

RESUME OF
RICHARD N. ERNEST
LABORATORY DIRECTOR
ALLIANCE FORENSICS LABORATORY, INC.
FORENSIC BALLISTICS CONSULTANT

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2/27/2023

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EDUCATION:

College -Auburn University, Auburn, Alabama
 I attended Auburn from fall of 1969 through spring of 1971.
 -University of Georgia, Athens, Georgia
 I transferred to Georgia in the fall of 1971 and graduated in June of
 1975 with a Bachelor of Science degree. I worked both part-time
 and full-time while in school.

Specialized Training

- "Managing for Performance"- GBI-GA State Merit System-1999
- "Introductory Management Training for Supervisors"- Career Track Seminars- Fort Worth, TX - 1999
- Tire-Track - Characteristics and Identification School-GBI-1990
- Criminal Profiling Workshop, GBI - 1990
- SIG-Sauer Pistol Armorer's Course -1990
- Glock Pistol Armorer's Course - 1990
- Smith & Wesson Revolver & Pistol Armorer's Schools - 1987
- F.B.I. Academy -Specialized Techniques in Firearms Identification School – 1985
- F.B.I. Academy- Gunpowder & Gunshot Residue School - 1984
- F.B.I. Academy Hairs & Fibers School - 1981
- Polarized Light Microscopy Workshop by Walter McCrone - 1979
- Beretta Pistol Armorer's School-1993
- Colt Armorer's School-1992
- Ruger Pistol Armorer's School-1993
- Ruger Rifle Armorer's School-1993
- Ruger Revolver Armorer's School-1993
- Blood Spatter Pattern Workshop, GBI-1985
- Crime Scene Investigation Workshop, SWAFS-1993
- Fingernail Striae Symposium, AFTE-1991
- Shooting Scene Reconstruction Workshop, AFTE-1994
- Trajectory Analysis Workshop, AFTE-1995

- Guest Lecturer at FBI Academy-1996- Seminar on Shooting Scene Reconstructions
- NRA Range Building Seminar- Arlington, TX - 2001
- Wound Ballistics Workshop by Dr. Vincent DiMaio- AFTE-2002
- Ricochet Workshop by Lucien Haag- AFTE- 2002
- Shooting Scene Reconstruction School- 2002- Gunsite Ranch
- Simplified Gunshot Residue Analysis- AFTE, 2005
- Hi-Point Armorer's Course- AFTE, 2005
- Microscopy Database Workshop - AFTE, 2013
- Double Casting Firearms Evidence - AFTE, 2013
- Metallurgy for the Non-Metallurgist - AFTE 2015
- Shooting Scenes - Staged or Not Staged - AFTE 2016

Manufacturing Facilities Toured

- SWD Firearms Inc. - 1989
- Fabrique Nationale - 1989
- Smith & Wesson - 1987
- Winchester - 1987
- Wilson Firearms Barrels - 1987
- Ruger Firearms - 1987
- Ranger Manufacturing (Walther Firearms) - 1987
- Remington Ammunition Plant-1997
- American Derringer Corp.- 1998

AFTE Annual Training Seminars Attended:

- 1978 - Nashville, TN**
- 1979 - Milwaukee, WI**
- 1982 - Orlando, FL**
- 1983 - San Mateo, CA**
- 1984 - New Orleans, LA**
- 1986 - Baltimore, MD**
- 1989 - Virginia Beach, VA**
- 1991 - Houston, TX**
- 1992 - Miami, FL**
- 1993 - Raleigh, NC**
- 1994 - Indianapolis, IN**
- 1995 - San Diego, CA**
- 1997 - Annapolis, MD**
- 1998 - Tampa Bay, FL**
- 1999 - Williamsburg, VA**
- 2000 - St. Louis, MO**

2001 - Newport Beach, CA
2002 - San Antonio, TX
2003 - Philadelphia, PA
2004 - Vancouver, British Columbia
2005 - Indianapolis, IN
2006 - Springfield, MA
2009 - Miami, FL
2010 - Henderson, NV
2013 - Albuquerque, NM
2015 - Dallas, TX
2016 - New Orleans, LA
2019 - Nashville, TN

WORK EXPERIENCE:

4/00 to Present:

LABORATORY DIRECTOR & FORENSIC CONSULTANT

Alliance Forensics Laboratory
Alliance Forensic Science Consultants
Fort Worth, Texas

Since 03/2004 - Laboratory Director of Alliance Forensics Laboratory directing daily laboratory operations. Successfully directed operations of laboratory toward ASCLD-LAB accreditation which was granted in February 2006. The lab was re-accredited in 2011 and 2016. The Fort Worth Lab location was closed in 2021 due to the Covid-19 Pandemic. ASCLD-LAB/ANAB accreditation was terminated during the Pandemic due to business considerations. Operations shifted to current location.

From 4/2000 to 03/2004, Self-employed forensic consultant specializing in firearms related services for the legal & insurance related industries.

Clients include civil & criminal case attorneys, police departments, and District Attorneys Offices. Services offered include firearms identification, shooting scene reconstruction, shooting accident investigations & reconstructions, gun safety & design related issues, toolmark examinations, crime scene examinations & reconstruction, general criminalistics related examinations, gunshot residues issues, distance determination examinations, casework consultations, gun range examinations & consultations, etc.

11/99 to 04/00:

FIREARMS SECTION SUPERVISOR

Georgia Bureau of Investigation Crime Laboratory
Atlanta, Georgia

Same duties as listed below including the supervision of ten personnel, and responsibility of administration of the IBIS (Integrated Bullet Identification System) Program for The State of Georgia.

08-90 to 10/99:

FIREARMS SECTION SUPERVISOR

Tarrant County Medical Examiner's District
Criminalistics Laboratories, Fort Worth, Texas

Duties included responsibility for the entire operation of the Firearms/Toolmarks Laboratory of the Tarrant County Medical Examiner's District Criminalistics Laboratories. This supervisory responsibility included:

- Firearms identification / Bullet comparisons- cartridge case comparisons
- Toolmarks comparisons
- Serial number restorations
- Muzzle to target determinations / Gunshot residue determinations on clothing
- Examinations of shooting scenes - determinations of angles, shooting distances, re-creations of the incident, etc.
- Assisting Medical Examiners in ballistics related areas - muzzle to target distances based on wound characteristics, intermediate target effects, etc.
- Teaching seminars and classes to police, legal, medical, and other personnel on firearms related topics. Also on all other forms of criminalistics and crime scene related subjects.
- Establishment and maintenance of an open homicide file and a large reference file of weapons, test fired exemplars, and ammunition including supervision of the **Drugfire** automated imaging system.
- Determination of the type of firearm in "no gun" cases
- Functioning condition of firearms
- Check for "accidental firing" of firearms / trigger pull testing
- Purchasing supplies- ammunition, equipment, chemicals, etc. as needed for the section.
- Testifying in court (local, state, and Federal) concerning my examinations. {over 1000 times at last count}.
- Directing the training of new firearms personnel as needed.
- Supervision of the activities of firearms section personnel

Also, it could be pointed out, that there are unusual circumstances, which from time to time are encountered such as the work I performed on the cases known as the "Mount Carmel Disaster" involving David Koresh and his followers in Waco, Texas during 1993. Immediately

after the beginning of this incident, I was asked to examine ammunition components recovered from the bodies of the BATF agents killed in the initial raid to supply the BATF & FBI information as to what types of weaponry they were confronting. Having performed this, I was asked to examine all ammunition components recovered during autopsies of David Koresh's followers, and I was frequently consulted during the course of the autopsies as firearms/ wound related topics arose.

During July of 1998, I concluded testimony in the trials surrounding the death of Adrienne Jones, which included the trials of Dianne Zamora and David Graham who were accused and convicted of her murder. The case became known as "The Texas Cadets Murder" and received national attention. Both trials were televised nationally on Court TV. I was commended in both trials by the Tarrant County District Attorney's Office for the level of professionalism, which was displayed during testimony under the stressful circumstances which surround a high-profile case.

04-77 to 08/90 **SENIOR FIREARMS EXAMINER**
G.B.I. Crime Laboratory, Atlanta, Ga.

-My duties and responsibilities as a Senior Firearms Examiner for the G.B.I. Crime Laboratory were essentially the same as my position listed above with the Tarrant County Medical Examiner's Crime Laboratory with the exception of my administrative duties. The first area in Criminalistics I was trained in was Arson Analysis, which also included analyzing explosive residues. I testified in Superior Court on several occasions concerning Arson Analysis. Following this I trained in Gunshot Residue Analysis by instrumental analysis, and have testified in court many times as a specialist in this field. In 1978 I began my training in Firearms Identification. The only interruption was during 1981 when I was trained in the analysis of hairs and fibers to help with the caseload in the " Atlanta Missing and Murdered Children" cases. I was a member of the Special Homicide Task Force Crime Scene Team and helped to process many of the crime scenes and much of the physical evidence associated with these cases. I testified several times during the trial. Once the trial was over I assumed my normal duties in the Firearms Identification Section. Additionally, as a part of my duties within the firearms laboratory, I was assigned the tasks of designing the layout of the new firearms laboratory and gun ranges (both indoor and outdoor ranges) to be utilized in the new lab (circa 1982-1985).

10-75 to 04-77 Stephenson Chemical Co., College Park, Ga.
Position: Chemical Pesticide Lab Director

- Responsibilities included the daily supervision and maintenance of the quality control program and the personnel in that program. I developed procedures and implemented them for the prevention of hazardous cross contamination in the pesticide product line. I performed all the purchasing for the laboratory, which also included the purchase of all raw materials used in the pesticide product formulations. I supervised the plant and laboratory staff, both in salary administration and in handling all disciplinary actions as needed.

PROFESSIONAL AFFILIATIONS

The Association of Firearms & Toolmarks Examiners
(Distinguished Membership- since 1992)
The Southern Association of Forensic Scientists
The American Academy of Forensic Sciences
The Southwestern Association of Forensic Scientists
The Association for Crime Scene Reconstruction – charter member
The International Wound Ballistics Association (now defunct)
The American Society of Crime Laboratory Directors
The National Rifle Association – Life Member
The American Conference of Forensic Science Laboratories (Board member- now defunct)

PUBLICATIONS & PRESENTATIONS

1. " An Obsolete .256 WIN. Magnum Cartridge Causes Interesting Problems", AFTE JOURNAL, April 1990.
2. " A Reassembled Buckshot Load", AFTE JOURNAL, July 1991.
3. " Toolmarks in Cartilage- Revisited", AFTE JOURNAL, October 1991.
4. " A TEXAS Size Exploding Bullet", AFTE JOURNAL, January 1992.
5. " Bryco Arms- A Change in Rifling", AFTE JOURNAL, January 1992.
6. "Exploring the Possibility of Matching Fired Shotgun Ammunition Components to Unaltered Shotguns", AFTE JOURNAL, January 1992. Delivered same paper as a presentation to the 1991 AFTE Convention in Houston.
7. " Toolmarks on Plastic Shotshells", AFTE JOURNAL, October 1992.
8. " Anvil Marks in Centerfire Cartridge Cases", AFTE JOURNAL, October 1992. Delivered same paper as a presentation to the 1992 AFTE Convention in Miami. Given award for "Best Paper" at conference.
9. " Association of a lead core to a bullet jacket through the use of an unusual manufacturing toolmark" delivered as a paper at the 1994 AFTE Convention in Indianapolis.
10. " The Use of Computer Ballistics Programs to Solve a Long-Distance Shooting Case" delivered as a paper at the 1995 AFTE Conference in San Diego. Given award for "Best Paper" at the conference.
11. "A Study of Shooting Scene Dynamics: Common Elements, Scene Types, and Scene Complexity Models" delivered as a paper at the first Shooting Crime Scene Processing and Shooting Scene Reconstruction Training Seminar- FBI Academy- Sept. 1996.
12. "A Study of Buckshot Patterning Variation and Measurement using the Equivalent Circle Diameter Method" delivered as a paper at the 1997 AFTE Training Conference- Annapolis, Md. - July 1997.

13. "An Unusual Toolmark Case: The Ups & Downs of a Zipper Tooth Comparison" delivered as a paper at the 1998 AFTE Training Conference- Tampa, Florida- July 1998.
14. "RBCD Performance Platinum Plus Ammunition- Performance Characteristics and Forensic Aspects" delivered as a paper at the 2002 AFTE Conference in San Antonio, Texas
15. "Evaluation of the Lyman Digital Trigger Pull Gauge" delivered as a paper at the 2002 AFTE Conference in San Antonio, Texas
16. "Trace Evidence Considerations in Shooting Scene Reconstructions with Special Emphasis on the Miami SWAT Team Shootings" delivered as a paper at the 2003 AFTE Conference in Philadelphia, PA.
17. Featured speaker in "Forensic Ballistics" at the 2003 National Crime Scene Investigation & Forensic Sciences Conference in Chicago- September 22, 2003
18. "Research into the Various Methodologies for the Matching of Lead Cores to Bullet Jackets- Parts One & Two"- delivered as a paper at the 2005 AFTE Conference in Indianapolis, IN.
19. "Adaptation of the SWG-MAT Guidelines for the Recovery of Trace Evidence on Clothing to the Field of Gunshot Residue Analysis for Firearms Examiners"- delivered as a paper at the 2007 American Academy of Forensic Science meeting in San Antonio, TX.
20. "Nanomanipulation-Coupled Nanospray Mass Spectrometry Applied to the Extraction and Analysis of Trace Analytes Found on Fibers" – Journal of Forensic Sciences, September 2010, Volume 55, No. 5
21. "Ten Years at Alliance Forensics Laboratory, Inc.: Perspectives from an Independent Firearms Laboratory" - delivered as a paper at the Texas AFTE meeting in Austin, TX on 09/18/14.
22. "Long distance ricochet shooting involving a high-powered rifle" - delivered as an informal presentation at the 2016 AFTE Conference in New Orleans.

AWARDS & ACHIEVEMENTS

Presented "Best Paper Award" at 1992 AFTE Convention in Miami.
Presented " Distinguished Member" status in AFTE at 1992 Convention in Miami.
Presented "Key Person of the Year Award" at the 1993 AFTE Convention in Raleigh.
Presented "Best Paper Award" at 1995 AFTE Convention in San Diego.
Appointed to AFTE Ethics Committee (1993-95), Chairman – 1995
Featured Speaker at the first Shooting Crime Scene Processing and Shooting Scene Reconstruction Training Seminar- FBI Academy-September 1996.
Appointed to AFTE Nominating Committee (1995-98), Chairman - 1998
Appointed to AFTE Board of Admissions - 1999 through 2002
Featured speaker in "Forensic Ballistics" at the 2003 National Crime Scene Investigation & Forensic Sciences Conference in Chicago- September 2003
AFTE Certification - Firearms Examiner - 08/2004, re-certified 08/2009, re-certified

08/2014, re-certified 08/2019

- Panel speaker- “The CSI Effect”- AAAS Conference- Washington, DC- Feb. 2005
- Featured Speaker- “Modern Firearms & Tool Marks Examination”- 2005 CA Public Defender’s Conference- Monterrey, CA- February 2005
- Featured Speaker- "Forensic Ballistics"- University of San Diego Law School- February 2006
- Presented ASCLD-LAB Accreditation and membership in ASCLD- Feb. 2006
- Re-accredited under the ASCLD-LAB International Program - Oct. 2011, Mar. 2016
- Featured Speaker- “Shooting Scene Reconstruction”- WVU/ NIJ Joint sponsored Conference for Working Professionals in Forensic Science- Orlando, FL – March 2007
- Featured Speaker- “Basic Firearms & Tool Mark Identification and Shooting Scene Reconstruction”- WVU/ NIJ Joint Sponsored Conference for Working Professionals in Forensic Science- Fort Worth, TX – March 2010
- Featured Speaker- TCDLA Association – “Firearms & Tool Marks Evidence Reliability”, Austin, TX – January 2017

EXPERIENCE:

I have had over 45 years of full time experience as a Forensic Firearms & Tool Mark (Forensic Ballistics) Examiner & Criminalist. Also, I have worked over 20 years (both part time & full time) as an independent forensic firearms and toolmark consultant, and have worked full time for over the past 20 (twenty) years as the Laboratory Director of the Alliance Forensics Laboratory, Inc. Additionally, I have worked as an Adjunct Professor at the University of North Texas teaching a course in Forensic Microscopy for the past 17 (seventeen) years in the FEPAC accredited Forensic Science Program at UNT. I am a member of the American Society of Crime Lab Directors, and the Texas Association of Crime Lab Directors.

At this point in my career I have worked well over 10,000 cases combined in the fields of Forensic Firearms & Tool Mark Identification, Gunshot Residues Analyses, Arson Examinations, Crime Scene Examinations, Gun Range examinations & consultations, and Shooting Scene Examinations & Reconstructions. In total, I have testified or been deposed in the range of more than 1000 times in the above listed fields in criminal & civil cases including State, Superior, Military and Federal Courts in Georgia, Texas, Louisiana, Alabama, Mississippi, Florida, Kansas, Iowa, Illinois, Tennessee, Kentucky, Arkansas, Oklahoma, New York, New Jersey, North Carolina, South Carolina, Virginia, Minnesota, North Dakota, Ohio, Colorado, Montana, Massachusetts, California, Arizona and the Virgin Islands. A current list of cases & depositions covering the last four + years is available upon request.