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CRIME SCENE RECONSTRUCTION
FORENSIC DOCUMENT ANALYST

ROBERT D. KULLMAN
FORENSIC DOCUMENT ANALYST

LARRY A. DALMAN
COMPUTER RECOVERY SPECIALIST

DR. GEORGE F. JACKSON Ph.D.
TOXICOLOGIST

ERICH J. SPECKIN
FORENSIC DOCUMENT ANALYST
INK DATING SPECIALIST

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LABORATORY DIRECTOR
CRIME SCENE RECONSTRUCTION
FORENSIC ANALYST & CONSULTANT

THOMAS K. HUARD Ph.D.
DNA ANALYST & CONSULTANT

ROBERT B. CILWA
FORENSIC FIREARMS EXAMINER

RICHARD L. BRUNELLE
RETIRED INK DATING CONSULTANT

DR. LAURENCE R. SIMSON M.D.
FORENSIC PATHOLOGIST

DR. JAY A. SIEGEL Ph.D.
ANALYTICAL CHEMIST

COLIN V. SHELLHORN
COMPUTER & GRAPHICS SPECIALIST

DR. JULIE HOWENSTINE
SEROLOGIST
DNA ANALYST & CONSULTANT
CRIME SCENE RECONSTRUCTION

Dr. JAY A. SIEGEL, Ph. D.

Analytical & Forensic Chemist

EDUCATION

B.S. Chemistry, George Washington University, 1968

M.S. Chemistry, George Washington University, 1970

Ph.D. Analytical Chemistry, George Washington University, 1976

EXPERIENCE

2008-present Chair – Department of Chemistry and Chemical Biology, Indiana University, Purdue University Indianapolis

2004-present Professor and Director, Forensic and Investigative Sciences Program, Indiana University, Purdue University Indianapolis

2003-2004 Adjunct Professor, Michigan State University College of Law

1980-2005 Professor of Forensic Science and Director of the Forensic Science Program (1980-2004), School of Criminal Justice, Michigan State University, East Lansing, MI. Coordinator of graduate programs in forensic science.

1977-80 Associate Professor of Chemistry, Metropolitan State College, Denver, CO.

1977-present Consultant in forensic science. Testified a total of more 200 times as an expert witness in 12 states, federal and military courts.

1975-77 Forensic Analytical Chemist – Virginia Bureau of Forensic Sciences. Analyzed controlled substances and trace evidence. Testified in court over 100 times as expert witness

1970-75 Graduate Teaching Assistant – George Washington University

1968-69 Analytical Chemist, Byron Motion Pictures. In charge of all chemicals in motion picture processing lab

PROFESSIONAL AFFILIATIONS

American Academy of Forensic Sciences (Fellow). Chairman of Education Committee of Criminalistics Section, 1986-1996. Chair of poster sessions for 1996 national meeting, Nashville, TN. Named Distinguished Fellow – February, 2009

President of Council of Forensic Science Educators, 1992-93

American Chemical Society

Southwestern Association of Forensic Sciences (Distinguished Member) 1977-1995

Dr. JAY A. SIEGEL, Ph. D.

Midwestern Association of Forensic Scientists
The Forensic Science Society (England)
Member, Editorial Board, Journal of Forensic Sciences 1980-2007
Forensic Science Education Accreditation Commission 2003-2008
International Association for Identification

PUBLICATIONS

Journal Articles

Siegel, J.A. and Perros, T.P., Preparation and Thermal Decomposition of Tetra-npropylammonium Hexafluoroplatinate (IV) , *Zietchrift fur Naturforshung*, Band 266, Heft, 6,53, (1971).

Siegel, J.A. and Rowley, D.R., Reactions of Coordinated Complexes I: The Reaction of Bis(acetylacetonato) Nickel II with Carbon Disulfide , *Inorganica Chimica Acta*, 9,19(1974).

Siegel, J.A. and Cormier, R.L., Thin Layer Chromatography of Analgesics , *J. Chem. Ed.* 56,180 (1979).

Siegel, J.A., The Chemist as Technical Expert , *Lawyer's Medical Journal*, 9, 4, 495 (1980).

Siegel, J.A., Lateef, B. and Smith, T., Introduction of Forensic Science: A Model Curriculum, in the Curriculum and Course Development Project, H. Abidinsky, Project Leader, Academy of Criminal Justice Sciences, 1982.

Siegel, J.A. and Baldwin, R., Death Investigation and the Role of the Criminal Investigator, *Peace Officer*, Winter, 1983.

Siegel, J.A. and Weisz, S.C., The Analysis of Metronidazole in Human Serum: An Unusual Overdose Case, *J. Forensic Sci.*, 29, 2 (1984).

Siegel and Weisz, S.C., The Effects of the New Michigan Drunk Driving Laws on Hospital Laboratories, *The Michigan Department of Public Health Newsletter* , January, 1983.

Siegel, J.A. et al, Fluorescence of Petroleum Products I: Three Dimensional Fluorescence Plots of Motor Oils and Lubricants , *J. Forensic Sci.*, 30, 3, 741 (1985).

Siegel, J.A., Solving Crimes with 3-D Fluorescence Spectroscopy, *Analytical Chem.*, 57, 934A (1985).

Siegel, J.A. and Horowitz, R., Patterns of Injury in Motor Vehicle Accidents , *J. Forensic Sci.*, 32, 1, 45 (1987).

Siegel, J.A. et al, Fluorescence of Petroleum Products II: The Analysis of Gasolines by Three-Dimensional Fluorescence, *J. Forensic Sci.*, 32, 1, 78 (1987).

Siegel, J.A., The Appropriate Educational Background for Entry Level Forensic Scientists: A Survey of Practitioners, *J. Forensic Sci.*, 33, 4, 1065 (1988).

Siegel, J.A. and Fenzan, G., Fluorescence of Petroleum Products III: Three Dimensional Fluorescence or Petrolatum Products , *J. Forensic Sci.*, 33, 6, 1405 (1988).

Siegel, J.A. and Cheng, N.Z., Fluorescence of Petroleum Products IV: Three Dimensional Fluorescence and Capillary Gas Chromatography of Midrange Petroleum Products , *J. Forensic Sci.*, 34, 5, 1128 (1989).

Siegel, J.A. and DeGaetano, D., Survey of U.S. Forensic Science Laboratories to Determine the Status of Gunshot Residue Analysis, *J. Forensic Sci.*, 35, 5, 1087 (1990).

Siegel, J.A., DeGaetano, D. and Klomperans, K., Comparison of Three Sampling Methods of Gunshot Residue Analysis by SEM-EDX, *J. Forensic Sci.*, 37, 1, 281, 1992.

Siegel, J.Horvath, F., and Gardner, K., Range of Fire Estimates from Shotgun Pellet Patterns: The Effect of Shell and Barrel Temperature , *J. Forensic Sci.*, 38,3, 585, 1993.

Siegel, J.A., Crime and Science: Extending the Frontiers , *Criminal Justice Reviews* 18(1), 78, 1993.

Siegel, J.A. and Sheff, L., Fluorescence of Petroleum Products V: Three Dimensional Fluorescence and Capillary Gas Chromatography of Evaporated Gasoline Samples , *J. Forensic Sci.*, 41(4), 225, 1994.

Siegel, J.A. and Midkiff, C., Worldwide Graduate and Undergraduate Forensic Science Education Programs, *J. Forensic Science*, 34,1, 103, 1994.

Siegel, J.A., Forensic Applications of Fluorescence Spectroscopy , *Forensic Science Review*, Dec. 1995

Siegel, J.A., Forensic Sciences at Michigan State University , *MSU Alumni*

Magazine, Dec. 1994.

Siegel, J.A., Review of Scientific Evidence, 2nd Ed., by Gianelli, P. , in Journal of Criminal Justice, 1995.

Siegel, J.A. Evidential Value of Textile Fiber – Transfer and Persistence, Forensic Science Review, 9:81; 1997

Siegel, J.A. Collection and Chain of Evidence, In Encyclopedia of Forensic Science, Academic Press Limited, London, August, 2000 , 426-8.

Siegel, J.A., Grim, D., Allison, J., Evaluation of Desorption/Ionization Mass Spectrometric Methods in the Forensic Applications of the Analysis of Inks on Paper, J. Forensic Sci, July, 2002, Vol. 46, No. 6, 1411-20.

Siegel, J.A., Grim, D., Allison, J., Evaluation of Laser Desorption Mass Spectrometry and UV Accelerated Aging of Dyes on Paper as Tools for the Evaluation of a Questioned Document, J. Forensic Sci, July, 2002, Vol. 47, No. 3, 476-84.

Siegel, J.A., Grim, D., Allison, J., Does Ink Age Inside of a Pen Cartridge? , J. Forensic Sci, July 2002, Vol. 47, No. 4 , 1294-7.

Siegel, J.A. Dunn, J., Allison, J., Photodegradation and Laser Desorption Mass spectrometry for the Characterization of Dyes Used in Red Pen Inks , J. Forensic Sci, May 2003, Vol 48, No. 3 , 393-98.

Siegel, J.A., Esslinger, K.J., Stallworth, S., Using STR Analysis to Detect Human DNA from Exploded Pipe Bomb Devices, J. Forensic Sci, May 2004, Vol. 49, No. 3, 693-6.

Siegel, J.A., Barnes, A.T., Nolan, J.A. and Kuk, R.A., Comparison of gasolines using gas chromatography-mass spectrometry and target ion response, September, 2004, J. Forensic Sci., Vol. 49, No. 5, 1049-55.

J. A. Siegel, P. L. Szymanski and C. Bommarito " Laser Ablation in Forensic Science" in: Laboratory News 2004, 28, 13-14.

Siegel, J.A., Accreditation of Undergraduate and Graduate Forensic Science Education Programs. Forensic Magazine, Winter, 2004, Vol. 1, No. 3, pp. 23-26

Method, P. Siegel, J and Londino, G., Comparison of Blood and Duplicate Breath Testing for Ethanol in Indiana, J. Alcohol Testing Alliance, April, 2006, Vol. 5, No. 1, pp. 9-13.

Siegel, J.A., McNorton, S. and Guy, Analysis of Automobile Body Fillers and Putties, J. Forensic Science, January 2008, Vol. 53, No. 1, 13-23.

Books

Editor in Chief, Encyclopedia of Forensic Science , Academic Press Limited, London, August, 2000

Editor of Series: Forensic Drug Handbooks: Liang, R., Hallucinogens: A Forensic Drug Handbook, Academic Press, Boston, MA, April, 2003.

Editor of Series: Forensic Drug Handbooks: Smith, F., Ed., Handbook of Forensic Drug Analysis, Elsevier/Academic Press, Boston, MA, January, 2005.

Houck, M. and Siegel, J. "Fundamentals of Forensic Science", Elsevier, 2006

Siegel, J., "Forensic Science: The Basics", Taylor and Francis, 2006

Siegel, J., "Forensic Science: A Beginner's Guide, OneWorld Press, May 2009.

Book Chapters

Siegel, J.A., Forensic Identification of Controlled Substances, in Forensic Science Handbook, Vol. II, R. Saferstein, Ed., Prentice -Hall, Englewood Cliffs, N.J., 1987.

Siegel, J.A., Three Dimensional Fluorescence in Forensic Chemistry , in Analytical Methods in Forensic Science, R. Liu, Ed. Ellis Horwood, London, 1991.

Siegel, J.A., Science and Law in the Courtroom: Two Ships Passing in the Night , Focus on Law Studies, American Bar Association, 1995

Siegel, J.A., Analysis of Textile Fibers, in Forensic Science, by Cyril Wecht, 1996.

Siegel, J.A. History and Development Expert Testimony, in More Chemistry and Crime, American Chemical Society, Washington, D.C., 1997.

Siegel, J.A. Forensic Chemistry, in Macmillian Encyclopedia of Chemistry,

Macmillian Company, New York, 1997

Siegel, J.A. and Houck, M.M., Analysis of Textile Fibers, in Forensic Science, by Cyril Wecht, 2002

Siegel, J.A., Forensic Identification of Illicit Drugs, in Forensic Science Handbook, Vol. II, 2nd Ed., R. Saferstein, Ed., Prentice-Hall, Englewood Cliffs, N.J., 2004

Siegel, J.A., Szymanski, Patino, L, Bommarito, C. Laser Ablation in Forensic Science, Laboratory News, November, 2004, 13 -14.

Siegel, J.A. and Houck, M.M., Analysis of Textile Fibers, in Forensic Science, by Cyril Wecht, 2006

PAPERS PRESENTED

Jay A. Siegel

August 2007

American Chemical Society, Middle Atlantic Regional Meeting, January 1973. "The Reaction of Bis(acetylacetonato) Nickel II: with Carbon disulfide."

American Academy of Forensic Sciences. February 1983. "The Analysis of Metronidazole in Human Serum." "Three -Dimensional Fluorescence of Petroleum Products."

American Academy of Forensic Sciences. February 1983. "The Use of Physical Evidence by Prosecutors." (With Frank Horvath).

American Academy of Forensic Sciences. February 1984. "Three -Dimensional Fluorescence of Gasolines." "The An alysis of Human Seminal Fluid for Spermine and Sperminidine."

Midwestern Association of Forensic Scientists. October 1985. "Fluorescence of Petroleum Products." "Roundtable on Forensic Science Education."

American Academy of Forensic Sciences. February 1 986. "Three-Dimensional Fluorescence of Motor Oils."

Joint Meeting of Regional Forensic Science Associations. Lexington, KY. October 1986.

"The Analysis of Lubricants Used in Sexual Assault Crimes by Three -Dimensional Fluorescence." Paper won award as best paper by a new forensic scientist. (Gerianne Fenzan).

American Academy of Forensic Sciences. February 1987. "Three Dimensional Fluorescence of Petrolatum Products." "The Need for a Masters Program in Forensic Sciences-Survey of the Crime Lab Directors."

American Academy of Forensic Sciences. February 1989. "Three Dimensional Fluorescence Spectroscopy and Capillary Gas Chromatography of Midrange Hydrocarbons."

American Academy of Forensic Sciences. February 1990. "Survey of Crime Lab Directors on Analysis of Gunshot Residues by SEM-EDX." (With D. DeGaetano).

American Academy of Forensic Sciences. February 1991. "Comparison of Three Methods of Analysis of Gunshot Residues by SEM-EDX." (With D. DeGaetano).

American Academy of Forensic Sciences, February 1994. "Forensic Science in the Adversary System."

American Academy of Forensic Sciences. February 1997. "Use of Scientific Evidence by Prosecutors", New York.

American Academy of Forensic Sciences. February 1999. "Transfer and Persistence of Fibers – A Mass Transfer Study". (With Max Houck)

American Academy of Forensic Sciences. February 2000. "Analysis of Inks using HPLC and FTIR".

American Academy of Forensic Sciences, Feb. 2002, D. Grim and J. Siegel, "Analysis of Inks by Laser Desorption Mass Spectrometry"

American Academy of Forensic Sciences, Feb. 2003

C. Stark and J. Siegel, "Analysis of Lipsticks by ATR/FTIR"

S. Walbridge and J. Siegel, "Transfer and Persistence of Fibers"
 K. Esslinger and J. Siegel, "Recovery of DNA from Exploded Pipe Bombs"
 American Chemical Society, Midwest Regional Meeting, Indianapolis, IN, June, 2004
 J. Siegel, "Analysis of Ink Dyes by Laser Desorption"
 J. Siegel, "Accreditation of University Forensic Science Programs"
 American Academy of Forensic Sciences, Feb. 2005
 G. Nutter, S. McNorton and J. Siegel, Analysis of Automobile Body Fillers.
 J. Siegel, FEPAC Accreditation of Forensic Science Programs – Poster
 Midwestern Association of Forensic Scientists, May, 2006
 J. Siegel, Use of statistics in analysis of DNA
 J. Siegel, Color analysis in microspectrophotometry
 American Academy of Forensic Science s, Feb. 2006
 J. Siegel, G. Londino, J. Allison, Analysis of Pigmented Inks: Concept Paper
 J. Siegel, Kristen Jaumann, Analysis of Cosmetic Glitter
 J. Siegel, Forensic Science Education Resources
 American Academy of Forensic Sciences, Feb. 2007
 J. Siegel, "Forensic Science Education" in Workshop on New Developments in Forensic Science
 J. Siegel, "Teaching Ethics to Forensic Science Students" in Workshop on Ethics in Forensic Science.
 American Academy of Forensic Sciences, Feb. 2008
 J. Siegel, BAJ Fisher, "Pattern Evidence", Panel and Roundtable
 Michigan Science Teachers' Association, March, 2008
 J. Siegel, K. Mirakovits, Presenter, Murder, Madness, Mayhem
 National Science Teachers' Association, April, 2008
 J. Siegel, K. Mirakovits, Teaching forensic science in high school
 J. Siegel, K. Mirakovits, Presenter, Murder, Madness, Mayhem
 American Academy of Forensic Sciences, Feb. 2009
 Barrett, J., Goodpaster, J, Siegel, J. "Analysis of Red Hair Dyes by Microspectrophotometry"
 Goodpaster, J., Rivas, L., Siegel, J. "Analysis of Pigmented Inks by Pyrolysis GC-MS"
 J. Siegel, BAJ Fisher, "Individualization of Evidence, Panel and Roundtable

OTHER PRESENTATIONS

Denver District Attorneys Association. May 1976. "The Analysis of Fire Residues."
 The Denver District Attorneys Association. May 1980. "The Investigation of Arson."
 Michigan Judicial Institute. 1981 -84. Seventeen presentations on Forensic Science, physical evidence and Michigan Drunk Driving Laws. Programs given to judges, courtreporters and court personnel.
 Michigan Associations of Academically Talented Children. 1982 -87. Four presentations to Michigan chapters on forensic science.
 National Association of Court Reporters. March 1983. "The Analysis of Scientific Evidence."
 Michigan Court Stenographers Assoc. June 1983. "The Analysis of Controlled Substances."
 Southwestern Association of Forensic Sciences. November 1979. "The Preparation of d-Pseudococaine from 1- Cocaine."
 Federation of Analytical Chemistry and Spectroscopy Societies. Sept. 1980.

“Comparison of Criminalistics Curricula at U.S. Colleges and Universities.”
 Midwest Association of Criminal Justice Educators. October 1980. “The Future of Forensic Science in the Criminal Justice System.”
 Southwestern Association of Forensic Sciences. November 1980. “The Cocaine Isomers Defense.”
 Southwest Association of Forensic Sciences. November 1981. “Forensic Science Internship Programs.”
 The Michigan Association of Laboratory Technologists. November 1985. “The Effects of the New Michigan Drunk Driving Laws on Clinical Laboratories.”
 South-Central Michigan Laboratorians Association. January 1985. “The Practice of Forensic Science in the Laboratory.”
 American Society of Crime Lab Directors. September 1985. “Forensic Science Education Today.”
 International Association of Forensic Sciences. August 1987. Chair and participant of panel of forensic science education.
 American Academy of Forensic Sciences. February 1988. Chair of panel on Arson Analysis.
 Midwest Criminal Justice Association. October 1990. Chair and presenter on panel on “Future of Forensic Sciences.”
 Presentations on “Drugs in the Workplace” since 1987.
 Brotherhood of Electrical Workers of Michigan
 Michigan Firefighters Association (4 presentations)
 International Association of Firefighters
 Capitol Area Substance Abuse Commission
 Industrial Relations Research Association Kalamazoo Area Substance Abuse Commission
 Michigan Employment Relations Commission
 MSU School of Labor and Industrial Relations Alumni Assoc.
 Michigan Association of Fire Chiefs
 Great Lakes Chemistry Conference, March 1992. Keynote speaker. “Careers in Forensic Chemistry.”
 Gordon Research Conference, August 1993. Invited speaker. “Applications of Analytical Chemistry to Forensic Science.”
 Visiting Scientist, Dow Chemical Corp., Midland MI, October, 1993.
 Alma College Career Fair, March 1994. Invited speaker. “Forensic Science Careers.”
 “Incorporating Forensic Science into High School and College Science Courses”, Mid – Michigan Section, American Chemical Society meeting, Ann Arbor, MI, May 1994.
 “Investigation of Violent Death”, Oakland County, MI Bar Association Youth Law Day. Invited speaker. March 1995-2003.
 “Update in Forensic Science”, SCH, Inc. Executive Management seminar, East Lansing, MI. April 1994.
 “Analysis of DNA Evidence”, East Lansing, MI chapter of Kiwanis Club, June 1994.
 Keynote speaker, Southwest Michigan Chapter, American Chemical Society, Kalamazoo, MI. Sept 1994.
 “The Analysis of Petroleum Products by Three Dimensional Fluorescence Spectroscopy”, International Forensic Science Conference, Taipei, Taiwan, ROC. November 1994.
 “Forensic Science Education in the 1990s”, Department of Chemistry and Biochemistry, University of Windsor, Windsor, Ontario, Canada. March 1995.
 “Analysis of DNA Evidence in Court”, Michigan Clinical Laboratory Association, East Lansing, MI. April 1995.
 “Forensic Chemistry”, Central Indiana Society for Applied Spectroscopy. Feb 1996.
 “Careers in Forensic Chemistry”, Central Michigan University, invited speaker. March 1996.
 “The Status of Forensic Science in the US”, New South Wales, AU Forensic Science Society, Sydney, AU. May 1996.
 “Scientific Evidence Issues”, Michigan Defense Attorneys Association, Traverse City, MI. Sept 1996.
 “Admissibility of Scientific Evidence -Where are we now?” invited plenary speaker,

Midwest Association of Forensic Sciences, October 1996
 "Update in Forensic Science", SCH, Inc. Executive Management seminar, December, 1996. Lansing, MI.
 "Forensic Chemistry", invited speaker at Department of Chemistry, Ohio Wesleyan University, Delaware, Ohio, March, 1997
 "Forensic Science Update and Case Preparation", invited speaker by SEAK, Inc., Cape Cod, MA, June 1997.
 "Investigation of Violent Death", Ohio Continuing Legal Education Inc., Columbus, OH, Dec. 1997, 1999, 2001, 2003, 2005, 2007.
 "The Status of Forensic Science in the US", New South Wales, AU Forensic Science Society, Sydney, AU, March, 1998
 "Forensic Science Research Issues", New South Wales Drug Laboratory, Sydney, AU, April, 1998
 A series of 5 seminars on scientific evidence, presented to the Department of Chemistry, Physics and Earth Science, Flinders University, Adelaide, AU, May and June, 2000
 A series of 2 seminars on scientific evidence, presented to the staff of the South Australia Crime Lab, Adelaide, AU, June, 2000
 "Update on Forensic Science". Michigan Defense Attorneys Association, Traverse City, MI, Oct. 2000.
 Guest lecturer, Okemos High School, May 7, 2002, Forensic Science
 Pike High School, Indianapolis, IN – Careers in Forensic Science, November, 2004
 University High School, Indianapolis, IN – Careers in Forensic Science, February, 2005
 Moderator and Organizer – CSI Effect Panel for IUPUI Alumni Association, Indianapolis, April 10, 2007
 Forensic Science Update, Indiana University Alumni Association, Sanibel Island, January 10-11, 2007
 Invited speaker – Texas A&M Department of Anthropology, College Station, TX, Update on forensic science, Sept. 28, 2007
 Invited speaker – Indiana Public Defender's Association, Daubert Defenses in Pattern Evidence, January, 29, 2009
 Invited speaker – John Marshall College of Law, Cleveland, OH, National Academy of Sciences report on the Needs of Forensic Science, March 19, 2009
 Invited panelist – Arizona State University, Sandra Day O'Connor College of Law, Tempe, AZ. National Academy of Sciences report on the Needs of Forensic Science, March 30, 2009
 Invited panelist – National Institute of Justice Applied Technologies Conference, Kansas City, MO, National Academy of Sciences report on the Needs of Forensic Science, April 17, 2009
 Invited speaker – Arizona State Judges Conference, Scottsdale, AZ, National Academy of Sciences report on the Needs of Forensic Science, June 19, 2009

MAJOR INTERNATIONAL ACTIVITIES

Visiting Professor – The Criminal Police College of China, May -June 1993
 Chief Delegate – International Conference on Forensic Science, Taiwan, PRC, June, 1994
 Visiting Professor – The University of Technology, Sydney, Australia, January – July, 1998
 Visiting Professor – Flinders University, Adelaide, Australia, May -June, 2001
 Member, Board of Visitors – Deakin University, Geelong, Australia, 2003-present
 Invited Presenter – International Conference on Forensic Science, San Salvador, El Salvador, May 2006.

GRANTS

National Science Foundation. Grants for Scientific Education. 1980. Development of a course in forensic science for nonscience majors. \$300. Associate investigator.

National Science Foundation. Science Faculty Development Grant. 1981 -83. Research in forensic serology and toxicology. \$53,000. Principal investigator.

Michigan State University. All -University Research Initiation Grants. 1981-82. Use of physical evidence by prosecutors. \$7500. Co -principal investigator with Frank Horvath.

Office of Criminal Justice, State of Michigan. Grants for scientific equipment for the MSU forensic science laboratory. 1982 -83. \$95,000. Principal investigator.

Michigan State Police, Office of Highway Safety Planning. 1984. Study of patterns of injury in motor vehicle fatalities. \$5000. Principal investigator.

Perkin-Elmer Corporation. Corporate Donation Program. 1986.

Spectrofluorimeter to support forensic chemistry research. \$37,000.

Midwest Association of Forensic Scientists. Research Grant program. 1988. Analysis of Midrange Hydrocarbons by Three -Dimensional Fluorescence. \$2200. Principal investigator.

Michigan State University. All -University Research Initiation Grants. 1988 -89. Study of gunshot residues by SEM-EDX. \$2600. Co-Principal investigator.

USAID – Office of Democratic Initiatives. 1989 -90. Education project for El Salvadorian students for training in forensic science. \$68,000. Principal investigator.

Michigan State University. IT-CDG grant program. 1990-91. Adding high technology to forensic science education. \$1000 plus 100 hours of video production time.

Hewlett-Packard Corp. Corporate donation program. 1992. Gas -chromatograph/mass spectrometer, \$62,000. Joint with the department of chemistry.

Michigan State University, All -University Research Initiation Grants. Use of Scientific Evidence by Prosecutors. 1995. \$7500.

Nicolet Corp. University donation program. 1992. Data station and IR source for FTIR. \$21,000.

Michigan State Police. Evaluation of Drunk Driving Training Programs. 1996. \$41,000

Michigan State University. All -University Outreach Grant program. Forensic Science as problem-solving tool for high schoolteachers. 1996. \$7500.

National Institute of Justice. Analysis of Inks using Laser Desorption Mass Spectrometry, \$240,000. Co-PI. 2001-2004.

Analysis of Pigmented Inks. National Institute of Justice. \$271,000. Principle Investigator. 2006-2008.

Analysis of Automobile Paint Clear Coats. Midwest Forensic Science Center. \$50,000. Principle Investigator. 2007 -2008

AWARDS AND HONORS

Outstanding Graduate Assistant. George Washington University, Department of Chemistry. 1974.

American Chemical Society Congressional Fellow. 1988-89

Distinguished Member, Southwestern Association of Forensic Sciences.

Chief US Delegate to International Forensic Science Conference, Taipei, Taiwan, ROC, November, 1994

Visiting Professor, Criminal Police College of China. 1993.

Visiting Professor – Department of Chemistry, Materials and Forensic Science, University of Technology, Sydney, Australia. January to June, 1998

Visiting Professor – School of Chemistry, Physics and Earth Science, Flinders University, Adelaide, AU, May-June, 2000

Member, External Advisory Committee. Deakin University Forensic Science Course, Geelong, Victoria, Australia, 2003-present

Paul Kirk Award winner. Criminalistics Section, American Academy of Forensic Sciences, Feb. 22, 2005.
Member, Committee to Study the Needs of Forensic Science, National Academy of Sciences, 2006-2008.
Member, Committee on the Research Programs of the National Institute of Justice, National Academy of Sciences, 2007-2009.
Distinguished Fellow, American Academy of Forensic Sciences, February, 2009
Distinguished Alumni Scholar Award, George Washington University, April 30, 2009

CONSULTING

Denver Police Department. 1979-80. Casework, internships, personnel.
Denver Districts Attorneys Office. 1979 -80. Casework and scientific evidence e.
Colorado Bureau of Investigation. 1979 -80. Analytical techniques, internships and personnel.
Denver Public Defenders Office. 1979 -80. Casework and scientific evidence. Wisconsin State Police. 1987. Casework.
Michigan State Police. 1987-present. Casework, internships, personnel. U.S. Bureau of Alcohol, Tobacco and Firearms. 1989. Casework.
Cameron Parish, Louisiana Sheriffs Department. 1989. Casework.
Over 100 cases with numerous law firms, insurance companies, and traffic accident reconstructors. 1977-present. Analysis of evidence, testimony, depositions, drug testing protocols. Testified as expert witness in over 200 cases in 12 states, Federal and Military courts.
University of Wisconsin at Milwaukee. Invited consultant on starting a forensic science program. March, 1997.
Consultant in Forensic Chemistry, Speckin Forensic Laboratories. 1996 -present. Analysis of illicit drugs for Hamilton, Boone and Hendricks Counties, Indiana. Pilot program of Governor's Office. January 2006 -present.

SHORT COURSES AND SEMINARS TAUGHT

Denver Poisonlabs seminar on forensic toxicology. 1977.
University of Denver Law Center. Continuing Legal Education Division. Course in Forensic Science for Attorneys. 1979.
Michigan Judicial Institute. Approximately 30 short courses and seminars to judges and court personnel on various forensic science topics. 1981 -93.
Michigan State University, Lifelong Education Programs. Approximately 20 programs in Criminal Justice and Forensic Science to Criminal Justice professionals. 1980 -present.
Visiting Lecturer, Criminal Police College of China, Shenyang, PRC, July 1992.
Michigan Judicial Institute, Judges Seminar in Scientific Evidence, Troy, MI., May, 1993.
American Bar Association. Continuing Education Program for Appellate Court Judges, Workshop on Admissibility of Scientific Evidence. Sun Valley, ID, July, 1994.
Five State Judges Association. Continuing Education Seminar for Judges. Workshop on Admissibility of Scientific Evidence. Rapid City, SD, July, 1995.
American Bar Association. Continuing Education Program for Appellate Court Judges, Workshop on Admissibility of Scientific Evidence. Jackson Hole, WY, July, 1996.
Michigan State University, High school teachers enrichment program. 5 hour short course in teaching forensic science in high school. March, 1997.

SHORT COURSES AND SEMINARS TAKEN

Drug Enforcement Administration course in forensic drug analysis. 1977. McCrone Institute course in forensic microscopy. 1980.
FBI International Conference in Forensic Toxicology. 1984.

DNA typing by Polymerase Chain Reaction, 1994.

McCrone Institute course on building materials analysis, Chicago, IL, October 16, 17, 2000

One day course on analysis of Inks, US Department of Internal Revenue, Chicago, IL, October 18, 2000

Paint analysis, Midwest Association of Forensic Scientists, Lansing, MI, May 5 -9, 2003

MAJOR MEDIA APPEARANCES

Expert witness for the defense, State of Florida v. William Kennedy Smith, December, 1993, nationally televised

“Eye to Eye with Connie Chung”, Sept. 1994, Use of DNA evidence in court and role of financial resources in ability to offer defense in criminal justice system

“ABC Evening News”, April, 1995. Tagging Explosives

“Science Friday-Talk of the Nation”, National Public Radio, Forensic Science, April, 1996.

“CBS Early Morning”, October 2002, DC Sniper attacks

“CBS Early Morning”, October 2002, The forensic science program at MSU

“Inside Indiana Business”, August, 2004, The forensic science program at IUPUI

“Inside Indiana Business”, July, 2007, The forensic science program at IUPUI