

Dr Amy E. Du Beau
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Website: [Matanuska Forensic Science](#)

Dr A. E. Du Beau, PhD, MS, BS, is a neuroscientist with special expertise in forensics. Since earning her doctorate at the prestigious University of Glasgow (United Kingdom), she specialized in forensic behavioral evidence analysis and bloodstain pattern analysis. Active in international forensic organizations, she is a researcher, published author and lecturer. She has served as an experienced adjunct professor of biology and neuropsychology. Integrating her neuroscientific expertise with criminology, she has consulted on both civil and criminal cases, plaintiff and defendant.

Professional experience

Matanuska Forensic Science LLC

Expert confidential consultancy (current)

Principally to review, examine and analyze case materials, research relevant scientific literature, expert report writing and trial testimony to inform triers of fact; Imaging and descriptive figures for presentation; Research; Private investigatory; Review scientific articles for publication; Authorship

Adjunct professorships

Alaska Pacific University 2022

Teaching neuropsychology with emphasis in forensics to graduate students; Serving on doctoral committees; Mentorship; Teaching general biology with laboratory; Creating academic curriculum

University of Alaska Anchorage (2015-16)

Teaching human anatomy/physiology laboratory

Educational background

PhD, Neuroscience (integrated biology) 2013

University of Glasgow

Scotland, United Kingdom

Institute of Neuroscience and Psychology

Investigations of the neurochemical properties of neural systems using an array of sophisticated laboratory, surgical, microscopy and imaging techniques

MS, Environmental science

Alaska Pacific University with Matanuska Experiment/Research Station internship

Anchorage, Alaska

Chemical uptake and light/circadian cycles affecting plant behavior and morphology

BS, Natural Science

University of Alaska Anchorage

Accomplishments and Certifications

Lecturer for the International Association for Identification

National Harbor, Maryland 2023

Psychogeographic analysis of serialists

On-site presentation for international forensic audience, based on research project

International Homicide Investigators Association

New Orleans, Louisiana 2022

Certificate earned: Specialized instruction in homicide and violent crimes investigations (36 hours)

International Association for Identification's Science and Practice general discipline sub-committee (current)

Vetting forensic lectures and workshops, on-site conference meetings

Criminal profiling and behavioral evidence analysis

Professional diploma: Diplomate of the Academy of Behavioral Profiling (D-ABP)

Forensic Criminology Institute 2019

Semester study to earn this diploma

84 course hours plus written profile and/or thesis project

General topics: Forensic victimology; False allegations and malingering;
Forensic interviewing; Behavioral evidence; Case studies; Pathology of
violence; Serial crime; Medico-legal investigation; Wound pattern analysis;
Forensic assessment; Investigative and forensic ethics; Forensic report writing
and testimony

Investigative interviewing and advanced interrogation

The Reid Technique

Wichita, Kansas 2020

Week-long on-site course with certificate

International Association for Identification

National Harbor, Maryland 2023

Certificates earned (2): Forensic testimony techniques (4 hours); Likelihood
ratios (4 hours)

Henry C. Lee Institute of Forensic Science

Week-long 5-part online course 2020

Certificate earned: Advanced forensic science webinar

General topics: Crime scene investigation; Documentation; Pattern analysis;
Evidence examination and analysis

Henry C. Lee Institute of Forensic Science

Online full day webinar 2020

Certificate earned: Solving crimes using relatives' DNA

Forensic genetic genealogy and familial DNA searching applications for
casework

Lecture for the Global Scientific Guild

Webinar 2021, 2022

Psychogeographic analysis of serialists

Presentation for international forensic audience, based on research project

Bloodstain pattern analysis

Blood distribution and spatter

University of Florida 2018

Graduate 3-credit semester course

General topics: Pattern analysis; Hemodynamics; Motion and directionality; Impact spatter and altered bloodstains; Angle of impact; Convergence and origin; Documentation and evaluation of patterns; Detection of blood; Note-taking and courtroom testimony

Tri-Tech Forensics

Alexandria, Virginia 2018

Certificate earned: Bloodstain pattern analysis workshop (40-hour)

Basic foundational training course with examination

General topics: Characteristics of blood; Bloodstain math/trigonometry; Pattern documentation; Drying blood; Complex patterns and scientific method; Application and critical thinking; Reports and court testimony
Practicum: Passive stains; Impact spatter; Area of convergence and origin; Scene documentation; Bloodstain creation; Practical scenarios

International Association of Bloodstain Pattern Analysts

Ottawa, Ontario, Canada 2018

Earned certificates (2): Bloodstain reconstruction workshop (half-day); HemoSpat software practicum, impact pattern analysis and visualization (half-day)

International Association for Identification

National Harbor, Maryland 2023

Earned certificate: Recognizing voids (4 hours)

Tri-Tech Forensics

3-hour online webinar 2021

Bloodstain pattern recognition plus extra practicum project

International Association of Bloodstain Pattern Analysts

Online webinar 2020

Scientific foundations for bloodstain pattern analysis (90-minutes)

International Association for Identification

Reno, Nevada 2019

Certificates earned (3): Impact pattern recognition (4 hours); Examination of bloodstains and patterns on clothing (3 hours); Blood enhancement versus blood detection (8 hours)

Additional training

Accelerated Hypnotherapy

The Wellness Institute 2020 (65 hours)

Clinical hypnosis with practicum

Professional development

SEAK expert witness trainings: Trial testimony, on-site San Diego 2024 (14 hours);

Expert witness practice, webinar 2024 (17.5 hours)

Memberships

International Homicide Investigators Association (since 2022) No. 64577722

International Association of Crime Analysts (since 2020) No. 8764

International Association for Identification (since 2018) No. 33079

International Association of Bloodstain Pattern Analysts (since 2018) No. 4647

American Chemical Society (since 2017) No. 31227345

American Association for the Advancement of Science (since 2020) No. 60220076

British Neuroscience Association (2010-2024)

Federation of European Neuroscience Societies (since 2012)

European Physiological Society (since 2012)

Institute of Neuroscience and Psychology (since 2010)

Publications

Bloodstain pattern analysis information

Everything you wanted to know about blood distribution and spatter: comprehensive Q&A (2024).

The alcohol blackout

My exposé exploring the mechanisms of ethyl alcohol induced memory lapses from a neuroscientific and legal perspective (2022).

Mise en place

Why scaling matters in this complex 'Where's Waldo' world (2021).

Consciousness squared

Why the brain's anatomy cannot explain the process of consciousness (2020).

Architectural design and murder

Violent offenders' proclivity for the Eichler design, geographic profiling (2020).

Sleep and violent behavior

My report investigating the neurobiology underlying sleep and the forensic implications of sleep related violent behavior (2020).

Detecting deception

Can you detect deception? Features of deception (2020).

The curious incident of the neuroleptic prescription

Satirical exposé exploring neuroleptic action at the neuronal and neurochemical level with emphasis on the efficacy of off-label prescribing and diagnostic criteria (2020). [Mad in America](#) <hyperlink>

Experimental shift

Mathematically, can you imagine thinking like a pathogen? Perspectives on scale (2020).

Are you cold blooded?

Why have our body temperatures dropped? Perspectives on temperature (2020).

Blood distribution and spatter creation

Photographs of various identified bloodstains (2021).

Blood distribution and spatter photographs

Photographic montage (2018).

Eye drops and premeditated murder

Forensic toxicology behind eye drops. Short prospectus (2020).

Mediums, Ouija boards, séances and tarot cards, oh my!

Psychics do not belong in profiling and here is why. How do you investigate? Debunking psychics (2020).

Monoamines and violent criminal behavior

The chemistry behind mood, motivation, emotion. What underlies violence? Short prospectus (2019).

Presumptive testing to detect blood and freezing temperatures

It was a dark and stormy night....is it blood? Thermodynamics and molecular chemistry underlying blood detection (2019).

Du Beau A. (2018). Forensic neurobiology underlying violent criminal behavior. Glasstree Academic Publishing.

Du Beau, A. (2018). Serological method to determine blood phenotypes and probability of occurrence. Absorption-elution method. Prepared for Alaska Forensics, LLC.

Du Beau A. (2014). Neurochemistry and synaptic connections in the mammalian spinal cord. Pennsylvania State University, Philadelphia and Queens University, Kingston, Ontario, Canada. Presentation.

Huma Z., Du Beau A. *et al.* (2014). Origin and neurochemical properties of bulbospinal neurons projecting to the rat lumbar spinal cord via the medial longitudinal fasciculus and caudal ventrolateral medulla. Front Neural Circuits.

Du Beau A. (2013). Corticospinal and reticulospinal contacts onto cholinergic interneurons. Poster presentation. Festival of Neuroscience, British Neuroscience Association. London, England, United Kingdom.

Du Beau A. (2013). Neurotransmitter phenotypes of descending systems in the rat lumbar spinal cord. PhD thesis, University of Glasgow. 253 pages.

Du Beau, A. *et al.* (2012). Neurotransmitter phenotypes of descending systems in the rat lumbar spinal cord. *J Neurosci.* 227. 12 pages.

Scottish Neuroscience Group and Glasgow Neuroscience conferences (2011-2013). Glasgow, Aberdeen, Dundee, Edinburgh, Scotland, United Kingdom.

Scottish Autism Research Group Conference. Edinburgh, Scotland, United Kingdom.

Historical background and volunteer

Volunteership for Psych Rights Law Project, Mind Shield (current)

Molecular ecology laboratory (genetics)
US Geological Survey; Anchorage, Alaska (2017)

Post-doctoral researcher, psychophysics and visual cognition
Queen's University; Kingston, Ontario, Canada (2014)

Geology laboratory technician
ALS Chemex; Fairbanks, Alaska

Laboratory technician, research assistant, internship
Matanuska agricultural research/experiment station; Palmer, Alaska

Scientific skill sets

Extensive array of laboratory bench techniques

E.g., Qualitative/quantitative analysis, assays, calibrations, titrations, cryopreservation, preparing reagents/formulae, preparatory techniques, instrumentation, etc.

Forensic science techniques

Microscopy, histology and immunocytochemistry

Neurochemistry and neuroanatomy

Surgical techniques, animal modelling, dissections and perfusions

Biomedical, e.g., Anatomy/physiology, biochemical

Basic genetic techniques, e.g., DNA extraction/analysis, PCR, electrophoresis

Psychophysics and visual cognition

Imaging techniques and digital image processing

Experimental methodology and research design

Agronomy, photochemistry, botany and soil sciences