Wisconsin	Workshop - Population Genetics and Statistics October, 1993
American Academy of Forensic Sciences/Ron Forney, et.al. San Antonio, Texas	Workshop - Implementation and Consequences of New DNA Technology in the Forensic Laboratory February, 1994

Allerton Hotel Chicago, Illinois	May, 1994
Midwestern Association of Forensic Scientists Cleveland, Ohio	Workshop - DNA Testimony - Views from the Prosecution and Defense October 1994
TWGDAM (Technical Working Group On DNA Analysis Methods) U.S. Army Crime Lab Fort Gillem (Atlanta), Georgia	Workshop - Chemiluminescent Detection (of RFLP-DNA Patterns) December, 1994
American Academy of Forensic Sciences/ Howard Coleman Seattle, Washington	Workshop - Statistical Interpretation of DNA Data February, 1995
American Academy of Forensic Sciences/Susan H. Johns, et al. Seattle, Washington	Workshop - Grants to Crime Laboratories Under the DNA Identification Act of 1994 February, 1995
American Academy of Forensic Sciences/Edwin Jones, Jr. San Francisco, California	Workshop - Microscopy of Sexual Assault Evidence February 9, 1998
American Academy of Forensic Sciences/Ron Forney, et al San Francisco, California	Workshop - Forensic STR (short tandem repeat) DNA Analysis February 10, 1998
Midwestern Association of Forensic Scientists Ann Arbor, Michigan	Workshop - Leucocrystal Violet as a Blood Detection and Enhancement Technique October 7, 1998
Midwestern Association of Forensic Scientists Cape Girardeau, Missouri	Workshops – Mitochondrial DNA and STR Interpretation October 19, 1999
The Institute for Forensic Imaging IUPUI (Indiana University-Purdue University at Indianapolis, Indiana)	Digital Imaging-Phase I (basis of digital scanners, cameras computers and imaging methods for law enforcement) February 8-10, 2000
Florida Division of the International Association for Identification, Inc. St. Petersburg, Florida	Basic Blood Detection, Documentation and Collection Workshop October 28, 2003

PUBLICATIONS:

Cowan, M.E., and Purdon, P.L., A Study of the Paraffin Test, Journal of Forensic Sciences, (1967) 12, 1, 19-36.

Gerber, S.R., Cowan, M.E., and Purdon, P.L., Correlation Between Clothing Evidence and Body Injury, Annual Statistical Report of Cuyahoga County Coroner's Office, Cleveland, Ohio, 1969.

Cowan, M.E., Purdon, P.L., Hoffman, C.F., Brunelle, R., Gerber, S.R., and Pro, M., Barium and Antimony Levels on Hands, Significance as Indicator of Gunfire Residue, Experience with Neutron Activation Analysis on Coroner's Cases, Journal of Radioanalytical Chemistry, (1973) 15, 203-318.

PUBLICATIONS: (CONT'D)

Purdon, P.L., Expanded Testing for Disputed Paternity Cases, Bulletin of the Midwestern Association of Forensic Scientists, (1977) V, 4.

Tahir, M.A., Caruso, J.F., Hamby, P.P., and Sharma, V.K., Deoxyribonucleic acid (DNA) HLA-DQ $\infty$  Allele frequency distribution in various sects of South Indian populations. Advances in Human Genetics, Edited by W. Bar, A. Firoi, and U. Rossi, (1993) 5, 593-595.

Tahir, M.A., Asghar, A., Caruso, J.F., Hamby, P.P., and Budowle, B., Distribution of HLA-DQ $\infty$  alleles in Deoxyribonucleic acid (DNA) from Caucasian and Black populations in Marion County, Indiana, U.S.A., Advances in Human Genetics, Edited by W. Bar, A. Firoi, and U. Rossi, (1993) 5, 596-598.

Tahir, M.A., Caruso, J.F., Hamby, P.P., Sovinski, S.M., Tahir, U.A., Restriction Fragment Length Polymorphism (RFLP) Typing of Deoxyribonucleic Acid (DNA) Extracted from Nasal Secretions, Journal of Forensic Sciences JFSCA, (1995) 40, 3, 459-463.

Tahir, M.A., Caruso, J.F., Hamby, P.P., Sovinski, S.M., Deoxyribonucleic Acid (DNA) Restriction Fragment Length Polymorphism (RFLP) Analysis - A Comparison: Spermine Precipitation vs. Nick Column Probe Cleanup (submitted for publication in Crime Laboratory Digest)

Tahir, M.A., Caruso, J.F., Hamby, P.P., and Sovinski, S.M., Importance of Reagent Quality Control in DNA-RFLP Analysis, Science International (Lahore). (1995) 7, 3, 361-365

Tahir, M.A., Caruso, J.F., Hamby, P.P., and Sovinski, S.M., Deoxyribonucleic Acid Profiling by Restriction Fragment Length Polymorphism Analysis - A Compilation of Validation Studies, Science & Justice. (1996) 36, 173 - 182.

Sovinski, S.N., Baird, L.S., Budowle, B., Caruso, J.F., Cheema, D.P.S., Duncan, G.T., Hamby, P.P., Masibay, A.S., Sharma, V.K., Tahir, M.A., Development of a deoxyribonucleic acid (DNA) restriction fragment length polymorphism (RFLP) database for Punjabis in East Punjab, India, Forensic Science International, (1996) 79, 187 - 198.

#### PAPERS AND PRESENTATIONS:

A Study of the Paraffin test, presented at the American Academy of Forensic Sciences Annual Meeting, Chicago, Illinois, February, 1966.

Correlation between Clothing Evidence and Body Injury - presented at the 5th International Meeting of Forensic Sciences, Toronto, Canada, June, 1969.

Evaluation of MN System of Fluid Blood and Stains requiring Absorption onto Cloth for Absorption-Elution Procedures, presented at the Midwestern Association of Forensic Scientists Meeting, Des Moines, Iowa, May 9, 1975.

Expanded Testing for Disputed Paternity Cases, a Report after One Year in the Program, presented at the Midwestern Association of Forensic Scientists Meeting, Cleveland, Ohio. May, 1977.

Expanded Testing for Disputed Paternity Cases, a Report on the 18-month program, presented at the Research and Development Seminar, Michigan Department of Public Health, Lansing, Michigan, September, 1977.

A Comparison of Presumptive Tests for Blood Used by Various Forensic Laboratories (Panel), presented at the Mid-Atlantic Association of Forensic Scientists, Virginia, September, 1979.

The Evaluation of Genetic Marker Data for Use as a Data Base Applicable to Criminal Case Evidence on Cases from "Out-State" Michigan, presented at Michigan State University, May 27, 1980.

Eighteen Years of Forensic Serology, presented at the Midwest Regional Section of the Association of Official Analytical Chemists, Ames, Iowa, June, 1981.

Reconstruction of a Firearms Case, presented at the 15th annual meeting of the Association of Firearm and Toolmark Examiners, San Mateo, California, May 16, 1983.

Review of the Fiber Workshop (Spring, 1984), presented at the Midwestern Association of Forensic Scientists Meeting, Des Moines, Iowa, October, 1984

Blowback (blood and tissue) Examinations of Firearms, A Procedure for Firearms Examiners and Serologists, presented at the 19th Annual Meeting of the Association of Firearm and Toolmark Examiners. Chicago. Illinois. May. 1988.



Review of Methods for Species Determination, presented at the Midwestern Association of Forensic Scientists Meeting, Indianapolis, Indiana. October, 1990.

Distribution of HLA -DQ $\alpha$  Alleles in Deoxyribonucleic Acid (DNA) from Caucasian and Black Populations of Marion County, Indiana, U.S.A. (Poster) presented at the Second International Symposium on the Forensic Aspects of DNA Analysis, FBI Training Academy, Quantico, Virginia. March, 1993.

Environmental Insult/Contamination Study on Dried Bloodstains subjected to DNA-RFLP (Deoxyribonucleic Acid-Restriction Fragment Length Polymorphism) Analysis, presented at the Midwestern Association of Forensic Scientists Meeting, Madison, Wisconsin. October, 1993

Review of the Introduction to Forensic Serology Workshop (1992) - presented at the Midwestern Association of Forensic Scientists Meeting. Madison, Wisconsin, October, 1993

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