ABAcard® HemaTrace®
For The Forensic Identification of Human Blood at Crime Scenes

• Specific to Human Blood. Highly Sensitive
• Ready to use. No reagent preparation required
• No refrigeration required. Store at room temperature
• Support probable cause arrest and in obtaining search warrants

♦ Validated by many such as Michigan State Police, Miami-Dade Police, Maine State Police, W. Australia Police
♦ Presented at meetings such as Annual Meeting of American Academy of Forensic Sciences (AAFS), Spring Meeting of The Southwestern Assoc. of Forensic Scientists (SWAFS), Annual Meeting of The Midwestern Assoc. of Forensic Scientists (MAFS), Annual Meeting of The Northeastern Assoc. of Forensic Scientists (NEAFS), Meeting of Mid-Atlantic Assoc. of Forensic Scientists (MAAFS), International Symposium on the Forensic Sciences (ANZFSS), Annual Meeting of Canadian Society of Forensic Science (CSFS), Promega's International Symposium on Human Identification
♦ Published in various forensic publications such as Bloodstain Pattern Analysis Handbook, Canadian Journal of Forensic Science, Forensic Bulletin, International Association of Bloodstain Pattern Analysts News
♦ Used by thousands of forensic professionals

SALIgAE®
For The Forensic Identification of Saliva at Crime Scenes

• Identify Expirated Bloodstain Pattern from Impact Bloodstain Pattern
• Ready to use. Single step. No reagent preparation required
• Completes in minutes at room temperature
• Visual interpretation. No instrumentation required

Serving the Forensic Community since 1996
Abacus Diagnostics, Inc. Phone (818) 716-4735 Fax (818) 716-9471
www.hematrace.com

For further information please call our customer service department at (877) 225-9900
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>1</td>
</tr>
<tr>
<td>IABPA 2008 Officers</td>
<td>2</td>
</tr>
<tr>
<td>President’s Message</td>
<td>3</td>
</tr>
<tr>
<td>Case Report: Bloodstains of Gettysburg: <em>The Use of Chemiluminescent Blood Reagents to Visualize Bloodstains of Historical Significance</em></td>
<td>4</td>
</tr>
<tr>
<td>Standards and Guidelines: Scientific Working Group on Bloodstain Pattern Analysis: <em>Guidelines for the Minimum Educational and Training Requirements for Bloodstain Pattern Analysts</em></td>
<td>15</td>
</tr>
<tr>
<td>Standards and Guidelines: Scientific Working Group on Bloodstain Pattern Analysis: <em>Topics to Consider in Preparation for an Admissibility Hearing on Bloodstain Pattern Analysis</em></td>
<td>24</td>
</tr>
<tr>
<td>The Second European IABPA Region V Training Conference 2008 Zurich, Switzerland</td>
<td>33</td>
</tr>
<tr>
<td>2008 International Association of Bloodstain Pattern Analysts Annual Training Conference</td>
<td>38</td>
</tr>
<tr>
<td>Daniel Rahn Memorial Grant</td>
<td>42</td>
</tr>
<tr>
<td>Bloodstain Pattern Analysis in the News <em>Alexei Pace</em></td>
<td>43</td>
</tr>
<tr>
<td>Organizational Notices</td>
<td>44</td>
</tr>
<tr>
<td>Training Opportunities</td>
<td>44</td>
</tr>
<tr>
<td>Editor’s Corner</td>
<td>47</td>
</tr>
<tr>
<td>Past Presidents of the IABPA</td>
<td>48</td>
</tr>
<tr>
<td>Associate Editors of the IABPA NEWS</td>
<td>48</td>
</tr>
</tbody>
</table>

I.A.B.P.A. News 1 March 2008
# 2008 I.A.B.P.A. Officers

## PRESIDENT

**LeeAnn Singley**

copsci2@msn.com

---

### Vice President, Region I

**Pamela Bordner**  
pam.bordner@state.or.us

### Vice President, Region III

**Iris Dalley**  
irisd@osbi.state.ok.us

### Vice President, Region V

**Andre Hendrix**  
andre.hendrix@zeeland.politie.nl

### Vice President, Region II

**John Forsythe-Erman**  
jon.forsythe@rcmp-grc.gc.ca

### Vice President, Region IV

**Craig Stewart**  
craig.stewart@jus.gov.on.ca

### Vice President, Region VI

**Mark Reynolds**  
mreynolds@anhb.uwa.edu.au

### Secretary / Treasurer

**Norman Reeves**  
norman@bloody1.com

### Sergeant at Arms

**Brian Kennedy**  
b.kennedy@bloodscene.com

### Legal Representative

**Mark Seiden**  
markseiden@markseidenlaw.com

### Historian

**Herbert MacDonell**  
forensiclab@stny.rr.com
PRESIDENTS MESSAGE

The weather is cool, or down right cold in many parts of the world but things are heating up in the planning for our annual conference in Boulder, Colorado in October. The conference committee has been hard at work preparing information to assist your attendance at this year’s meeting. In this issue, as well as on our website, you will find hotel and local information and, of course, registration information. Please look closely at this conference material, for this year we have requested more input from you. As many of you who attended the conference in San Antonio know, the IABPA and the conference planners have decided to offer workshops as part of our gathering. Because of this, we have extended our time together to four days and in exchange for these workshops (and to help defray the costs associated with them) there has been a slight increase in the conference registration fee. To assist in the planning and attendance at the workshops, the conference committee is asking you to complete a conference questionnaire as to your interest. This questionnaire, with a return date of April 4, is available in this issue and on our website. While you’re at it, why not consider sharing your skills as a workshop leader or sharing your research or a case as a conference presenter. If interested, kindly contact the appropriate conference committee person as soon as possible in order to assist them in their planning. Keep a close watch on our website, www.iabpa.org, as up to date information will be posted.

With all this conference planning underway, I would like to remind you of the unique opportunity our organization has in July as we meet for our 2nd European Conference in the beautiful city of Zurich, Switzerland. What exciting times these are for the IABPA as our worldwide membership grows. Those of us who attended the conference in the Netherlands can attest to the extraordinary exchange of information as we gathered in Europe for the first time. Please make a special effort to attend this conference, especially our members from North America. The success of the annual conferences held on this continent, has in no small part occurred because of our members who traveled many hours to be a part of it. Let us now contribute to continued conference success by gathering in Zurich. I am so glad I made the commitment as a member in 2006 to travel to the Netherlands and now I look forward to being in Europe again as your President. I ask you to make the same commitment in 2008. See you in Zurich.

I would also like to remind you that time is running out for application for the first research grant to be awarded by the IABPA. The submission deadline is April 15th for the Rahn Memorial Grant and the application procedure can be found in this issue. In addition, biographical information regarding the man for which this grant has been named has been added to our website. Take a moment and read about the special contributions Dan Rahn made to our organization and the discipline of Bloodstain Pattern Analysis. The grant, established in his memory, is meant to assist in the continued advancement of our discipline. Good luck to all applicants.

In closing, I would like to thank all of you who have made my first year as President such a rewarding one. As I enter year two, I have been pleased by the emails, phone calls and personal contacts from many of you who have a desire to become, or continue to be, involved with the workings or our group. It is your contributions that make the IABPA the fine organization it is. I thank you once again for your dedication.

Looking forward to seeing you in a few months. Take care of yourselves,

LeeAnn Singley
President, IABPA
CASE REPORT

Bloodstains of Gettysburg:
The Use of Chemiluminescent Blood Reagents to Visualize Bloodstains of Historical Significance

Detective Lieutenant Nicholas Paonessa
Supervisor – Forensic Identification/Crime Scene Unit
Niagara Falls Police Department
Niagara Falls, New York

Abstract

Chemiluminescent bloodstain reagents are regularly utilized at crime scenes to reveal bloodstain residue after cleanup attempts or other activities have reduced the visibility of a stain. High sensitivity and the ability to react with stains of extreme age have made this type of reagent an invaluable tool in the crime scene officer's arsenal.

It has been noted that traces of iron in heme can physically remain in a substrate for an indefinite period of time depending, of course, on the degree of exposure and physical wear upon such substrate. Based on the ability to react with this trace molecular material of aged stains, chemiluminescent reagents may be an aid to further expand the use of bloodstain pattern analysis into the field of historical research.

The utilization of reagents such as luminol for the purpose of visualizing aged bloodstains has previously been documented; however the employment of this type of reagent at actual historical sites requires special considerations and precautions not normally encountered at the common crime scene. This paper examines the feasibility of utilizing such reagents at historical sites and the application to historical archives and antiquities.

Introduction

Confrontations resulting in bloodshed have often affected the course of history. While bloodstain pattern analysis is generally considered a tool for crime scene and accident investigation the possible application to historical research should also be considered. The ability to locate and visualize bloodstains is, of course, the first step to any analysis. In order to determine if the use of chemiluminescent processing would be feasible in regard to historical research the traditional application of reagents to locate bloodstains in suspected areas would need to be modified. It would be necessary to perform these tests at sites that already had previous documentation of residual blood contamination. Extensive research was required to locate suitable test sites.

Due to the limited scope of this project, widespread processing at historical sites in search of latent bloodstains was deemed impractical. The application of reagents to large areas of historical sites such as military fortifications or locations of noted past crimes would have required extensive chemical exposures. Bear in mind that the application of certain reagents could permanently damage or alter historical properties of high value. Preliminary test applications of the reagent on known bloodstained samples of the same material should be conducted. The tests should reveal the accuracy and sensitivity of the reagent on known blood
traces, as well as identify any potential physical alteration to the actual substrate. Based on this, it was decided that suitable test sites would require locations with extensive historical documentation identifying the exact location of blood-shedding events and/or exhibiting known visible stains. Two suitable sites were located in the Town of Gettysburg, Pennsylvania.

History

The Battle of Gettysburg is considered by some to be the point at which the tide turned in favor of the Union Army during the American Civil War. Although other battles of the war resulted in higher single day casualties, the total of wounded and dead for the three days of battle has caused Gettysburg to be considered the bloodiest engagement to have ever occurred on the continent. The battle started on the morning of July 1st, 1863 when the Confederate division of Henry Heth marched into the Village of Gettysburg ostensibly to secure shoes for his troops. Heth’s division was met by the Union Cavalry brigade of John Buford. Soon enough, Union General John Reynolds and the First Corps were engaged in a battle that raged until sometime between 5:00 and 6:00 P.M. (Standard time as daylight savings time did not yet exist). General Reynolds was shot in the head and killed during this engagement.

Ultimately, the Confederate Army pushed the Union Army through the streets of Gettysburg and occupied the town. The Union forces regrouped on Cemetery Hill and formed what is now called the “Fishhook Defensive Line” which was anchored on two hills – Little Round Top and Culp’s Hill. Confederate sharpshooters were stationed in homes throughout Gettysburg, making things difficult for the Union forces.

On July 2nd, 1863, General Robert E. Lee and the Confederate forces attacked Union forces on the left and right ends of the Union line. By the end of the day the Union lines had held their positions. On July 3rd, 1863, the Confederates began with what is now known as one of the largest artillery barrages ever fired. At approximately 1:00 P.M. Confederate artillery began firing at the center of the Union line in an attempt to soften their defense prior to a frontal assault. The barrage was then followed by what is commonly known as Pickett’s Charge. Approximately twelve thousand Confederate infantry marched directly over one mile of hilly terrain toward the center of the Union line. By sunset, observers would comment that the ground appeared to be moving because there were so many wounded and dead men on the battlefield. The failure of the charge forced the Confederate Army into retreat. Casualties, both Union and Confederate are believed to be approximately 51,000 men.

Virtually all public and private buildings were utilized as hospitals for the wounded of both armies. Anecdotal evidence speaks of holes being drilled into the floors of the makeshift operating rooms to allow for the draining of accumulated blood. Both the Shriver House and the Lady Farm were used as hospitals as well as for other military functions. The proprietors of the Shriver House Museum located on Baltimore Street in Gettysburg and the Gettysburg Battlefield Preservation Association that maintains the Daniel Lady Farm on Hanover Street agreed to allow testing on their properties.
Shriver House

The Shriver House has been documented as a residence used as a base for Confederate sharpshooters. Prior to the battle, during the winter of 1862, it was used to house Union soldiers. During the battle the owners of the home had fled outside of the town.

A Confederate “snipers nest” was established in the attic. Bricks were removed from the attic wall to form portholes from which to fire upon the Union soldiers. A neighbor later described watching the Confederates through an attic window. According to historical records, one of the Confederate sharpshooters was apparently struck by a bullet and killed directly in front of one of the makeshift portholes. The death and removal of the body was described in detail by the witnessing neighbor. Records show that the body of at least one other sniper was later carried out of the house. The Shriver House is located on Baltimore Street and was owned by George and Henrietta Shriver. George Shriver had hoped to open a tavern and ten-pin alley before the war. After enlisting in the Union Army he was captured and died in Andersonville (the notorious Confederate prisoner of war camp). The Shriver House has been restored with great care taken to retain much of the original building materials. The Shriver House is now a private museum that features the impact of the battle on the civilians of the town (Figure 1).

Figure 1. Shriver House on Baltimore Street in Gettysburg, Pennsylvania.
Daniel Lady Farm

Daniel Lady and his family owned the Lady Farm. They also had fled to relatives during the battle. Upon their return, they discovered that their home had been used as a Confederate field hospital for Major General Edward “Old Allegheny” Johnson’s Second Division. The hospital was specifically for the artillery battery commanded by Major Joseph Latimer. The young major was known as the “Boy Major”. He was wounded during the fighting on Brenner’s hill and was taken to the Lady Farm where his brother, a Confederate surgeon, amputated his right arm. Major Latimer died during the retreat following the battle on August 1, 1863.

Subsequent to the battle, Daniel Lady found several dead bodies and wounded soldiers in his home. All of the bedding and carpets were missing with the exception of one carpet which was saturated with blood. The doors of the residence had been removed and utilized as stretchers and operating tables. Mr. Lady subsequently filed a claim with the U.S. Government for damage to his property. He received a total of $1,251.97 for damage and loss.

The home was occupied for several years with carpets used to cover the stained floors and shrapnel from artillery shells imbedded in the walls. In 1999 the Gettysburg Battle Field Preservation Association purchased the property and has worked to restore it to its original appearance. The restoration has been done with historical accuracy with preservation of significant artifacts as a priority. Archeological excavations outside the home and barn have resulted in the recovery of additional artillery shrapnel, whole, unexploded artillery shells, bullets, uniform buttons, knives, and other miscellaneous artifacts as well as human bones. The Association intends to open the Lady Farm as a field hospital museum and a working period farm exhibit (Figure 2).

Figure 2. Daniel Lady Farm on Hanover Road in Gettysburg, Pennsylvania.
Preparation

Unlike the common crime scene, where the documentation of evidence is the priority, the preservation of historical properties is essential and therefore of greater importance. To determine if on site testing would be feasible it was first necessary to determine if the reagents would leave any type of unwanted artifacts or prove difficult to clean creating an unacceptable health risk due to chemical exposure. Material safety data sheets and precaution sections of the distributors’ technical information sheets were reviewed, and preliminary tests were conducted to determine which reagent would be the most suitable.

Commercially available luminol formulas purchased from Sirchie® Finger Print Laboratories, Inc. and Evident Crime Scene Products, as well as BlueStar® Latent Bloodstain Reagent were evaluated and utilized in several preliminary tests preformed on numerous wood samples (walnut, maple, oak, hemlock, and pine). The purpose of the tests was to determine which reagent would be less likely to cause discoloration to the woodwork at the historical sites. The reagents were prepared according to provided instructions and applied to the wood samples. After five minutes of exposure the wood samples were flushed with distilled water. Excess water was then removed using a wet-vacuum. Although all applications left a slight washed or bleached appearance, no significant discoloration was noted. Bluestar® Reagent appeared to show the least change from the original appearance. The two luminol products showed similar results ranging from a mild dulling and bleached appearance to no notable discoloration.

Artifact Test

In addition to the preliminary testing completed on the wood sections, an actual Civil War era rifle was treated with a luminol reagent. A collector had volunteer an 1862 Joslyn breech loading rifle for use in this study. The collector wished to know whether some dark stains on the stock were traces of blood. The rifle was treated with a luminol reagent marketed by Evident Crime Scene Products, followed by flushing with distilled water, wet-vacuuming, and forced-air drying. No chemiluminescent reaction was observed. Subsequent testing with phenolphthalein and O-Tolidine also proved to be negative. However, after the rifle had been flushed and dried it was discovered that approximately 60 percent of the original finish on the stock had been destroyed (Figure 3). Based on the results of the preliminary testing on the wood samples as well as the damage observed after the Joslyn rifle was exposed to luminol, Bluestar® was chosen for application at the actual test sites. Although Bluestar® does contain corrosives it is marketed as a nontoxic formula. This was considered advantageous because these areas would be opened to the public. Due to the emphasis on safety and physical preservation, questions regarding which reagent may have the highest sensitivity were not addressed at this time.

Figure 3. The 1862 Joslyn Breech Loading Rifle.
Site Applications

Shriver House

The first site tested was the Shriver House attic. Test applications were applied to several areas of the attic woodwork that were located away from the porthole site. Areas of plain wood consistent with that found immediately under the portholes showed no background luminescence. After five minutes the treated areas were flushed with distilled water and the water was immediately removed with a wet-vacuum unit. The application test sites were re-examined 24 hours later to confirm that no discoloration had resulted (Figure 4).

The area under the porthole was then exposed to the Bluestar® Latent Bloodstain Reagent and the results were photographically documented. A chemiluminescent reaction was observed in the area under the porthole showing a pattern consistent with a cloth or mop having been used to wipe up in the area. The reaction was clearly visible but of a lesser intensity as than previously observed with stains of modern origin (Figure 5). Also noted is that a distinct line of demarcation was observed at the edge of floorboards a few feet from the porthole. It was learned that the boards that did not react had been replaced during restoration and were not the same boards in place during the battle.

Figure 4. Attic of the Shriver House- The site of the shooting of the Confederate sniper.
Daniel Lady Farm

In order to protect the integrity of the historical artifacts, the visible stains on the floor of the Daniel Lady Farm were covered with heavy gauge plastic sheeting. A small area at the edge of the visible stain was left exposed as a control. Test applications were conducted away from the stains (Figure 6). A light amount of background luminescence was noted in a few areas and where nail heads appeared in the wood. Most of this was very dim, whiter in color and lasted a short duration.
It was not determined if any of the apparent background luminescence was actually due to residual blood material that had spread into the wood grain as a result of past cleaning attempts. As with the previous test applications, the areas were re-examined 24 hours later with no significant discoloration noted.

The area surrounding the visible stains (along with the small exposed section) was then subjected to the Bluestar® Reagent with positive results. Low level luminescence observed at the Shriver House was visible at the exposed control stain area. The chemiluminescent reaction continued several inches outward from the known stain area and showed a flow pattern that followed the contours in the floorboards. This accumulated in an area with a gap opening at the end of two of the boards. A dim irregular background luminescence was observed in a widely distributed pattern around this stain (Figure 7).

Historical documentation contains numerous descriptions of field hospital surgical rooms having “streams of blood” which dripped through the floors. It was now observed that the water from the flushing procedures completed after the application had run through the floorboard end gap and dripped downward. A substantial amount of water was absorbed into the wood grain on the underside of the boards. No water was seen to have permeated the tongued seams (Figure 8). This appears to be the most likely path of any blood, serum, or original blood contaminated cleaning water. The reagent was subsequently applied to the underside of the stained floorboards as well as the surrounding area and exposed beams. This resulted in chemiluminescence in the area of the water path (Figure 9). No reaction was observed in the surrounding area, within the tongued seams, or on the exposed beam directly below the floorboard end gap. This beam was a replacement and not original to the date of the Battle.
Figure 8. Basement ceiling of Daniel Lady Farm below stains on floor above. Note the capillary action causing absorption of water from the prior flushing procedures above.

Figure 9. Chemiluminescent reaction observed on the basement ceiling. No reaction was observed in the tongue and groove seams or on the replaced beam.
Conclusions

Due to the high sensitivity and the ability to react with stains of extreme age, chemiluminescent bloodstain reagents can be utilized for the visualization of stains of historical significance. However, the following should be considered prior to any application:

1. All surfaces should be tested for discoloration or any other adverse effects prior to full exposure. Many antiquities have very high values while some items of historical significance are considered priceless and irreplaceable. The prospect of visualizing a stain pattern may not justify the risk of causing irreversible damage. Although in the two test site applications no negative effects were noted this study can not be considered to encompass all possible substrates. As in the example of the Joslyn rifle, the possibility of damage can be costly. The possibility of affecting future DNA analysis should also be considered.

2. Even reagents that are non-toxic may present heath risks. All applicable precautions such as protective clothing, masks, and ventilation should be utilized in the same manner as at a modern crime scene. Areas that maybe opened to the public require a thorough effort to remove any chemical residues in order to prevent unwanted exposure.

3. Cleanup efforts must also be closely monitored so that water damage does not result. An example would be the flushing of floorboards with water. Water may assist in the cleanup; however, excess water dripping down into lower floors can damage items such as old horsehair plaster or other building materials impossible to replicate. This is of extreme importance when processing upper floor areas such as in the attic of the Shriver House Museum. During the clean-up procedures it was also noted that pressing the wet-vacuum nozzle too hard against wet wood surfaces can leave unwanted striation marks. The ability to complete a thorough cleanup without causing damage should be as much a consideration as the possible adverse effects of the chemical processing itself.

4. Chemiluminescent bloodstain reactions function as a blood indicator and are therefore limited to a presumptive test. Any conclusions should be appropriately conservative and coordinated with historical research as well as results of any additional confirmatory testing.

5. In the event of a negative reaction, this should not be considered prima facie evidence to be used to bring into question previously accepted historical theory. The extended time lapse often occurring between a historically significant event and the application of a reagent can allow for any number of undocumented modifications of building materials and/or additional occurrences resulting in degradation or complete physical removal of bloodstain traces.
In closing, the use of chemiluminescent bloodstain reagents such as luminol and Bluestar®, when applied with due caution can provide potentially useful clues to past events. Under the right circumstances this type of reagent may be able to provide a glimpse into the past by visualizing historical evidence that has remained dormant and unquestioned for a significant period of time.

REFERENCES

STANDARDS AND GUIDELINES

Scientific Working Group on Bloodstain Pattern Analysis: Guidelines for the Minimum Educational and Training Requirements for Bloodstain Pattern Analysts

Scientific Working Group on Bloodstain Pattern Analysis (SWGASTAIN)

Objective | Introduction | Statement of Purpose | Minimum Pretraining Requirements | Required Minimum Objectives Specific to a Training Program | Mentorship | Competency Testing | Continuing Education Requirements | Minimum Requirements for a Mentor | Glossary

Objective

This document provides minimum pretraining educational requirements for an individual currently in, or entering into, a bloodstain pattern analyst training program and the minimum training requirements that a trainee must successfully complete prior to practicing as a bloodstain pattern analyst.

Introduction

The Scientific Working Group on Bloodstain Pattern Analysis (SWGASTAIN) comprises bloodstain pattern analysis (BPA) experts from North America, Europe, New Zealand, and Australia. SWGASTAIN serves as a professional forum in which practitioners in BPA and related fields can discuss and evaluate methods, techniques, protocols, quality assurance, education, and research. SWGASTAIN’s ultimate goal is to use these professional exchanges to address substantive and operational issues within the field of BPA and to work to build consensus-based, or “best practice,” guidelines for the enhancement of the discipline of BPA.

Statement of Purpose

SWGASTAIN has developed minimum educational and training requirements for bloodstain pattern analysts. As used here, the concept of a bloodstain pattern analyst training program encompasses the pre-training knowledge, skills, and abilities the prospective bloodstain pattern analyst trainee possesses as a prerequisite for training, as well as the professional instruction completed by a trainee seeking to become an active practitioner in the field of BPA. The BPA trainee must participate in a mentorship program during his or her training. It is the mentor’s responsibility to evaluate the trainee’s progress toward completing the required education and training objectives stated in the bloodstain pattern analyst curriculum. The trainee must successfully complete competency testing prior to becoming a qualified bloodstain pattern analyst and rendering expert opinions. The duration of the training will vary depending on the length of time required for each trainee to successfully complete the educational and training requirements.

Definitions

As used by SWGASTAIN, the following terms convey the meanings specified:

Must—Done without exception
Should—Expected to be done
Recommended—Appropriate but not mandatory
1. Minimum Pre-training Requirements for a Bloodstain Pattern Analysis Trainee

1.1. Bachelor’s degree or equivalent in a field of study related to BPA from an accredited college or university.

-OR-

1.2. Associate's degree or equivalent in a field of study related to BPA from an accredited college or university and two years of job-related experience.*

-OR-

1.3. High school diploma or equivalent and four years of job-related experience.*

*Job-related experience includes, but is not limited to, experience as a:

- Crime scene technician.
- Criminalist.
- Homicide/criminal investigator.

2. Required Minimum Objectives Achieved Through Accepted Training Methods Specific to a Bloodstain Pattern Analysis Training Program

At the completion of training the student must be able to:

2.1. Demonstrate an understanding of health and safety issues associated with BPA.

2.1.1. Demonstrate an awareness of bloodborne pathogens and other related health hazards.

2.1.2. Demonstrate an awareness of biohazard safety equipment and procedures.

2.2. Demonstrate knowledge of the history of BPA.

2.3. Demonstrate an understanding of the scientific principles as they relate to BPA.

2.3.1. Demonstrate an understanding of the scientific method and its application to BPA experimentation, to include:

2.3.1.1. Problem identification.

2.3.1.2. Hypothesis.

2.3.1.3. Experimentation/data collection.

2.3.1.4. Data analysis.

2.3.1.5. Theory/conclusions.
2.3.2. Demonstrate an understanding of the principles of physics as they relate to BPA, to include:

2.3.2.1. Physical laws of motion.
2.3.2.2. Surface tension.
2.3.2.3. Viscosity.
2.3.2.4. Gravity.
2.3.2.5. Air resistance.
2.3.2.6. Velocity.

2.4. Demonstrate an understanding of bloodstain pattern principles and their application to BPA.

2.4.1. Demonstrate an understanding of blood components and related human anatomy and physiology.

2.4.2. Demonstrate an understanding of the effects of target surface characteristics on the resulting bloodstain patterns.

2.4.3. Demonstrate an understanding of the effect of environmental factors on the formation and/or drying time of bloodstain patterns, to include:

2.4.3.1. Air flow.
2.4.3.2. Humidity.
2.4.3.3. Temperature.
2.4.3.4. Substrate characteristics.
2.4.3.5. Animal/insect activity.

2.4.4. Demonstrate an understanding of the characteristics of blood in motion, to include:

2.4.4.1. Drop formation.
2.4.4.2. Oscillation.
2.4.4.3. Flight paths.
2.4.4.4. Accompanying drop.
2.4.4.5. Wave castoff.
2.4.4.6. Distribution of stains.
2.4.4.7. Kinetic energy.
2.5. Demonstrate an understanding of the mathematical principles that relate to BPA, to include knowledge of the methods used to measure bloodstains and bloodstain patterns. These include:

2.5.1. Methods for the measurement of individual bloodstains.

2.5.2. Trigonometric functions as they relate to BPA.

2.5.3. Methods for origin determination.

2.6. Demonstrate an understanding of how the physical appearance of bloodstain patterns (size, shape, distribution, and location) relates to the mechanism by which they were created.

2.6.1. Demonstrate the ability to identify bloodstain patterns.

2.7. Demonstrate acceptable documentation methods of bloodstain pattern evidence, including:

2.7.1. Documentation techniques specific to BPA, to include:

2.7.1.1. Photography.

2.7.1.2. Sketching.

2.7.1.3. Note taking.

2.8. Demonstrate an understanding of the methodologies for the preservation and collection of bloodstain pattern evidence that allow for future examination(s).

2.9. Demonstrate an understanding of bloodletting injuries, their locations, and their potential effects on the bloodstain pattern(s).

2.10. Demonstrate an understanding of searching, chemical testing, and enhancement techniques as they pertain to bloodstains.

2.11. Demonstrate an understanding of the limitations of BPA.

2.12. Demonstrate the ability to apply BPA to assist in the reconstruction of a bloodletting event(s).

2.13. Demonstrate the ability to communicate findings, conclusions, and opinions by written and/or verbal methods.

3. Mentorship

During the course of training, the BPA trainee and mentor must document and participate in a mentorship program. This training should include, but is not limited to, the evaluation of the required objectives, the review of completed casework, supervised BPA scene and laboratory work, and the observation of expert testimony.

4. Competency Testing

A BPA trainee must participate in and successfully complete a competency test prior to performing independent analysis and rendering expert opinion. Competency testing may be administered incrementally and/or cumulatively to allow the trainee to conduct some of the analyses independently.
(For example, a mentor may allow the trainee to complete a competency test in the area of photography and then allow the trainee to photograph a scene independently).

5. Continuing Education Requirements for a Bloodstain Pattern Analyst

5.1. A minimum of eight hours of training related to BPA should be completed annually. This may include, but is not limited to, attending professional conferences, seminars, and/or workshops.

5.2. It is recommended that one belong to a professional organization(s) related to BPA.

6. Minimum Requirements for a Bloodstain Pattern Analysis Mentor

6.1. A mentor must be an active practitioner in the field of BPA and should have a minimum of three years of casework experience as a qualified bloodstain pattern analyst.

6.2. A mentor should have fulfilled all previously stated requirements for a bloodstain pattern analyst.

Glossary

Active practitioner—An individual who is an analyst actively involved in bloodstain pattern training and/or BPA casework and/or performing technical reviews of BPA casework.

Bloodstain pattern analyst—An individual who has successfully completed the prescribed course of study.

Bloodstain pattern analysis mentor—An individual who is an active practitioner in the field of BPA with a minimum of three years of casework experience as a qualified bloodstain pattern analyst and having fulfilled all previously stated requirements for a bloodstain pattern analyst.

Bloodstain pattern analysis trainee—An individual who has met the pre-training minimum and is actively working toward meeting the requirements as described in the Scientific Working Group on Bloodstain Pattern Analysis Guidelines for the Minimum Educational and Training Requirements for Bloodstain Pattern Analysts.

Competency test—A method used to demonstrate the successful completion of a BPA trainee’s course of study. The competency test(s) may be administered incrementally and/or cumulatively.

Mentorship—A program administered under the direction of a qualified bloodstain pattern analyst during the course of a BPA trainee’s training. This training should include, but is not limited to, the evaluation of the required objectives, the review of completed casework files, supervised BPA scene and laboratory work, and the observation of expert testimony.

Professional organizations—Organizations recognized by the general scientific community that devote a portion of their subject matter to the science of BPA (e.g., the American Academy of Forensic Sciences [AAFS], the Canadian Society of Forensic Science [CSFS], the International Association of Bloodstain Pattern Analysts [IABPA], the International Association for Identification [IAI], and the Forensic Science Society [FSS]).
Scientific Working Group on Bloodstain Pattern Analysis: Guidelines for a Quality Assurance Program in Bloodstain Pattern Analysis

Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN)

Objective

The intent of this document is to provide bloodstain pattern analysts general guidance for the establishment of a quality assurance program in bloodstain pattern analysis (BPA) to ensure the reliability of all BPA work product. SWGSTAIN expects to develop additional documents to provide further guidance in select topic areas addressed in this summary treatise.

Introduction

The Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) comprises BPA experts from North America, Europe, New Zealand, and Australia. SWGSTAIN provides a professional forum in which practitioners in BPA and related fields can discuss and evaluate methods, techniques, protocols, quality assurance, education, and research. SWGSTAIN's ultimate goal is to use these professional exchanges to address substantive and operational issues within the field of BPA and to work to build consensus-based, or "best practice," guidelines for the enhancement of the discipline of BPA.

Statement of Purpose

The following are guidelines for an effective quality assurance program as it relates to BPA.

Definitions

As used by SWGSTAIN, the following terms convey the meanings specified:

Must—Done without exception

Should—Expected to be done

Recommended—Appropriate but not mandatory

Quality Assurance Program

The agency must establish and maintain a documented quality system that is appropriate to BPA. The quality manual should address, but is not limited to:

1. Goals and objectives.
2. Personnel and qualifications.


4. Case files.

5. Assessments.

6. Corrective action.

7. Safety.

8. Facilities.

9. Evidence control.

10. Equipment and reagents.

11. Validation.


13. References.

1. Goals and Objectives

The agency should address the goals and objectives of the quality assurance plan for the BPA program.

2. Personnel and Qualifications

The agency must have written specifications defining the minimum education, training, and experience required of an individual in order to perform BPA (see SWGSTAIN education and training documents).

3. Standard Operating Procedures

The agency must have written and approved standard operating procedures (SOPs) regarding BPA. Items that should be included are:

3.1. Title.

3.2. Scope.

3.3. Equipment, materials, and reagents.

3.4. Procedures.

3.5. Report generation, review, and approval.

3.6. Calculations.

3.7. Limitations.
3.8. Safety.

3.9. References.

3.10. SOP approval.

4. Case Files

   The agency must have written procedures for the content and maintenance of BPA case files.

5. Assessments

   The agency should have in place a documented program of ongoing skill assessment of the bloodstain pattern analyst.

   5.1. It is recommended that each bloodstain pattern analyst participate in case reanalysis or proficiency testing annually.

   5.2. It is recommended that the agency have a documented program that annually assesses the testimony of each bloodstain pattern analyst.

6. Corrective Action

   The agency should establish written procedures to be followed for corrective actions addressing such issues as administrative, analytical, interpretive, or skill-assessment errors.

7. Safety

   The agency should maintain a documented health and safety program. This should include health and safety practices consistent with standards for the occupational exposure to blood borne pathogens and occupational exposure to hazardous chemicals used in BPA.

8. Facilities

   The agency must have a documented program that ensures that the facility is secure from unauthorized access and maintained in a condition that minimizes the risk of contamination of evidence.

9. Evidence Control

   The agency must have a documented evidence control system to ensure the integrity of physical evidence.

10. Equipment and Reagents

   10.1. The agency should have a documented program to monitor the maintenance and calibration of equipment and/or instrumentation that affect(s) the accuracy and validity of the BPA.

   10.2. The agency should have in place documented procedures for testing the reagents used in casework to ensure their functionality.
11. Validation

The agency should have written procedures that require that all new techniques be validated prior to their use in BPA applications.

12. Audits

The agency must have in place a documented program for the periodic review of BPA case files.

13. References

It is recommended that the agency list and maintain all reference material relating to the development of the quality assurance program.

Glossary

Agency — Any entity such as an individual, a law enforcement department, a private company, or a government or private laboratory—that provides BPA as one of its functions.

Assessment — A method used to evaluate an individual’s knowledge, skills, and abilities in BPA.

Case re-analysis — The reexamination, by another bloodstain pattern analyst, of all data and conclusions generated in a bloodstain pattern case.
STANDARDS AND GUIDELINES

Scientific Working Group on Bloodstain Pattern Analysis: Topics to Consider in Preparation for an Admissibility Hearing on Bloodstain Pattern Analysis

Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN)

Objective

This document provides a resource to prepare for an admissibility hearing on the topic of bloodstain pattern analysis (BPA).

Introduction

The Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) comprises BPA experts from North America, Europe, New Zealand, and Australia. SWGSTAIN provides a professional forum in which practitioners in BPA and related fields can discuss and evaluate methods, techniques, protocols, quality assurance, education, and research. SWGSTAIN’s ultimate goal is to use these professional exchanges to address substantive and operational issues within the field of BPA and to work to build consensus-based, or “best practice,” guidelines for the enhancement of the discipline of BPA.

Statement of Purpose

SWGSTAIN has developed predicate questions and suggested answers or points that may be useful in defining and defending the discipline of BPA during an expert’s testimony at an admissibility hearing. In addition to these questions and responses, SWGSTAIN has provided a resource list specific to each proposed question or topic area. This list is not intended to be comprehensive. It is provided in support of the foundational points given, as well as to provide a starting point for the collection of more detailed and/or pertinent references should such materials be required.

Although designed around the style of an admissibility hearing generally conducted in the United States, this document should be a beneficial resource to analysts practicing in similar judicial proceedings in other countries. In most settings, an admissibility hearing seeks to test the general acceptance of a scientific technique and/or discipline through the testimony of experts, not to advance the evidence yielded by that technique or dispute its role in the case-in-chief. In addition to reviewing the testimony presented at an admissibility hearing, the court may also consider and/or require the submission of materials such as scientific literature, transcripts of previous BPA testimony, previous appellate and/or trial court decisions, and/or the qualifications of any expert that may provide testimony at any subsequent admissibility hearing. A BPA expert should be prepared to provide documentation of his or her training and experience as a part of this process. Should an admissibility hearing be ordered by the court, the BPA expert should strongly consider using visual aids to demonstrate major points in support of the scientific validity and methodology of BPA.
Admissibility Standards


*Daubert*-based admissibility proceedings seek to:

1. Provide evidence that the methodology has been tested;
2. Provide evidence that the methodology has been subjected to peer review and publication;
3. Determine the error rate(s) associated with the methodology; and/or
4. Provide evidence that the methodology has been generally accepted by the relevant scientific community.


*Frye*-based admissibility proceedings seek to:

1. Determine if the expert testimony will assist the jury in trying the case;
2. Establish that the expert testimony is based upon scientific principles that have been widely accepted in the field;
3. Establish that the witness has been qualified as an expert in the relevant field; and/or
4. Establish the credibility of the witness.


Federal Rule 702 admissibility proceedings seek to:

1. Determine that the testimony is based upon scientific testing;
2. Determine that the testimony is a product of reliable scientific principles and methods; and/or
3. Determine that the witness has applied the scientific principles and methods reliably to the case.

Predicate Questions

The sound practice of BPA involves continual review of the discipline’s scientific literature. To assist BPA practitioners in preparation for their expert testimony, each of the following proposed predicate questions is followed by guidance concerning what the question should seek to demonstrate as well as an example and/or a suggested resource list.

1. What is BPA?

The answer should include a definition of BPA and an explanation of how BPA can be used to answer specific question(s) or to reconstruct events. A general definition may state that BPA is a field of study that relies on the fact that blood is a fluid, and as such, it adheres to physical laws. Therefore, bloodstain patterns are broadly reproducible under similar conditions. BPA is the study of the size,
shape, distribution, and location of bloodstains in order to establish the physical events that gave rise to their origin.

Example:

BPA is the scientific study of the static consequences resulting from dynamic bloodshedding events. The study involves detecting, describing, and analyzing the size, shape, distribution, number, location, and pattern of bloodstains, as well as the nature of their target surfaces and the relationship among various bloodstains at the scene. Potential target surfaces include virtually any surface capable of sustaining detectable bloodstains—for example, the victim, the victim’s clothing, the suspect, the suspect’s clothing, any weapon(s), any vehicle(s), or any other surfaces, such as walls, floors, or ceilings.

Suggested Resources


2. What is the purpose of BPA?

The answer should include an explanation of how BPA is used to answer specific question(s) and/or to reconstruct events.

Example:

The purpose of the scientific study of BPA is to provide information about the bloodshedding events that produced patterns on the targets under investigation. This purpose may include providing insight(s) into (a) the position of the victim(s) at the time of bloodshed, (b) the position of the subject(s), (c) the origin(s) of the bloodstains, (d) the sequence of events that created the patterns, (e) the movement(s) of the victim, suspect, or objects at the scene during and after bloodshed, (f) the agreement or disagreement of these bloodstains with statements provided by the victim(s), suspect(s) or witness(es), etc.

Suggested Resources


3. What are the principles of BPA?

An answer should reference the use of mathematics and scientific principles from biology and physics as the basis for the study of BPA.

Example:

BPA applies mathematics and scientific principles from biology and physics (e.g., trigonometry, characteristics of blood, force/acceleration, surface tension, cohesive forces). Its practice, therefore, embraces methods that are characteristic of the natural sciences.

Suggested Resources


4. Briefly describe the methodology used when conducting BPA.

The answer should include an explanation of how BPA uses a scientific process; therefore, the analysis of a bloodstain(s) follows a generally accepted methodology that includes information gathering, observation, documentation, analysis, evaluation, conclusion, and technical review. The scientific method is appropriate for describing BPA methodologies. The scientific method endeavors to identify a problem, gather relevant data, formulate a hypothesis, and verify the analysis by experience and/or experiment. An explanation and/or description of what critical elements are performed at each step of the process may be needed.

Example:

Characterization of BPA Method:

Established methods include gathering information relevant to the bloodshedding event, formulating a question to be answered, making careful observations of the available data, describing and documenting those observations and data, producing objective analyses by applying specific scientific principles, and then systematically evaluating those analyses.

Systematic evaluation of these analyses may require the application of established scientific facts, the experimental production or reproduction of comparable data under specified conditions, and/or the testing of alternative explanatory mechanisms under other controlled conditions that apply to the proposed analysis under review. Another vital characteristic of this systematic evaluation is to ensure objectivity through technical and/or peer review of this analysis by another analyst practicing in the field.

Scientific methodology cannot be reduced to a list of activities but involves a systematic approach to the recognition, processing, and assessment of physical evidence resulting in a scientific explanation.

Suggested Resources


5. Are the scientific principles and methods you described used in fields other than BPA?

Example:

Yes. The scientific methodology is used in one form or another in all scientific processes, research, and other forensic disciplines. The scientific principles most relevant to BPA are adopted from the disciplines of mathematics, biology, and physics.

**Suggested Resources**


6. Are the methods used in BPA generally accepted in the scientific community?

Example:

Yes. There are many published studies that support their general acceptance in the scientific community, as well as case law to support their validity.

**Suggested Resources**


7. Is BPA used by the forensic science community throughout the world? How long has it been used?

Example:

Yes. Studies and papers date its use back to the late 1800s, with routine use since the 1970s. BPA is currently used in many countries, including the United States, the United Kingdom, the Netherlands, Canada, New Zealand, and Australia.

**Suggested Resources**


Piotrowski, E. *Origin, Shape, Direction and Distribution of the Bloodstains Following Head Wounds Caused by Blows*. [Translated from German]. The Institute of Forensic Medicine of the K. K. University, Vienna, Austria, 1895.

8. Are you aware of published studies that address the reliability and scientific validity of BPA?

Example:

Yes. The procedures have been extensively studied and have been shown to be scientifically valid and to produce reliable results. (The BPA analyst should be prepared to cite studies pertinent to the analyses conducted in an individual case.)

**Suggested Resources**


9. Have the scientific principles used in BPA been published in peer-reviewed journals?

Example:

Yes. Numerous peer-reviewed articles in scientific journals spanning many years support BPA. In addition, the principles and methods used have been presented at scientific meetings hosted by professional organizations and government agencies in the United States and other countries.
Suggested Resources


10. Are there professional associations related to bloodstain pattern analysts?

Example:

Yes. These would include, but are not necessary limited to, the International Association of Bloodstain Pattern Analysts (IABPA), the International Association for Identification (IAI), the Association for Crime Scene Reconstruction (ACSR), local/regional associations, the American Academy of Forensic Sciences (AAFS), and the Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN). Any group or association listed must have BPA training and/or BPA content as part of its meetings or discussions.

11. What is SWGSTAIN?

Example:

The acronym SWGSTAIN denotes the Scientific Working Group on Bloodstain Pattern Analysis. It is an FBI-sponsored, professional forum of bloodstain pattern analysts from international, federal, state, local, and private laboratories, as well as law enforcement agencies. The group’s mission is to establish guidelines for best practices and to develop and advance the discipline of BPA.

12. Describe elements of the analysis process that ensure the reliable application of scientific methodologies to bloodstain pattern cases.

The answer should include an explanation of some or all of the following concepts that can be employed to monitor analyst performance: internal and/or external proficiency testing, competency testing, technical review, and/or reanalysis/coanalysis by a qualified analyst.

13. Is there an error rate associated with BPA methodology?

The answer should include an explanation that no error rate is associated with the methodology of BPA when it is conducted properly. Analysts should be prepared for additional questions regarding measurement errors and/or analyst errors. It should be emphasized that analyst error is different from errors in the method and that controls such as proficiency and competency testing may be used to evaluate analyst performance.

Suggested Resources


14. What administrative controls are used to ensure that BPA results are reliable?

The answer should include an explanation of how case-file review and internal/external audits provide a means of administrative control for both form and content. Administrative review is an evaluation of the report and supporting documentation for editorial correctness.

**Testimony Preparation**

In preparation for expert testimony, the analyst needs to prepare for and/or be conversant in the following topic areas.

1. Expert qualifications (curriculum vitae)

   1.1. Formal training in BPA.
   1.2. Years of experience practicing BPA and number of cases.
   1.3. Education in related fields (e.g., physics, mathematics, biology).
   1.4. Continuing education in BPA.
   1.5. Memberships in relevant organizations.
   1.6. Publications/presentations in BPA.
   1.7. Instruction given in BPA.
   1.8. Court experience. (It may be useful to make available a list of your previous BPA testimonies.)
   1.9. Prior testimony (i.e., transcripts).

2. Analyst error: differing opinions and/or conclusions do not necessarily constitute an error. The analyst should be able to explain how he or she minimizes the impact of potential sources of analyst error, such as:

   2.1. Lack of complete and factual information.
   2.2. Lack of training.
   2.3. Lack of continuing education.
   2.4. Lack of experience.
   2.5. Lack of objectivity.
   2.6. Incorrect application of the methodology.
   2.7. Measurement error.
   2.8. Methodological error.
3. Proficiency testing. (If you do not participate in any proficiency-testing program, then consider the following to demonstrate proficiency.)

3.1. Emphasize that all of the conclusions given have been peer-reviewed.

3.2. Reiterate your training, education, and experience in BPA.

3.3. Demonstrate that you are current in literature review, experimentation, and case exposure.

3.4. Follow a documented quality assurance program.

4. Limitations of BPA

4.1. The circumstances of the examination, e.g., remote analysis\(^2\) that may limit conclusions drawn.

4.2. The inability to preserve and document the scene.

4.3. The inability to preserve and document the evidence.

4.4. A lack of information from other examinations, e.g., DNA, medical examiner reports.

4.5. Insufficient pattern information to provide an analysis.

4.6. Numerous, complex, or unusual patterns that make it particularly difficult to render an opinion.

4.7. Previous, unrelated bloodshed.

5. Validation Studies

5.1. BPA is validated through studies that demonstrate pattern reproducibility and the reliability of the methodology.

5.2. BPA is validated through experimentation and research.

5.3. The comprehensive bibliography of BPA demonstrates that it is a valid scientific discipline.

6. Standard operating procedures (SOP) and quality assurance (QA) practices

7. Precedent resources


7.2. LexisNexis (http://www.lexisnexis.com/).


**Notes**


2. Remote analysis can be defined as the examination of bloodstain pattern cases without direct observation of the crime scene or evidence (e.g., relying upon photographs, video, sketches).
The Second European IABPA Region V
Training Conference 2008
Zurich, Switzerland

Wednesday 2 July – Friday 4 July 2008
(pre-registration/welcome drink 1st July 2008)

Journey to Zurich
By plane to Zurich Airport (International/European flights)
EuroAirport Basel (European flights)
From Zurich Airport there is a train to Zurich Hardbrücke → www.zvv.ch (Visitors/english)

Conference hall
Novotel Zurich City-West
(Hotel reservation form → available on website conference link)

Conference cost (estimate)
Paid by 31 December 2007: CHF 325 / € 200 / $ 250 (incl.coffee break/lunch)
Paid after 31 December 2007: CHF 360 / € 225 / $ 280
On-site registration: CHF 400 / € 250 / $ 310

Accommodation (estimate)
NOVOTEL**** (special price CHF 170 / € 105 / $ 132, double room, excl. breakfast)
(www.accorhotels.com – hotelcode: 2731)

IBIS** (CHF 140 / € 86 / $ 108, double room, excl. breakfast)
(www.accorhotels.com – hotelcode: 2942)

ETAP* (CHF 85 / € 52 / $ 65, single room, excl. breakfast;
1-2 addit. person(s) plus CHF 10 / € 6 / $ 8)
(www.accorhotels.com – hotelcode: 3184)

We invite Speakers to contribute a presentation. Speakers who are interested please contact:
silke.brodbeck@gmail.com

For further information please contact:
www.wissenschaftlicher-dienst.ch
or
sabine.hess@stp.stzh.ch
andreas.schweizer@stp.stzh.ch
Program of the Second European IABPA Conference
Zurich, Switzerland.

(Note that this program is not the final conference program. Changes are probable.)

Provisional Program of Speakers

Tuesday, 1st July, 2008

Registration 16.00 – 18.00

Wednesday, 2nd July, 2008

Morning Session

9.00 – 10.00
Opening of the conference
P. Hotzenköcherle, Chief of Zurich City Police, Switzerland
Dr. U. Weder, Principle Zurich State Attorney
Dr. K. Zollinger, Head of Scientific Forensic Service

10.00 – 10.30
The role of Modeling in BPA.
Peter Lamb
Forensic Science Service, Great Britain, UK

10.40 – 11.10
BREAK

11.20 – 11.50
TBA
Iris Daley
Oklahoma State Bureau of Investigation, USA

12.00 – 12.30
TBA
Norman Reeves,
BPA Consulting, Tucson, USA

12.30 – 14.00
LUNCH

Afternoon Session

I.A.B.P.A. News 34 March 2008
14.00 – 14.30
Luminol
*Filipo Barni,*
*Carabineri, Rome, Italy*

14.40 – 15.10
The role of modern crime scene documentation systems for BPA
*Dr. Silke Brodbeck, MD*
*Germany*

15.20 – 15.50
*BREAK*

15.50 – 16.20
Chemical Enhancement Techniques
*Martin Eversteijk*
*Amsterdam Police, Netherlands*

16.30 – 17.00
BPA in bomb explosions
*Andrea Berti*
*Carabineri, Rome, Italy*

17.10 – 17.40
Forensic Application of Luminol in the Netherlands: The Dutch Methods, Techniques and New Developments
*Elizabeth van Zouten*
*Netherlands,*

**End of Session**

**Thursday, 3rd July, 2008**

08.00 – 08.30
The Interpretation of Blood Patterns – Investigator or Evaluator
*Pete Smith*
*Forensic Science Service, Great Britain*

08.40 – 09.10
A Pawn in a Deadly Chess Match
*Tom Bevel*
*TBI, Oklahoma, USA*
09.20 – 09.50
BPA in France
Philippe Esperanca
French Gendarmerie Forensic Institute, France

10.00 – 10.30
BREAK

10.30 – 11.00
TBA
Stuart H. James
James and Associates Forensic Consultants Inc., Fort Lauderdale, USA

11.10 – 11.40
Who stabbed who?
Dr. D.J. Daly
Forensic Science Laboratory, Dublin, Ireland

11.50 – 12.20
TBA
Paul Kish
Forensic Consultants and Associates, Corning, New York, USA

12.30 – 14.00
LUNCH

Afternoon Session

14.00 – 14.30
TBA
Vesa Jääskeläinen
Savonlinna Police, Finland

14.40 – 15.10
TBA
Gillian Leak
Forensic Science Service, Great Britain

15.20 – 15.50
TBA
Esben Bager
Nation Centre if Forensic Services, Denmark

End of Session
Friday, 4th July, 2008

**Morning Session Chaired by xxxx**

08.00 – 08.30
TBA
*Institut für Rechtsmedizin, Universität Bern, Switzerland*

08.40 – 09.10
TBA
Institut für Rechtsmedizin der Universität Zürich, Switzerland

09.20 – 09.50
BPA and Assessing Suspect’s Credibility - A Case Example
*Dr. Duncan Woods*
*Keith Borer Consultants, Great Britain*

10.00 – 10.30
*BREAK*

10.30 – 11.00
TBA
*Lesley Seymour*
*Keith Borer Consultants, Great Britain, UK*

11.10 – 11.40
TBA
*Rex Sparks*
*Des Moines Police Department, USA*

11.50 – 12.20
Third European IABPA conference discussion

12.30
Official closing of the conference

**Afternoon Session**

**Workshop “Luminol”**

*Robert Spruit*
*Elizabeth van Zouten*
*Forensic Investigation Unit Politie Midden en West Brabant, Netherlands*
2008 International Association of Bloodstain Pattern Analysts Annual Training Conference

October 7-10, 2008

Hotel Boulderado in Boulder, Colorado, USA

Lodging information:

Conference attendees are responsible for making their own reservations with the hotel. The Hotel Boulderado is an historic hotel in downtown Boulder and within walking distance of numerous restaurants and stores.

Hotel Boulderado
2115 13th Street
Boulder, Colorado 80302
USA

Toll free: 866-826-2887
Fax: 303-443-7035

www.reservations@boulderado.com

Website: www.boulderado.com

When reserving your room(s), please reference “IABPA/Bid # 1634”. Room rates start at $119 plus tax for traditional 1 queen and $139 plus tax for deluxe 2 queen for single or double occupancy. There is a $15 charge for each additional guest. IABPA rooms are blocked for us until 9 September 2008.

Transportation information:

The hotel is approximately 45-50 minutes from Denver International Airport (DIA). Parking at the hotel is through a valet service only at $8 for a full day (four or more hours or overnight). “SuperShuttle” provides a shuttle from DIA to the hotel at a cost of approximately $22 for a one-way trip. After arriving from the concourses, go to the Boulder SuperShuttle counter in the west terminal. The shuttle departs DIA between 5:10 a.m. to 12:10 a.m. Reservations can be made at www.BoulderSuperShuttle.com or 303-227-0000.

Conference content:

Anyone interested in presenting at the general session and/or conducting a workshop and/or anyone with suggestions for topics in those areas please contact either Sheri Shimamoto at sheshi@lakewoodco.org or David DeHann at davdeh@lakewoodco.org. For general information about the conference, please contact one of the following conference coordinators: Tom Griffin at tom.griffin@cdps.state.co.us, Rich Tewes at RTewes@fcgov.com or Sgt. Tom Trujillo at TRUJILLOT@bouldercolorado.gov.
The conference will be a blend of workshops and general sessions with case and research presentations. The conference schedule and information on workshops will be published and posted when available. At that time pre-registration for workshops will be accepted.

Last name ___________________________  First name ______________
IABPA member Yes ______ Member # __________  No ______
Name as you would like it to appear on the attendance certificate
______________________________________________________________________________

Agency ___________________________________________________________
Address _______________________________________________________________________
City ______________ State/province ______________ Postal code __________
Country __________________________ Telephone ___________________________
E-mail ________________________________________________

Name(s) of guest attending the conference with registrant ______________________
__________________________________________________________________________
Are you interested in any formalized activities for your guest? __________________
Will guest(s) be attending the Thursday dinner? Yes _____  No ________ Cost is $50
US per guest.

Registration (including Thursday dinner, all costs are US dollars):
Paid before 9 September $250 for IABPA member and student cost $200.00
Paid between 9 September and 6 October for IABPA member $280 and student cost
$220.

On site for IABPA member $300 and student cost $240. On-site registration will begin at
6:00 p.m. Monday, 6 October.

Make checks and purchase orders payable to IABPA. Federal ID# IABPA 52-1597063.
Refund requests must be made before 1 September 2008.

Mail registration and payment to: For credit card payments contact:
Colleen Wilcox (IABPA)  Norman Reeves
Boulder Police Department  phone 520-760-6620
1805 33rd Street  fax 520-760-5590
Boulder, Colorado, USA  e-mail: Norman@bloody1.com
Phone 303-441-4483  
e-mail WilcoxC@bouldercolorado.gov
2008 IABPA Conference Questionnaire

This questionnaire is intended to help the conference committee organize workshops for this year’s conference. Please respond by 4 April by sending your replies to either Sheri Shimamoto at sheshi@lakewoodco.org or David DeHaan at davdeh@lakewoodco.org.

Mail to:
Lakewood Police Crime Lab
445 South Allison Pkwy
Lakewood, Colorado 80226

Rank the following proposed workshop topics in order of interest to you. Use “1” to denote the topic of the most interest, “2” for the next topic, etc.

____ High speed video ______ BPA documentation on clothing
____ Complex patterns ______ Mixed and sequenced stains
____ Poser applications ______ Hands-on photography of bloodstains
____ 3-D laser reconstruction ______ BPA examination of firearms
____ IR photography ______ 3-D laser reconstruction
____ Defending an “indefensible” position
____ Strings vs. software for area of convergence/origin
____ Participation in “What if” bloodstains and “I saw this stain”
____ Applying a Methodology for BPA

If there are other topics you would like to see, please list those and indicate your level of interest starting with “1” for most interest, etc.

______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________

Would you be interested in an evening session in which you could bring your own bloodstain cases to share?

Thank you for taking the time to share your thoughts.

The 2008 conference committee.
Call for Presenters at the IABPA 2008 Training Conference

If you are interested in being a presenter at the October 2008 annual training conference, we would like to hear from you. Presenters include anyone conducting a workshop or sharing a case or sharing their research. Please return this form or contact either David DeHaan at davdeh@lakewoodco.org or Sheri Shimamoto at sheshi@lakewoodco.org or mail to:

Lakewood Police Crime Lab
445 South Allison Parkway
Lakewood, Colorado 80226
USA.

Name: _____________________________________________
Contact information:__________________________________
________________________________________________________________________
________________________________________________________________________

Nature of presentation: Workshop ____________
Lecture to general session ____________

Title: __________________________________________________________________
Time requested: ____________________

Please submit an abstract of your topic and a brief biography.

Equipment needed:
___ PowerPoint projector
___ Laptop computer
___ VHS player and monitor
___ 35mm slide projector
___ Tray for slide projector
___ Overhead projector
___ Speakers

If presenting a workshop:
How much space is required? _____________________________________________
How many people can participate in one session? _________
What supplies do you need? _____________________________________________
________________________________________________________________________

Other comments: _________________________________________________________
Daniel Rahn Memorial Grant

This is a small grant for up to $500.00 intended to help an individual fund a problem-oriented research. The grants are limited to two awards per year. These grants are open to members and affiliates (at any level) of the International Association of Bloodstain Pattern Analysts. Proposals should include:

- Current curriculum vitae (with contact information)
- A brief (approximately 1 page) description of the project
- Citations of appropriate references (e.g. literature references, legal citations, etc.)
- Citations for current or previous Daniel Rahn Grants awarded to the applicant(s)
- Budget for project, including the amount requested from the IABPA and any additional funding awarded by other sources
- Timetable for the project
- Plan for dissemination of results
- Issues relating to the harvesting, handling, transport and/or disposal of human body fluids. These must be dealt with explicitly within the proposal and should meet the accepted protocols for the jurisdiction in which the research is being conducted.

The deadline for Daniel Rahn Grant proposals is April 15th. Brief proposals should be sent to the IABPA, 12139 East Makohoh Trail, Tucson, Arizona 85749-8179/ USA by April 15th in order to be considered by the grant committee. In addition, an electronic submission of the proposal shall also be submitted to the Secretary/Treasurer of the IABPA at norman@bloody1.com. The deadline of April 15th is firm with no extensions. An announcement of the grant recipient(s) will be made at the annual conference in October of the same year. A progress report is due to the IABPA by September 1st of the following year.

The IABPA reserves first right of refusal for all publications resulting from the research. The grant recipient is strongly encouraged to present the results of the project at a regular IABPA conference.
Bloodstain Pattern Analysis in the News
Alexei Pace

Presented below are news articles that feature bloodstain pattern analysis. Links are active at the time of writing (mid-February 2008), however they may be put offline after a few weeks. These news items are distributed through the ‘Bloodstain-Patterns’ mailing list and discussion forum, which so far counts 296 members and to which one may subscribe by visiting: http://tech.groups.yahoo.com/group/bloodstain-patterns.

All case details published are as found in the public domain and were acquired through online news websites. The author is not responsible for any misinterpretations by the press however any clarifications, if required, shall be published in the next edition. URL’s are being presented in the tinyurl.com format.

CNN Online Edition
http://tinyurl.com/2shwgs

Adult, fetus found in shallow grave may be missing Marine

JACKSONVILLE, North Carolina (CNN) -- The remains of an adult and a fetus were found Saturday in a shallow grave in the backyard of the primary suspect in the death of a pregnant Marine, Onslow County Sheriff Ed Brown announced. An arrest warrant has been issued for Cpl. Cesar Armando Laurean in the death of Lance Cpl. Maria Lauterbach. Brown said that blood spatter evidence was found inside Laurean's home, even on a ceiling. There was evidence of "an attempted clean-up," including an attempt to paint over the blood spatter, he said. "Evidence now is saying what he's claiming happened did not happen like he said it happened," Brown said of Laurean.

CITIZENS VOICE.COM
http://tinyurl.com/2scgwy

Detective's last moments are spelled out in his own blood

From the silver cross around the neck of Colorado Springs police detective Jared Jensen to the bus bench near where he was shot to the ring on suspect Jereme Lamberth’s finger, there was blood. The blood told Colorado Springs police crime scene technician Kimberly Bjorndahl the story of the last seconds of Jensen’s life on Feb. 22, 2006:

Jensen knew he was about to be shot. He raised his left arm, ducked his head and started to squint his left eye before a bullet struck his head, killing him almost instantly. Jensen fell straight back, the crown of his head striking the ground, and never moved again. Some key points of Bjorndahl’s testimony:

There were “pinpoints” of blood on Jensen’s police badge worn on a chain around his neck, which came from either blood spatter from the gunshot wound or from blood bouncing off the left arm of his sweat shirt. “Would the badge have to be outside his sweat shirt for that to happen?” Assistant District Attorney Amy Mullaney asked. “Yes,” Bjorndahl replied. “It had to be exposed.” Blood from Jensen’s wound hit the bus stop bench about 10 feet away. The pattern on the bench showed it got there as Jensen was falling. More pinpoint drops of blood on Lamberth’s coat, jeans and ring show the pair were almost face-to-face when the .44-caliber Magnum revolver was fired.
Organizational Notices

Moving Soon?

All changes of mailing address need to be supplied to our Secretary Norman Reeves. Each quarter Norman forwards completed address labels for those who are members. Do not send change of address information to the NEWS Editor. E-mail your new address to Norman Reeves at:

 norman@bloody1.com
 Norman Reeves
 I.A.B.P.A.
 12139 E. Makohoh Trail
 Tucson, Arizona 85749-8179
 Fax: 520-760-5590

Membership Applications / Request for Promotion

Applications for membership as well as for promotion are available on the IABPA website:
IABPA Website: http://www.iabpa.org

The fees for application of membership and yearly dues are $40.00 US each. If you have not received a dues invoice for 2008 please contact Norman Reeves. Apparently, non US credit cards are charging a fee above and beyond the 40.00 membership/application fee. Your credit card is charged only $40.00 US by the IABPA. Any additional fees are imposed by the credit card companies.

IABPA now accepts the following credit cards:

 Discover
 Visa
 Mastercard
 American Express

Training Opportunities

May 4-9, 2008

Bloodstain Evidence Institute
Corning, New York

Contact: Professor Herbert Leon MacDonell Director
P.O. Box 1111
Corning, New York 14830
Tel: 607-962-6581
Fax: 607-936-6936
E-mail: forensiclаб@stny.rr.com

May 12-16, 2008

Math and Physics for Bloodstain Pattern Analysts
Ontario Police College
Alymer, Ontario, Canada

Instructed by: Dr. Brian Yamashita and
Cst. Fons Chafe
Course coordinator: Rick Devine
E-mail: richard.devine@ontario.ca
Further information: http://www.opconline.ca
June 9-13, 2008

Basic Bloodstain Pattern Analysis Course
Elmira College
Elmira, New York

Contact: Paul Erwin Kish
Forensic Consultant & Associates
P.O. Box 814
Corning, NY 14830
607-962-8092
E-mail: paulkish@stny.rr.com

June 16-20, 2008

Advanced Bloodstain Pattern Analysis Course
Elmira College
Elmira, New York

Instructors: Paul Kish and Stuart James
Contact: Paul Erwin Kish
Forensic Consultant & Associates
P.O. Box 814
Corning, NY 14830
607-962-8092
E-mail: paulkish@stny.rr.com

June 16-20, 2008

Basic Bloodstain Pattern Analysis Course
Humble, Texas

Instructors: Rex Plant and Johnny Aycock
Contact: Rex Plant
Tel: 410-286-5520
E-mail: www.forensictraining.us

July 28-August 1, 2008

Basic Bloodstain Pattern Analysis Course
Mineral Wells, Texas

Instructors: Rex Plant and Johnny Aycock
Contact: Rex Plant
Tel: 410-286-5520
E-mail: www.forensictraining.us

August 11-15, 2008

Basic Blood Pattern Analysis Course
London, England
Hosted by the Metropolitan Police Service,
London, England
at The City and Angel College, London

Instructors:
Paul Kish (USA) and Stuart James (USA)
For course registration and further information, please contact:
Tony Larkin, Metropolitan Police Service
anthony.larkin@met.police.uk
Phone: 00 44 (0) 207 230 0342
Fax: 00 44 (0) 207 230 0308

September 8-12, 2008

Advanced Bloodstain Analysis Course
Ontario Police College
Alymer, Ontario, Canada

Course coordinator: Rick Devine
E-mail: richard.devine@ontario.ca
Further information: http://www.opconline.ca

September 22-26, 2008

Bloodstain Evidence Institute
Corning, New York

Contact: Professor Herbert Leon MacDonell Director
P.O. Box 1111
Corning, New York 14830
Tel: 607-962-6581
Fax: 607-936-6936
E-mail: forensiclab@stny.rr.com

November 17-21, 2008

Basic Bloodstain Pattern Analysis Course
Mineral Wells, Texas

Instructors: Rex Plant and Johnny Aycock
Contact: Rex Plant
Tel: 410-286-5520
E-mail: www.forensictraining.us
December 1-5, 2008

Basic Bloodstain Pattern Analysis Workshop
Miami, Florida

Presented by the Specialized Training Unit of the
Miami-Dade Police Department
Doral, Florida

Contact: Toby L. Wolson, M.S., S-ABC
Miami-Dade Police Department
Crime Laboratory Bureau
9105 NW 25th Street
Doral, Florida 33172
Voice: 305-471-3041
Fax: 305-471-3041
E-mail: Twolson@mdpd.com

December 8-12, 2008

Level 3 Bloodstain Class
Mineral Wells, Texas

Instructors: Rex Plant and Johnny Aycock
Contact: Rex Plant
Tel: 410-286-5520
E-mail: www.forensictraining.us

Training Announcements for the June issue of the 2008 IABPA News must be received before May 15, 2008
The Standards and Guidelines for Bloodstain Pattern Analysis that are published in this issue reflect the hard work accomplished by the Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN). Most of the members of SWGSTAIN are also members of the IABPA as well. The documents are the work product of the Quality Assurance, Education/Training and the Legal Subcommittees respectively. Further documents will be published in the NEWS as the subcommittees continue their work.

I thank Detective Lieutenant Nicholas Paonessa of the Niagara Falls, NY Police Department for his interesting article about his search for blood in Shriver House and Lady Daniel Farm in Gettysburg, Pennsylvania. These two locations are of great historical significance as to their roles during the battle of Gettysburg in the Civil War.

There is still time to register for the Second European IABPA Region V Training Conference to be held in Zurich, Switzerland, July 2nd-4th, 2008.

Stuart H. James
Editor, IABPA NEWS
E-mail: jamesforen@aol.com
# Past Presidents of the IABPA

<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. Thomas Bevel</td>
<td>1983-1984</td>
</tr>
<tr>
<td>Charles Edel</td>
<td>1985-1987</td>
</tr>
<tr>
<td>Warren R. Darby</td>
<td>1988</td>
</tr>
<tr>
<td>Rod D. Englert</td>
<td>1989-1990</td>
</tr>
<tr>
<td>Edward Podworny</td>
<td>1991-1992</td>
</tr>
<tr>
<td>Tom J. Griffin</td>
<td>1993-1994</td>
</tr>
<tr>
<td>Toby L. Wolson, M.S.</td>
<td>1995-1996</td>
</tr>
<tr>
<td>Daniel V. Christman</td>
<td>1997-1998</td>
</tr>
<tr>
<td>Phyllis T. Rollan</td>
<td>1999-2000</td>
</tr>
<tr>
<td>Daniel Rahn</td>
<td>2001-2002</td>
</tr>
<tr>
<td>Bill Basso</td>
<td>2002-2006</td>
</tr>
</tbody>
</table>

# Associate Editors of the IABPA News

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Allyn DiMeo</td>
</tr>
<tr>
<td>Barton P. Epstein</td>
</tr>
<tr>
<td>Paul E. Kish</td>
</tr>
<tr>
<td>Jon J. Nordby</td>
</tr>
<tr>
<td>Alexei Pace</td>
</tr>
<tr>
<td>Joseph Slemko</td>
</tr>
<tr>
<td>Robert P. Spalding</td>
</tr>
<tr>
<td>T. Paulette Sutton</td>
</tr>
<tr>
<td>Todd A. Thorne</td>
</tr>
</tbody>
</table>
Advantages over classic luminol:

- Stronger luminescence
- Longer lasting reaction
- Higher sensitivity
- Total darkness not required
- Photos shot with ordinary camera
- Fully soluble
- Stable over time
- Easy to use
- Non toxic
HEXAGON OBTI
IMMUNOCHEMNOTERAPHIC RAPID TEST

Test for confirming the presence of human blood traces

HEXAGON OBTI is the perfect complement to BLUESTAR® FORENSIC

A single blue line means the testing liquid is working fine but no human blood has been detected, two blue lines mean the test has detected human blood.

A positive sample is typically detected within 2-3 minutes.

BLUESTAR USA Inc.
111 Commerce Center Drive, Suite 303 - Huntersville, NC 28078 - USA
Phone: 877 948 7827 (Toll free number) - Fax: 704 875 6714
E-mail: info@bluestar-forensic.com

www.bluestar-forensic.com
FM Photography

The Versatile Lab
and
Crime Scene Assistant

Hold, turn and position subjects
Optimize photographic angles
with the McClamp

Two McClamps for stronger holding power
Holds ALS to view fingerprint
Orient subjects for critical lighting and reflections

When you need a helping hand

FM Photography
14717-F Baltimore Ave.
Laurel, MD 20707 USA
301-497-9099
sales@fmphotography.us
www.fmphotography.us

Four Styles Available

Hard plastic outside jaws hold firm subjects, soft neoprene interior jaws hold delicate subjects