

CURRICULUM VITAE

Blaine M. Kern

HUMAN IDENTIFICATION TECHNOLOGIES

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PROFESSIONAL EXPERIENCE

FOUNDER / CHIEF FORENSIC SCIENTIST

Human Identification Technologies, Highland, CA, 2018 to Present

Forensic DNA Review:

- Review forensic DNA analyses conducted by third party forensic laboratories
- Consult with legal counsel regarding DNA findings during the review process
- Assist legal counsel with trial preparation and court exhibits
- Educate legal and scientific communities regarding forensic DNA analysis and other forensic disciplines
- Testify as a forensic DNA expert in courts of law

Crime Scene Investigation / General Criminalistics Services:

- Provide on-site analysis and post crime scene review and analytical services, which include:
 - Crime scene reconstruction
 - Bloodstain pattern analysis
 - Basic firearms examinations
 - Gunshot trajectory analysis
 - Crime scene documentation
 - Crime scene photography and videography
 - Detailed notes
 - Crime scene sketches
 - Evidence collection
 - Latent print processing
- Generate scientific reports detailing crime scene reconstruction, evidence collection and forensic examinations

- Technically review other crime scene analyst's work for correctness and completeness
- Testify as a forensic science expert in courts of law

FOUNDER / CHIEF FORENSIC CONSULTANT / FORENSIC LABORATORY DIRECTOR
Human Identification Technologies, Redlands, CA, 2004 to 2018

Founded California's first ASCLD/LAB-International accredited forensic DNA laboratory

As Chief Forensic Consultant

Forensic DNA:

- Review forensic DNA analyses conducted by third party forensic laboratories
- Consult with legal counsel regarding DNA findings during the review process
- Assist legal counsel with trial preparation and court exhibits
- Educate legal and scientific communities regarding forensic DNA analysis and other interrelated forensic disciplines
- Testify as an expert in courts of law

Crime Scene Investigation / General Criminalistics Services:

- Provide on-site analysis and post crime scene review and analytical services, which include:
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- Technically review other crime scene analyst's work for correctness and completeness
- Testify as a forensic science expert in courts of law

As Forensic DNA Laboratory Director:

- Oversee laboratory operations
- Evaluate scientific equipment and processes
- Validate scientific equipment and processes
- Supervise laboratory staff
- Recruit forensic scientists
- Perform DNA testing on crime scene evidence and reference samples
- Generate scientific reports detailing evidence, examinations, results and conclusions
- Technically review other forensic scientists' work for correctness and completeness
- Testify as an expert in courts of law

CRIMINALIST II, San Bernardino County Sheriff's Department Scientific Investigations Division, San Bernardino, CA, 1998 to 2004

DNA Analysis:

- Identify biological fluids
- Analyze DNA from biological evidence collected at crime scenes with polymerase chain reaction (PCR) based technologies
- Expertise includes the following PCR-based DNA typing systems: PM+DQA1 via reverse dot blot (SSO typing), D1S80 via polyacrylamide gel electrophoresis (VNTR typing), Profiler Plus and COfiler via capillary electrophoresis (STR typing)
- Interpret data, record results and provide conclusions
- Calculate statistical significance of DNA typing results
- Generate scientific reports detailing evidence submitted, examinations, results and conclusions
- Provide technical review of other Criminalists work for correctness and completeness
- Testify as an expert in courts of law

CRIMINALIST I, San Bernardino County Sheriff's Department Scientific Investigations Division, San Bernardino, CA, 1994 to 1998

Controlled Substance / Clandestine Laboratory Analysis:

- Analyzed over 4,000 cases
- Testified as an expert in courts of law

Crime Scene Investigations:

- Investigated over 1,400 crime scenes
- Expertise includes the following: Crime scene reconstruction, crime scene photography, detailed note taking, crime scene sketches, evidence collection, latent print processing
- Testified as an expert in courts of law

Forensic Biology/DNA

- Performed physiological stain preservation on biological evidence collected at crime scenes
- Processed and preserved various sexual assault evidence
- Commenced forensic DNA analysis training
- Testified as an expert in courts of law

HOSPITAL SERVICES TECHNICIAN, Blood Bank of San Bernardino and Riverside Counties, San Bernardino, CA, 1992 to 1994

- Performed enzyme-linked immunoassays (ELISA) for the detection of HIV I/II, hepatitis B and hepatitis C antibodies
- Assisted in the validation of new testing systems
- Responsible for equipment calibration, repair, and maintenance
- Generated reports detailing testing results

COURT TESTIMONY AND TRIAL PREPARATION ASSISTANCE

- **Provided trial preparation and forensics support services for U.S. Military, Federal, State, and Local jurisdictions throughout the United States and Internationally on over 400 occasions.**
- **Qualified as an expert witness on over 185 occasions:**
 - **U.S. Military Courts**
 - **U.S. Federal Courts**
 - **U.S. State Courts**

Forensic DNA Analysis:

Qualified as an expert witness in the following Polymerase Chain Reaction (PCR) based DNA analyses:

- Sequence Specific Polymorphism via Reverse Dot Blot / Allele-Specific Oligonucleotide (ASO) Hybridization:
 - Amplitype Polymarker (PM)
 - Amplitype DQA1
- Variable Number Tandem Repeat (VNTR) / Amplified Fragment Length Polymorphism (AFLP) analysis via Polyacrylamide Gel Electrophoresis (PAGE)
 - D1S80
- Short Tandem Repeat Analysis (STR) via Capillary Electrophoresis:
 - Profiler Plus
 - COfiler
 - Identifiler
 - Identifiler Plus
 - GlobalFiler
 - Minifiler
 - YFiler
 - PowerPlex 16
- DNA Population Statistics

Criminalistics:

Qualified as an expert witness in the following areas:

- Basic firearms analysis
 - Firearm muzzle to target distance determination
 - Firearms function
 - Firearms safety testing
 - Bullet trajectory analysis
- Basic trace analysis
- Scientific crime scene investigations
- Crime scene photography
- Evidence recognition, collection and preservation
- Crime scene reconstruction
- Bloodstain pattern analysis
- Latent print processing
- Chemical analysis (organic and inorganic)
- Controlled substance (drug) analysis

ACADEMIC QUALIFICATIONS

Bachelor of Arts in Biology, 1994

Bachelor of Arts in Environmental Studies, 1994

California State University at San Bernardino

Includes courses in Biochemistry, Genetics, Molecular Biology and Statistics

SPECIALIZED TRAINING (DNA)

Short Tandem Repeat (STR) Analysis Training (Identifiler)

Human Identification Technologies

Redlands, California - 2009

Advanced Topics in Forensic Statistics

The 17th International Symposium on Human Identification

Nashville, Tennessee - 2006

Extraction of DNA from Aged Skeletal Remains &

Forensic Mitochondrial DNA Sequence Analysis

Armed Forces DNA Identification Laboratory

Rockville, Maryland - 2005

Real-Time PCR Quantification Workshop

Applied Biosystems

Ventura, California - 2004

DNA Workshop

California Association of Criminalists Seminar

Ventura, California - 2004

DNA Statistics Workshop

California Association of Criminalists Seminar

San Diego, California - 2003

PCR – DNA: Short Tandem Repeat (STR) Analysis and Typing

California Criminalistics Institute

Sacramento, California - 2002

Short Tandem Repeat (STR) Analysis Training (Profiler Plus/COfiler)
San Bernardino County Sheriff's Department
San Bernardino, California - 2001

Short Tandem Repeat (STR) Analysis by Capillary Electrophoresis
Federal Bureau of Investigation
Quantico, Virginia - 2001

DNA Forensics Conference
Cambridge Healthtech Institute
Springfield, Virginia - 2000

Statistics in DNA Analysis
California Criminalistics Institute
Newport Beach, California - 1999

DNA – Polymerase Chain Reaction: DQA1/Polymarker
California Criminalistics Institute
Sacramento, California - 1999

DNA Extraction and Quantification
California Criminalistics Institute
Sacramento, California - 1999

DNA Analysis Training –DQA1/Polymarker and D1S80
San Bernardino County Sheriff's Department
San Bernardino, California – 1998-1999

SPECIALIZED CRIMINALISTICS TRAINING

Bloodstain Pattern Documentation and Interpretation
California Association of Criminalists
Orange County, California - 2011

Technical Writing for Criminalists
California Criminalistics Institute
San Luis Obispo, California – 2001

Bloodstain Pattern Interpretation
California Association of Criminalists Seminar
San Diego, California - 1998

Basic Practical Microscopy
California Criminalistics Institute
Sacramento, California - 1998

Basic Firearms and Tool Mark - Cross Training
San Bernardino County Sheriff's Department
San Bernardino, California - 1998

Basic Fiber Analysis - Cross Training
San Bernardino County Sheriff's Department
San Bernardino, California - 1998

Bloodstain Pattern Analysis - Cross Training
San Bernardino County Sheriff's Department
San Bernardino, California - 1998

Clandestine Drug Laboratory Waste Operations
California Specialized Training Institute
San Luis Obispo, California - 1997

Clandestine Laboratory Technical Training Seminar
Clandestine Laboratory Investigating Chemists
San Diego, California - 1997

Clandestine Laboratory Investigation
California Narcotic Officers' Association
Huntington Beach, California - 1997

Explosives Recognition Training
San Bernardino County Sheriff's Department
San Bernardino, California - 1997

Clandestine Laboratory Investigation
Clandestine Laboratory Investigators Association
Sacramento, California - 1996

Interpretation of Infrared Spectra
California Criminalistics Institute
San Diego, California -1995

Clandestine Laboratory Analysis and Synthesis
California Criminalistics Institute
Sacramento, California - 1995

Clandestine Laboratory Investigations
California Narcotic Officers' Association
Fullerton, California - 1995

Explosives Recognition
San Bernardino County Sheriff's Department
San Bernardino, California
1995

Controlled Substance Analysis
San Bernardino County Sheriff's Department
San Bernardino, California - 1994

Clandestine Laboratory Investigation and Analysis
San Bernardino County Sheriff's Department
San Bernardino, California
1994 – Investigations
1994– Analysis

Courtroom Testimony Skills
Sound Communication, Los Angeles Police Department
Los Angeles, California - 1994

PRESENTATIONS

Provided forensic DNA and general criminalistics training to law enforcement and the legal community on over 65 occasions from 2004 to present. The following is a partial list.

Kern, B. "How Does DNA Affect My Case?" Presented at The Law Offices of the Pima County Public Defender, 2012, Tucson, California

Kern, B. "How Does DNA Affect My Case?", Presented at High Desert Bar Association, 2011, Victorville, California

Kern B. "DNA Up-Close", presented at NDIA, 2008, Las Vegas, Nevada

Kern B. "DNA Up-Close", presented at PICA, 2008, Redlands, California

Kern B. "DNA Evidence", presented at Orange County Alternate Public Defender's Office, 2008, Santa Ana, California

Kern B. "DNA Evidence: 'DNA Up-Close'", presented at Federal Public Defender's Office, 2008, Los Angeles, California

Kern B. "DNA and Statistical Calculations", presented at Human Identification Technologies Conference Room, 2007, Redlands, California

Kern B., "DNA Evidence", presented at NDIA, 2007, Scottsdale, Arizona

Kern B. "DNA Evidence/DNA Up-Close'", presented at CDIA, 2007, Monterey, California

Kern B. "DNA Up-Close", presented at Maricopa County Public Defender's Office, 2007, Phoenix, Arizona

Anjaria M, Kern B. "Considerations in the Design, Validation, and Accreditation of a Forensic, Casework-Focused DNA Laboratory", poster presented at the 17th Annual International Symposium on Human Identification, 2006, Nashville, Tennessee

Kern B. "What Every PI Needs to Know About DNA", presented at the California Association of Licensed Investigators Seminar, 2006, San Diego, California

Kern B. "Forensic Science", presented at the Federal Defenders of Montana / Montana Association of Criminal Defense Lawyers, Criminal Defense Attorney Seminar, 2005, Big Sky, Montana

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

California Association of Criminalists (CAC)