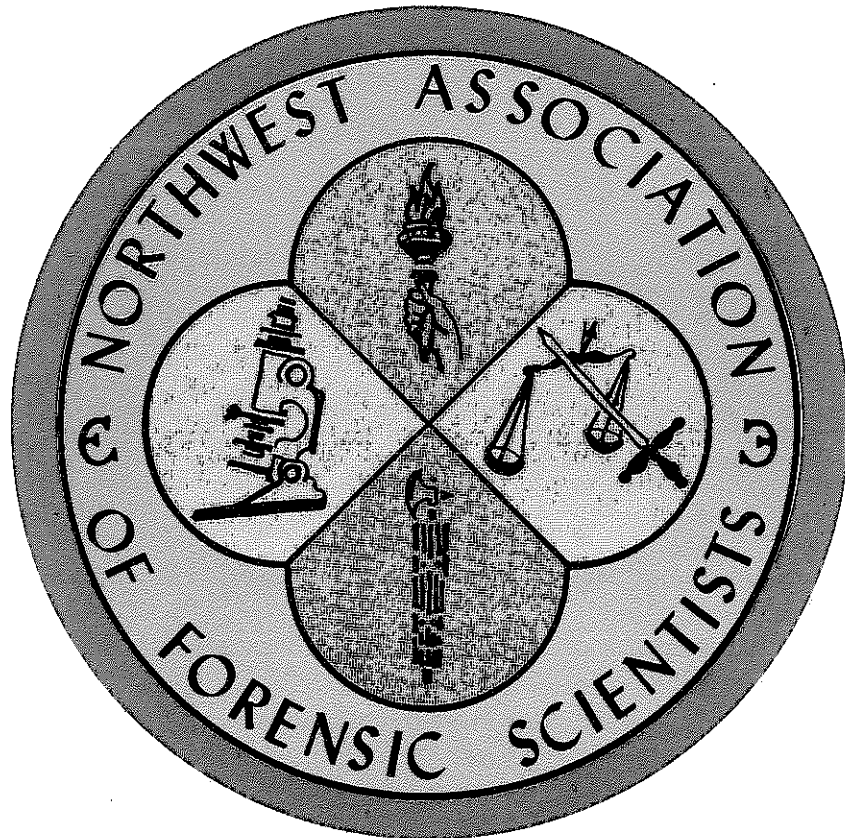


# THE NEWSLETTER of



MARCH 1988

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JOHN W. HAY

MARCH 1910

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 554 W. Broadway, 6th Floor  
 Missoula, MT 59802  
 (406) 728-4970

ethics matters and come to the Portland meeting prepared to discuss the impact of the changes.

The Missoula meeting is over, and everyone is heading home to fight crime and/or evil.

See you in Portland in October ....

### PRESIDENT'S MESSAGE

Wayne K. Jeffery

The spring Meeting in Missoula has just been completed. It was an outstanding success. Arnie and his staff must be congratulated for a job well done. The workshops "Forensic Geology", "Toxi-Lab TLC", "FTIR Microscopy" and "Iso-electric Focusing" were extremely well attended and were the highlight of the conference. A special thanks must go out to all the instrument companies who participated in the workshops and the instrument displays. Without the support of these companies, we would not be able to host these excellent conferences. The only low point of the meeting was the absence of Beth Carpenter's pretty smile in the hospitality room. I'm sure we will see her in Portland for the Fall Meeting.

This year is the NWAFFS's turn to award the AAFFS Regional Award. This pays the registration of the recipient at the AAFFS meeting in Las Vegas in February 1989. The last time it was awarded, the Association paid the transportation for the winner to the conference. The award is given for the best paper presented at the Spring of Fall Meeting (Missoula or Portland). These papers don't have to be 'Nobel Prize' winners. Your method modifications, interesting cases, new techniques, etc. are all worthy of presentation. So, lets all get working on a paper for presentation in Portland, and make this meeting the best ever for scientific papers. More information on the Fall meeting will be forth coming in the next Newsletters.

The Spring 1989 meeting will be hosted by the new National Fish and Wildlife Forensic Laboratory in Ashland, Oregon. The program chairman is Ken Goddard [author of The Alchemist and Belefire]. He has promised me a most exciting conference.

I would encourage everyone to read and ponder the proposed bylaw changes regarding the handling of

### UPCOMING MEETINGS

#### NORTHWEST ASSOCIATION OF FORENSIC SCIENTISTS FALL 1988 MEETING

The Fall 1988 meeting of the Northwest Association of Forensic Scientists will be held at the Portland Marriott Hotel, October 11-14. Room rates for the meeting are \$56 for a single or double room.

Several workshops are being planned for the meeting, including blood spatter interpretation, and a blood alcohol absorption and dissipation project. Other possible topics include the interpretation of mass spectral data and DNA typing. The program chairperson would appreciate comments from the membership on other possible areas for workshops.

For more information, contact:

Beth Carpenter, Program Chairperson  
 OSP Crime Lab  
 1111 2nd Ave.  
 Portland, OR 97204  
 (503) 229-5017

#### NORTHWEST ASSOCIATION OF FORENSIC SCIENTISTS SPRING 1989 MEETING

A preliminary meeting site of Ashland, Oregon has been selected for the site of the Spring 1989 meeting of the NWAFFS. Ken Goddard, director of the new Federal Forensic Wildlife Laboratory, has graciously offered to be the host for the meeting. The date and topics of the meeting will be posted in later issues of the newsletter. But keep this meeting in mind, it will offer an opportunity to see the new Wildlife lab that we've heard so many rumors about.

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**SOUTHERN ASSOCIATION OF FORENSIC SCIENTISTS  
SPRING 1988 MEETING**

The Southern Association of Forensic Scientists will be meeting May 5-7, 1988 in Memphis, Tennessee. The meeting will highlight four workshops on Solid Phase Extraction; Field Sobriety Testing; Physical Anthropology; and Presentation Skills and Effective and Inexpensive Audio-Visual Aids. Also, an update from the FBI on DNA polymorphisms will be presented. The meeting is being held at the Peabody Hotel, home of the famous Peabody Ducks. An excellent program appears to be in the works.

For more information, contact:

Steve Nichols or Paulette Sutton  
University of Tennessee  
Toxicology Laboratory  
3 North Dunlap  
Memphis, TN  
(901) 528-6355

**DEATH INVESTIGATION SEMINAR**

This seminar is being presented by the University of Washington School of Medicine, Department of Pathology; the Seattle - King County Department of Health, Medical Examiner Division; and the National Association of Medical Examiners on April 20-22. The Seminar will be held in Seattle, WA. If you are a physician, there is credit given for continuing medical education.

The seminar will cover such topics as: Overview of Serial Murder Investigation; Death Scene: Its Control and Processing; Bugs, Beetles and Time of Death; DNA Fingerprinting; AIDS and the Coroner/Medical Examiner; Forensic Expert Witness; and a panel discussion on gunshot wounds.

For more information, contact:

University of Washington  
Div. of Continuing Medical Education, SC-50  
Seattle, WA 98195  
(206) 543-1050

**MIDWESTERN ASSOCIATION OF FORENSIC SCIENTISTS  
SPRING 1988 MEETING**

The MAFS will hold their Spring 1988 meeting May 2-6 at the Sheraton Inn in Madison, Wisconsin. Two workshops are being offered: ATF accelerant Detection Class; and Archaeology, Anthropology and Odontology of Burial Sites.

For more information, contact:

Michael A. Haas, Workshop Chairman  
Crime Laboratory Bureau  
Madison, Wisconsin 53705-2157  
(608) 266-2031

**CALIFORNIA ASSOCIATION OF CRIMINALISTS  
SPRING 1988 MEETING**

The California Association of Criminalists will hold their Spring 1988 meeting at the Marriott Marina Hotel in Berkeley, CA on May 19-21.

For more information, contact:

Charles Morton  
Institute of Forensic Sciences  
Criminalistics Laboratory  
2945 Webster St.  
Oakland, CA 94609  
(415) 451-0767

**ATF OFFERS COURSE IN LOW EXPLOSIVES**

The ATF is offering a course in the Systematic Analysis of Low Explosives at the ATF's National Laboratory Center in Rockville, MD from June 13-17. The course is offered to state and local forensic chemists and enrollment is limited to ten students. Since individual examiner experience varies, each selected applicant will be sent a short self-test and reading material on explosives and explosions. There is no tuition, registration or course materials fees. All transportation, lodging and per diem costs must be paid by the local department or individual.

For more information, contact;

Rick Tontarski or Rick Strobel  
ATF NLC

1401 Research Blvd.  
Rockville, MD 20850  
(202) 294-0420

**SOUTHWESTERN ASSOCIATION OF FORENSIC SCIENTISTS  
TO CELEBRATE 10TH ANNIVERSARY IN AUSTIN**

The SWAFS will be meeting August 2-5 in Austin, Texas to celebrate the 10th anniversary of the organizing of the association. The location of the meeting will be in the Embassy Suites Hotel, in Austin. Workshops on photomicrography, DNA typing, Frye hearing and advanced interpretation of mass spectra will be presented.

For more information, contact:  
Brian Edmiston  
DPS Crime Lab  
Austin, Texas 78765  
(512) 485-2105

**NORTHEASTERN ASSOCIATION OF FORENSIC SCIENTISTS  
FALL 1988 MEETING**

The NEAFS will hold its Fall 1988 meeting October 21-22 at the Mystic Hilton in Mystic, CT.

For more information, contact:  
Steve Sottolano  
DEA Northeast Laboratory  
555 West 57th St, Suite 1886  
New York, NY 10019  
(212) 399-5137

**JOB OPENINGS**

**CRIMINALIST II**

The city of Santa Ana, CA, is seeking a qualified applicant to fill the position of Criminalist II. The duties of the position include performing complex chemical and physical examinations on physical evidence and related materials under general supervision.

The position requires a degree from an accredited four year college in criminalistics, chemistry, biochemistry, biology or closely related fields plus two years of lab experience in forensic science.

Salary: \$2703 to 3285 per month

For more information, contact:  
Human Resources Agency  
Fifth Floor  
City Hall  
20 Civic Center Plaza  
PO Box 1988  
Santa Ana, CA 92702

**FORENSIC DRUG ANALYST III (Two Positions)**

The New Mexico State Department of Public Safety is offering two positions for forensic drug analysts.

The position requires a Bachelor's degree from an accredited college or university with a major in chemistry or pharmacy, plus four years experience in forensic drug analysis.

Deadline for filing is **May 15, 1988.**

Salary: \$29,577 to 50,417 per year

For more information, contact:  
Dept. of Public Safety  
Personnel Management Bureau  
Ms. Celine Miller  
PO Box 1628  
Santa Fe, New Mexico 87504-1628  
(505) 827-9046

**SEROLOGIST or HAIR EXAMINER**

The Fort Worth, Texas Police Department Crime Lab is seeking an individual qualified in the examination of body fluids and stains using standard serological procedures for identifying and determining blood groups and enzyme variants. Alternately, the position will be tailored for a combination of duties in hair examinations and serological testing, depending on the qualifications of the examiner.

The position requires a Bachelor's degree in a biological science, chemistry or a related science, and at least 2 years specialized laboratory experience.

Salary: \$24,780 to 34,344

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For more information, contact:  
 Frank Shiller, Director  
 Police Department Crime Lab  
 350 W. Belknap St.  
 Ft. Worth, TX 76102  
 (817) 877-8084

1-(800)-421-9555 [outside CA]  
 1-(800)-252-7790 [inside CA]

**CRIMINALIST III**

The Alaska Department of Public Safety is seeking to fill positions in the areas of toxicology, questioned documents, trace evidence examination and serology.

The position requires a Bachelor's degree in criminalistics, chemistry, biochemistry, biology or a closely related field. 2 years of professional laboratory experience as a criminalist is required. An advanced degree in the educational areas indicated may be substituted for one year of experience.

Salary: \$3,113 per month

For more information, contact:  
 Division of Personnel  
 2600 Denali St. Suite 400  
 Anchorage, AK 99503  
 (907) 269-5511

**CRIMINALIST**

The Los Angeles Police Department Crime Lab is seeking an individual for the position of criminalist.

The position requires a Bachelors degree in criminalistics, biological science or chemistry. Full time paid experience as a criminalist may be substituted on a year for year basis up to two years of the required education. All applicants must take and qualify on a written examination.

Salary: \$2607 - 3283 / month  
 \$2979 - 3698 / month  
 \$3224 - 4005 / month

For more information, contact:  
 City of Los Angeles  
 Personnel Department  
 100 City Hall South  
 111 E. First St.  
 Los Angeles, Ca 90012

**CHEMIST - CRIMINALIST**

The State of Vermont Crime Laboratory is seeking a qualified individual for the position of chemist - criminalist.

The position requires a Bachelor of Science degree with at least 18 hours in chemistry, and 4 years of professional chemical laboratory experience, or 2 years of professional forensic laboratory experience.

Position duties involve the analysis of suspected controlled substances and/or trace evidence.

Salary: \$25,400 - 34,600

For more information, contact:  
 Eric Buel, PhD.  
 Senior Chemist-Criminalist  
 Vermont State Police Crime Lab  
 Waterbury, Vermont 05676  
 (802) 244-8786

MINUTES FROM SPRING 1988  
GENERAL MEETING OF THE NNAFS  
IN MISSOULA, MONTANA

March 17, 1988

The meeting was called to order by President Wayne Jeffery at 4:30 pm. Twenty-two members were present at the meeting.

The minutes of the Fall 1987 business meeting were approved as printed in the Newsletter.

Treasurer's Report (Lionel Tucker): As of this meeting, the Association has a total of \$6676.32 in its accounts. This figure will be reduced by approximately \$2000 by next meeting. The books will be audited then, and a complete accounting will be published in the Newsletter.

Committee Reports:

Membership [Robert Sager]: 26 members were written concerning their failure to attend one of the last 6 meetings of the Association. Seven members responded in writing, with 2 asking for a change in status from Regular member to Corresponding member. Five asked for a deferral until the Fall 1988 meeting in Portland. One member also called and requested a deferral until the Fall 1988 meeting. The deferrals will be made for those six who requested it, and the balance will be changed to corresponding members.

There was a request by former Regular Member Larry Peterson for reinstatement to the Association as a Regular Member without having to go through the Provisional status. Larry left the field for a while, and has now returned to it. He was accepted back as a Corresponding Member.

There were ethics charges brought against a member of the Association. The Membership Committee investigated, and recommended to the Executive Committee that a letter of reprimand be sent to the individual indicating further misconduct may lead to dismissal from the Association.

Historical Committee [Wayne Jeffery for Brad Telyea]: No new activity to report. No one is sending anything to the Committee. Brad has requested that photographs be taken at the meetings and sent to him for documentation of the event.

Publication Committee [Roger Ely]: There has been some problems in obtaining material for the Newsletter. Only a few responses for material have been met. The Newsletter has been running about 1 month behind for the last several issues. The Newsletter is still being printed in Longview, Washington, due to the substantial price difference between there and the Bay area.

Continuing Education [Arnold Melnikoff]: The committee has tried to answer some of the wishes of the membership by holding workshops in the areas indicated in the survey this meeting. No new material has been added to the library, and a list of the current materials will be placed in the

Newsletter. Members are encouraged to use the materials.

Elsevier Press donated several of their books on the field of Forensics to the Association on the condition that they be reviewed, and the review be printed in the Newsletter. Roger Ely indicated he has solicited through the Newsletter individuals to review the books, however, only one person has responded. Ely was directed to select individuals to review the books and mail the book to them directly. Concern was issued by the use of the review by Elsevier Press and the attachment of the reviewer's affiliation to the review. It was decided that the affiliation of the reviewer would not be included with the book review.

Technical Advancement [Wayne Jeffery for Rocky Mink]: This committee has been inactive for some time. Rocky will be replaced with someone new to fill the position. A volunteer is being sought.

Executive Committee [Wayne Jeffery]: With the recommendation of the Membership Committee, a letter of reprimand is being sent to a member of the Association. Because of the ethics matter, the Executive Committee is going to sponsor an amendment to the Bylaws to create an Ethics Committee consisting of the President, President Elect, Member at Large, Membership Committee Chairman and a Regular Member to be appointed by the President. This committee will establish procedures to deal with the ethics question.

The Executive Committee will also sponsor an amendment to the Bylaws to add the duty of deciding the reinstatement of members who wish to return to the Association. The requests will be dealt on a case by case basis.

Dale Mann reported that a Council of Regional Forensic Organizations was formed at the American Academy Meeting in Philadelphia. A liaison person from each organization will be appointed to be an information point for forensic information. Roger Ely was selected to act as liaison for the Association.



The Executive Committee indicated a preference to appoint committee chairman for extended terms. It was decided to leave things as they are for now.

There was a letter from the International Association of Arson Investigators requesting a liaison person for contact within our Association. Dale Mann was appointed.

OLD BUSINESS

The Fall Meeting of the NWAFS will be held at the Portland Marriott Hotel in Portland, Oregon, October 11-14. The cost for a single or double room is \$56.00. A preliminary workshop schedule includes a blood spatter interpretation class, a workshop on the absorption and dissipation of alcohol in a social situation and possibly a workshop on the interpretation of mass spectra. The cost of registration will be announced at a later date.

The AAFS each year gives each regional association a \$100 award. The Association selects the winner from its membership for their contributions to the field of forensic science.

The Association will also receive a Regional Award this year to present to the person who presents the best paper at the Spring or Fall 1988 meeting. The winner is invited to the next AAFS meeting [in Las Vegas in 1989] to present the paper in the poster section. The Association also contributes towards the winner's expenses.

NEW BUSINESS

The site of the Spring 1989 meeting will be in Ashland, Oregon, and will be hosted by Ken Goddard. Details on the meeting will be coming soon.

Roger Ely will check into the cost and details of having lapel pins made with the NWAFS logo [see the cover of the Newsletter].

Roger Ely and Lionel Tucker will look into the possibility of having the Fall 1989 meeting in the Bay area, possibly Napa Valley.

Meeting adjourned at 5:40 pm.

PROPOSED BYLAW CHANGES

The Executive Committee felt our present bylaws do not adequately meet our needs to deal with unethical conduct. The Executive Committee is therefore proposing the following changes to our bylaws, which will be voted on at the Fall Meeting in Portland, Oregon. I would encourage every member to study the changes very carefully, and if they have any concerns please contact any member of the Executive Committee.

Change #1:

Add to Chapter III, Section 2, Paragraph G.

The Ethics Committee shall consist of the President (Chairman), President-Elect, Member at Large, Membership Chairman and one regular member (chosen by the President).

Change #2:

Chapter I, Section 3, Paragraph E. The paragraph shall read:

A member may be expelled from the Association for unethical conduct, conduct detrimental to the profession of forensic sciences or conduct detrimental to the welfare of the Association. A member or members of the Association may initiate proceedings to expel another member for cause by petitioning in writing to the Chairperson of the Ethics Committee. It shall be the duty of the Ethics Committee to:

No further changes are proposed in points 1, 2, or 3.

FORENSIC SCIENCE COMPUTER BULLETIN BOARD  
ON-LINE IN SACRAMENTO

The California Department of Justice Crime Lab in Sacramento, CA is now operating a computer bulletin board for people in the forensic science field.

The sysop of the board, Steve Scott, indicates the board is configured to allow special interest groups and criminalistics forums in all areas. Messages, articles and programs can be uploaded and downloaded in each of the technical areas.

To log onto the board requires a computer, modem operating at either 300 or 1200 baud and modem software. New users will be allowed limited access until greater access is extended by the sysop.

The only rules of the system are to be professional, not talk about current cases and no information on drug synthesis.

The board can be accessed at (916) 739-5628.

#### PROPOSAL TO REPLACE LAB MICE WITH LAWYERS

David Fagerburg of Kingsport, Tennessee, found in Chemistry International [9, 21(1987)] a suggestion "that lawyers should replace white mice in toxicology experiments ... there are more lawyers than white mice and also this development would solve animal rights problems ... the main problem would probably [be] trying to extrapolate the results from lawyers to human beings."

#### SPEECH BY JOHN K. VAN DE KAMP ATTORNEY GENERAL OF CALIFORNIA

#### C.C.I. SEMINAR ON DNA IDENTIFICATION

#### LOS ANGELES, CALIFORNIA

JANUARY 7, 1988

I told my wife that I was going to be the ninth speaker on the program today, and she suggested that I mention sex in the first sentence just to get the audience's attention....What do you know? It worked.

My mother, who disapproves of such tactics, suggested that I make some light remark about literature. So I've decided to tell you the difference between literature and life:

Literature is mostly about having sex and not much about having children. Life is the other way around.

Life is also about making tough choices at key moments. Former secretary of state Dean Acheson knew something about that. As one of those who helped

design a new world order after World War II, he titled his memoirs "Present at the Creation." It was a shrewd recognition that all he had been and done in a long, distinguished career would ultimately be judged by his performance at that critical juncture.

There are few such moments in any life, when we must sail into uncharted waters with full responsibility for shaping something absolutely new. But we are at such a moment now.

We are present at the creation of an awesome new technology for criminal investigation. How we conduct ourselves at this juncture will affect our profession and our society for many years to come. Ultimately, it may even be the moment by which we are remembered and judged.

This afternoon I want to talk with you about some of the difficult legal and ethical issues that come with this dazzling new technology. I want to discuss the very real possibility that we can botch a golden opportunity by rushing too quickly into court. And I want to share my vision of how we can work together to build the world's most advanced criminal investigation system based on genetic "Fingerprinting."

If this truly is the moment of creation, you are the creators. You will make the key decisions on the front lines. You will set our course. I am here, and this assemblage of experts is here, to help you think through that responsibility.

You've already heard that DNA analysis will revolutionize the investigation of sex crimes of every kind. You've heard that a single hair or drop of blood at the scene of a crime could tell us whether to look for a blond, blue-eyed white male or a black woman with brown eyes and black hair.

Wondrous as those possibilities are, however, they won't be ours for free. The price of progress will be some of the most difficult legal and ethical questions any of us will ever face.

Consider, for example, the implications of certainty. DNA analysis is not like current serological methods which serve only to eliminate some suspects and

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narrow the field of search for others. The odds against two people having the same DNA configuration are greater by several orders of magnitude than the odds against having the same fingerprints.

Such certainty about who did, or did not, leave a particular trace of blood or semen means, among other things, that DNA can be just as powerful a weapon for the defense as for the prosecution -- A fact we should consider when setting standards for admissibility in court.

Certainty also means that this technology can expect tougher legal scrutiny than we have ever seen before. Far less powerful technologies -- including fingerprints -- were banned from court for many years. The same thing could happen with DNA if we're careless, a topic I shall return to in a moment.

Even more daunting than the power of certainty is the extraordinary threat to privacy that this technology could pose. It is one thing to have fingerprints and criminal histories easily accessible to tens of thousands of peace officers. It is quite another to have information on-line that can mark you as a carrier of A.I.D.S. or prove that you are not genetically related to either of your parents.

Which of us would like to know that we are genetically predisposed to Alzheimer's disease or other illnesses? And which of us would be willing to have such information easily available to others?

Obviously, we envision no such intrusive database. But technology is no respecter of our personal decisions about where to draw the line -- especially in this era of interlocking databases. Inevitably we will face some bizarre and troubling issues.

Some of the most predictable involve the temptation to engage in genetic fishing expeditions. For example, researchers now postulate that certain types of chromosomal deficiencies may incline people toward violent crimes. If DNA analysis becomes commonplace, there will surely come a day when a desperate detective working on a series of unsolved murders tries to run a search of every person in the vicinity with that deficiency.

With that kind of potential for abuse, this new technology is guaranteed to face fierce political opposition and rigorous judicial scrutiny -- which means that we have every opportunity to botch this historic moment. How might we do that? By getting mesmerized with DNA's potential and slipping into a counter-productive scramble to rush the technology from laboratory to courtroom in record time. The pressure to do so will be enormous. Technology in this field is moving with breathtaking speed. Even as we speak, federal researchers are deciphering 10,000 base pairs in human DNA molecules every day. In the midst of such movement and excitement, it will be difficult for our forensic scientists not to get caught up in the rush to the leading edge.

Even those with some innate sense of caution will be pressed onward by their clients, by investigators and prosecutors eager to get into court -- and perhaps even into the newspapers -- with the latest thing. And underlying all this pressure will be the noblest of motives: To hasten the day when this technology can serve and protect the public by solving thousands of crimes.

Given that reality, I think many in this room would ask, "What's the harm of going ahead? What have we got to lose?"

What we have to lose is the admissibility of this technology in court. What we have to lose is the fall-out on other technologies that have already been accepted if DNA analysis should be thrown out of court. What we have to lose is an endless round of Kelly-Frye hearings chewing up money and personnel for years to come.

We have only to look at the tortured history of electrophoresis in forensic serology for a painful case study. That technology was dribbled into court over time in a highly disorganized fashion. The result was a disastrous ruling in PEOPLE V. BROWN three years ago. The California Supreme Court rejected electrophoresis under the KELLY-FRYE standard. Suddenly we were in danger of being back to square one.

The irony is that electrophoresis was and is a supremely reliable technique. In fact, after much

effort, we have just won agreement on that point in the second district court of appeals. If we are lucky, the supreme court will concur and we'll be back to where we were three years ago.

Let me stress again that the problem in BROWN was not with the technology. The problem was with the way we rushed into court and let a magnificent new tool be tainted by unconvincing scientific and legal evidence.

If we are not to relive that nightmare with DNA analysis, the people in this room must exercise judgment and restraint. You are the ones who must decide whether the risk of going into court prematurely outweighs the benefit of possible advantage in a particular case.

To help you in that calculation, let's review the KELLY-FRYE Standard. In simplest terms, KELLY-FRYE says that forensic evidence is admissible only if the reliability of the method has been established, usually by expert testimony.

Any witness furnishing that testimony must be properly qualified to give an expert opinion. Those who introduce the evidence must prove that correct procedures were used in the case at issue. They must also prove that the method and procedures have achieved general acceptance in the scientific community.

This was the standard we failed to meet for electrophoresis in the BROWN Case. And it is my judgment that we are not currently prepared to meet it for DNA analysis.

Three months ago, the Bureau of Forensic Services, in cooperation with the California Association of Crime Laboratory Directors (C.A.C.L.D.), sent teams to inspect all three private laboratories which currently offer DNA analysis. B.F.S. concluded that there is still "substantial question about the validation efforts undertaken by these firms, and how well they have documented those validation efforts."

The FBI has reached a similar conclusion. So has the Society for Forensic Haemogenetics. And C.A.C.L.D., which has the gone on record in support of the

technology IF certain standards are met, has refused to state that those standards are met by current procedures.

As to the availability and credibility of expert witnesses, we face a major problem in that the vast majority of DNA researchers are working on medical applications. Of the handful working in forensics, almost none are law enforcement personnel. They are all attached to private laboratories.

This would be less of a problem if there were lots of private labs using similar techniques. But there aren't. Only three labs currently offer the service. One of those has far more experience in forensic analysis than the others. And that company regards its technology as proprietary -- Which means that its results cannot be verified by other laboratories or agencies.

Given these problems, we cannot honestly assert that DNA analysis is generally accepted in the scientific community. Indeed, at the September meeting of the American Society of Crime Laboratory Directors, 87 directors were asked whether DNA testing was ready for case work. One-third said yes; one-third said no; and one-third gave no opinion.

Faced with that kind of division in the scientific community, it is clear to me that we stand an excellent chance of losing a KELLY-FRYE hearing if DNA is brought into court in California in the near future.

Earlier I said that the responsibility for preventing that outcome rests with each of us in our roles as supervisors and policy makers. So I would like to announce my own decision on Department of Justice Policy.

I have ordered the Bureau of Forensic of Forensic Services not to submit samples of blood, semen and other biological materials to private laboratories for DNA analysis. We will maintain this policy until we are convinced that procedures in use at the labs have been fully validated and will meet the KELLY-FRYE Standards.

That's a tough call. It's going to disappoint some of our criminalists, and many investigators and prosecutors as well. But I firmly believe that it is the right decision. And I urge each of you to adopt similar policies in your own departments.

By urging caution, I am not urging inaction. Far from it. Up until now, I've been talking about how to avoid tainting this new technology -- about not blowing it. Now let's talk about what we can do to make the most of this historic opportunity.

I have three proposals: shared research and evaluation; joint preparation for the strongest possible presentation in court; and a united effort to create a fully-automated database system for criminal investigation and prosecution through DNA analysis.

The need for shared research and evaluation speaks for itself. There is nothing to be gained from secrecy or showboating. The scientific complexities involved are well beyond the scope of any forensic laboratory in the state acting alone.

Not only must we pool our efforts, we must support and cooperate with private and public research. University research is especially important, so that we are not dependent on private labs for rapid progress on validation. Toward that end, B.F.S. is helping fund and staff Professor Sensebaugh's research at U.C. Berkeley through C.C.I.

In addition to monitoring the progress of research, we must actively prepare for the successful introduction of DNA evidence in court. The natural forum for that effort is the California District Attorney's Association. This week, during their meeting at Monterey, C.D.A.A. appointed a committee of the leading experts on this question in California law enforcement.

The committee's co-chairs are with us today, Jan Bashinski from Oakland P.D. and Brent Ferrera from the L.A. D.A.'s Office. Let's have both of them stand and be recognized.

Their committee's charge will be to keep fully apprised of progress on DNA; to serve as a clearing

house for D.A.'s interested in using DNA for prosecution; and to evaluate our readiness for a KELLY-FRYE hearing.

I am also going to recommend that they seek the strongest possible test case -- or cases -- for establishing admissibility in court. I have instructed B.F.S. and the Criminal Division to work closely with the C.D.A.A. in this effort. I urge all of you to do the same.

My final recommendation is also the most exciting. For it is not about holding back which, though necessary, is never much fun. Instead, this recommendation is about leaping ahead into a new era of criminal investigation and prosecution.

I propose that California explore the possibility of creating the world's first automated database for identification through DNA analysis. In short, I propose that we lay the groundwork for what may become the CAL-I.D. of genetic fingerprinting.

The only sensible way to build such a system is through a coordinated effort involving law enforcement policy makers, prosecutors and forensic scientists. Earlier this year I ordered B.F.S. to develop a budget proposal for just such an effort.

The complete package was sent to all California crime lab directors in November for technical review. Many of their suggestions were incorporated in the final draft. An excerpt is in your handout this morning.

The proposal was approved in concept by the Governor and partial funding has been included in the budget for Fiscal 1988-89. I think this is so important, however, that I have instructed C.C.I. to redirect resources and complete as much of the full program as possible.

The proposal makes three assumptions: First, that a genetic identification system along the lines of CAL-I.D. can be achieved and that the impact on such a system should be considered in all efforts to develop and use DNA technology.

Second, while B.F.S. labs will eventually perform DNA analysis, we do not expect that they will be the only

police labs in the state to do so. Nor do we expect, however, that every crime lab will choose to be involved.

Our final assumption is that a combined state and local effort is essential for maximum speed, efficiency and funding.

Based on those principles, we propose the following course of action over the next year: First, we will send a group of state and local criminalists to Europe and to key laboratories in the United States.

The purpose is not to train them in DNA analysis, but to acquire the information that law enforcement managers will need for planning and budget purposes. They will also identify necessary changes in California law for the legislature's consideration.

Next, we will develop a statewide plan for the introduction and use of D.N.A. technology — along with proposals for adequate staff and funding.

An essential component of the plan will be provision for proper training in DNA analysis techniques, as well as clear procedures for demonstrating and maintaining their validity in court. I expect C.C.I. to take the lead in both areas.

To oversee the preparation of this plan, I will appoint a six-member advisory board consisting of chiefs, sheriffs and D.A.'s who run crime labs. And, while I have no power to appoint an FBI representative, I am going to invite the Bureau to take full part in the committee's deliberations.

The board will present its findings, and its plan, in a report to the Governor and the legislature early next year. In the interim, it will work closely with the C.D.A.A. committee, and with legal and technical staff from the Department of Justice, to monitor the readiness of private sector labs for case work.

This conference marks the beginning of a long and difficult task. But we in the Department of Justice are very optimistic about the future of this technology. We believe that it will be proven in court. And we believe that it will be the foundation of a superb crime-fighting database.

In fact, though the underlying technology for DNA analysis is far more complicated than for conventional fingerprints, we believe the technical problems of creating a database will actually prove to be simpler.

The biggest difficulty will be accumulating a large enough database of blood and semen samples for comparison and matching purposes. But even in that thorny area we have a head start. For the Department of Justice already retains such samples for all convicted sex offenders in California.

To say that there are no technical barriers, however, is no to say that the way is clear. The bad news is that we must confront three major issues before we can build an effective DNA database: Admissibility in court; standardization of test results; and funding. The good news is that all three problems can be overcome if the people in this room will work together.

I've already discussed the need for concerted action on the admissibility of DNA in court. Standardization of test results is a similar but much trickier problem. To date, researchers have developed more than 500 different DNA probes. Determining which probes, or combinations, to use in forensic applications is essential for creating an efficient database.

If L.A.P.D. uses one method for analysis, while the L.A. Sheriff uses another, sharing the information will be pointless. No single laboratory or department, no matter how large or sophisticated, can usefully undertake this project in splendid isolation. Fortunately, the FBI has already taken the lead in choosing the most reliable probes for forensic applications. We should follow their lead rather than try to reinvent the wheel.

Concerted action will also be required for adequate funding. Because it is conceptually simpler than Cat-I.D., developing and implementing a DNA database system may be somewhat cheaper. Nevertheless, it will probably exceed the means of any single department or agency.

Ultimately, we must depend on a combination of state and local funding just as we did for CAL-I.D. Winning consensus for that kind of program will require a united front. It won't be easy. But if DNA lives up to even half of its potential, I know we will win the necessary support in Sacramento.

I began this talk by noting the special responsibility that falls to those who are present at the creation of something truly new. That's us. And we've picked an auspicious day for it.

On this day 158 years ago, in Baltimore, some brave souls broke with conventional technology and began the world's first railway service. They had to walk before they could run, just as we will. In fact, they had to use horses to pull their first train. They were probably embarrassed to be going so slowly. But that didn't matter, did it? What mattered, and what matters still, is that they started.

Twenty years ago on this day, after an amazing team effort, Surveyor VII landed on the moon. And the world was dazzled, as we are today, by a glimpse of what lay just ahead.

We, too, will need an amazing team effort to achieve spectacular results. What lies ahead for us is extraordinary progress and excruciating moral dilemmas. What lies ahead is the freedom to fail or to succeed depending on our patience and our leadership. Above all, what lies ahead is a matchless opportunity, our chance — perhaps our only chance — to be present at the creation.

Together, let us resolve to make the most of it.

#### REFERENCE ABSTRACTS

The following abstracts were obtained from a variety of sources made available to the Association through the Newsletter Editor. If you would like more information on a particular abstract, or if you would like a copy of the item as it was published, please contact the Newsletter Editor.

#### CALIFORNIA DEPARTMENT OF JUSTICE BUREAU OF FORENSIC SCIENCES TIELINE - 1987, Volume 12, No. 2

##### **"Intoxilyzer Model 4011A, 4011AW and 5000"**

Mike Lee, Dean Nelson and Rick Takenaga

A listing of parts and components of the listed breath alcohol instruments, and the various features of each.

##### **"Blood/Breath Correlation Data: Part 1"**

Darryl R. Tate

The correlation of blood alcohol levels were checked versus the Intoxilyzer 5000 readings in Trombetta blood samples from the San Luis Obispo, CA counties area. Data on approximately 43 samples is presented.

##### **"Another DUI Excuse Bites the Dust"**

Frank H. Cassidy

A defense in a drunk driving case was that the suspect's use of a bronchial inhaler "Preventil" was responsible for her breath alcohol level to read 0.18. A trial run with the same inhaler, used by the author, found no contribution of the inhaler to the BA level.

##### **"Dust-Proofing for Intoxilyzers"**

Sandy Rakestraw

A major cause of electronic failure in the Intoxilyzer 5000 is the presence of dirt and dust. The author modified a household furnace filter to adequately filter cooling air to the instrument.

##### **"An Elevated Blood Alcohol Level"**

Jerry Massetti

A woman suspected of a hit and run with a parked vehicle was found to have a blood alcohol level of 0.58, the highest record in the Fresno Regional Lab.

##### **"Crime Scene Reconstruction From Crime Scene Photos"**

Gary V. Cortner

The reconstruction of a crime scene from photographs of blood stains is described.

**"Simplified Isomers - Part 1"**

J. Thomas Abercrombie

A simplified method for describing optical isomers is described for use in court.

**"N,N-Dimethylamphetamine Analog"**

J. Thomas Abercrombie

The occurrence of the drug N,N-dimethylamphetamine has been found in several clandestine drugs labs in the southern parts of California. The drug is made from the reaction of N-methylephedrine, red phosphorus and hydriotic acid. A description of the synthesis is provided along with analytical data.

**"Primer Composition and Gunshot Residue"**

William Matty

A brief history of primers is presented along with drawings of cross-sections.

**"Modification of Leitz Bullet Comparison Microscope"**

Unknown

A modification to the inside of the photo housing has provided a larger viewing area for focusing.

**"Structure and Composition of Food"**

Frank H. Cassidy

A case required the examination of a knife used in a homicide to determine if the knife had residues of apple on it. The author found four references on the subject of food structure and composition, and are listed.

**"Another Interesting Sexual Assault"**

Marianne Vick

Serological data for a rape case is presented.

**"The Crosby-Samples Variation on the Belschner Method of Suspended Atmospheric Desiccation of Physiological Fluid Samples, or Hangin' It Out to Dry"**

Barbara Crosby and Marie Samples

A ring stand is modified to allow the hanging of serological stains on cloth pieces for drying.

**"Four Generation Blood Study"**

Barbara Crosby

Four generations of the author's family are examined for genetic markers and the results charted.

**"EEO and Electrophoresis"**

Ricci E. Cooksey

Irreproducible results from run to run on electrophoretic systems was found to be caused by not optimizing the EEO values of the agerose.

**"Hair Examination - Technical Note"**

John Cockerham

A method for fastening hairs under coverslips without permanently mounting them is described. The method uses a hot glue gun.

**"Collection Sites For Animal Hair Samples"**

Tom. D. Moore

A chart depicts the areas of an animal's body where exemplar hair samples should be taken from.

**"Tire Dusting to Obtain Reference Tire Prints"**

Gary V. Cortner

Tires needed for reference in a crime were dusted with fingerprint powder, and then rolled on butcher paper. The procedure produces excellent results.

**"Knot Analysis - Helpful Suggestion"**

Frank H. Cassidy

The use of colored telephone cable wire is described for the demonstration of knots.

**"Floppy Disk Holder"**

Frank H. Cassidy

A polypropylene test tube rack is used for standing up computer floppy disks for easy access, and so the disks don't lie flat.



**MIDWESTERN ASSOCIATION OF FORENSIC SCIENTISTS**  
**NEWSLETTER, JANUARY 1988, Vol. 17, No. 1**

**"Current Procedures in the Handling and Processing of Checks"**

Judith A. Gustafson

The methodology of handling and processing checks by financial institutions is discussed.

**"Problems with IR Spectra of Cocaine Hydrochloride Case Samples"**

Edwina Ard

Irregular IR spectra of cocaine hydrochloride was found to be caused by the varying degrees of hydration of the drug. Thorough drying of the samples provided IR spectra consistent with standards.

**"Document Examination in Conjunction with Fingerprinting Techniques"**

Warren Stewart

The processing of documents with ninhydrin for fingerprints is common. It was found that dissolving zinc chloride in methanol and extracting with petroleum ether produced a solution that could be sprayed on the document and then examined with an argon laser.

**SOUTHWESTERN ASSOCIATION OF FORENSIC SCIENTISTS**  
**JOURNAL, MARCH 1988, Vol. 10, No. 1**

**"Police vs. Criminalists vs. the General Public: Is It Really Us Against Them?"**

John A. Belzer

Data from police officers and criminalist who have taken the Myers-Briggs Type Indicator test are presented. The test exposes the personality of the taker according to the theories of Carl Jung.

**"Rapid Test for the Differentiation of Near-Beer and Regular Beer"**

J.L. Castorena

A simple color test is provided for the presumptive distinction of near-beer and regular beer.

**"Comparison of Dishwashing Detergent as an Example of a General Approach to Dealing with the Unusual"**

Allen E. Cornelius

Criminal investigations often require the analysis and comparison of evidence that does not fall into easily definable categories. Trace evidence analysis is often broken down into paint, glass, soil, hairs, fibers, and "miscellaneous comparisons." These miscellaneous comparisons offer great challenge to the forensic analyst, as often they involve evidence never before encountered, and the analysis of this evidence requires much imagination and creativity. This paper presents a specific example of a general scheme which has been successful in analyzing some of these types of evidence.

**"Psychic Surgery: What is It? How the Printed Word Presents It, and Its Relevance to the Forensic Community"**

Lawrence L. Renner

Psychic surgery is the laying on, and in, of hands by a healer. It involves a healer making an incision on the patient with bare hands, causing blood to flow and removing (while the patient is awake) supposed diseased tissue. The intersection of psychic surgery and forensics came in the examination of tissue said to have been removed from a patient.

**"A Protocol for the Forensic Chemist in the Field Investigation of Clandestine Amphetamine Labs"**

Max Courtney and Tom Ekis

Some basic tips for the chemist in investigating amphetamine labs is discussed.

**"Preparative Scale Thin Layer Chromatography (Prep TLC); Additional Studies"**

Burgess J.A. Cooke

An earlier paper outlined efforts to resolve drug mixtures using prep TLC on a scale permitting isolation of the various components in sufficient quantity for IR spectral characterization. The procedure included an overnight extraction of the appropriate band scrapings, which is time consuming. If the components were sufficiently resolved, however, (ie, if the differences in Rf values were

0.1 or more], quite clean separations could be routinely obtained. The study has been extended to include several new drug mixtures. The procedures have also been modified, resulting in a drastic reduction in time with quite high percentage recoveries. Finally, comparisons of prep TLC with other wet chemical methods (Conway diffusion, column chromatography) were carried out. The results are presented.

**"Human Immunoglobulin Allotyping - Hints 'N' Techniques"**

Pat Wojtkiewicz

A discussion of the discriminating powers of Km and Gm is presented.

**JOURNAL OF IRREPRODUCIBLE RESULTS**  
**VOLUME 32, NUMBER 4 1987**

**"The Use of Quantum Uncertainties in Crime Detection"**

A.R. Rao and M.N. Vahia; Bombay, India

The basic law that a person is guilty until proven otherwise has in many cases resulted in freedom from many obvious criminals. In most cases the problem has been that the criminals had a perfect alibi by being some other place when they should have been at the place where the crime was committed. We have now realized that the problem has all along been the improper use of Quantum Mechanics by the courts. In this paper we therefore propose a corrected procedure which may be successfully applied to convict all criminals.

**ABSTRACTS OF PAPERS PRESENTED AT THE**  
**SPRING 1988 MEETING OF**  
**THE NORTHWEST ASSOCIATION OF FORENSIC SCIENTISTS**  
**IN MISSOULA, MONTANA**  
**MARCH 14-18, 1988**

**"Contamination Problems with Polyester Bags (Kapak / Scotchpak)"**

William R. Dietz, ATF and Dale C. Mann, WSP Crime Lab-Seattle

A contamination problem with polyester bags was accidentally discovered during the analysis of fire

debris for the presence of accelerants. The discovery came about after debris, stored and analyzed in metal cans, was transferred into polyester bags. While the portions of debris in the metal cans failed to reveal the presence of accelerants, the portions of debris in the plastic bags revealed the presence of a medium petroleum distillate, similar to Wizard Charcoal Lighter fluid. Suspicion was raised further when fire debris, which should not have contained Wizard Charcoal Lighter fluid, was store in polyester bags and analyzed to find it present.

Various shipments of bags were analyzed to find the medium petroleum distillate in several of them. Contacts with Kapak and 3M companies have indicated the contamination originated in the manufacturing of the plastic. No assurances have come forth to indicate the problem has been alleviated.

**"Applications of Forensic Science in the US and USSR"**

Ilya Zeldes, South Dakota Crime Lab

**"Trace Evidence Analysis by FTIR Microscopy"**

John Reffner, Spectra-Tech

**"Clandestine Methamphetamine Synthesis and Safety"**

Margaret Stevenson, Charles Hall and Roger Ely - DEA San Francisco Laboratory

The reaction mechanisms for the synthesis using phenylacetic acid, sodium acetate and acetic anhydride; and for phenylacetic acid and lead diacetate are presented. Several major reaction by-products are discussed, and the conditions which will give rise to the contaminants are presented.

The reaction mechanism for the classical reductive amination of Phenyl-2-propanone to methamphetamine is presented along with several reaction by-products. The reaction mechanisms for the synthesis of methamphetamine via ephedrine is also presented, along with the stereochemistry of producing optically pure methamphetamine.

A discussion of the DEA Clandestine Laboratory Safety Class is presented.

**"Forensic Applications of Plasma Spectrometry"**

Robert Koons, FBI Research Facility, Quantico, VA

Reported applications of atomic emission spectrometry using a variety of plasma sources have increased dramatically in the past few years. Among the attributes of plasma emission spectrometry which have contributed to its wide acceptance are its multi-element capability, relative freedom from chemical interferences, wide linear dynamic ranges, ability to determine a wide range of elements including refractories, and good precision and accuracy even at relatively low concentrations. General legal acceptance, particularly in the environmental area, and widespread availability of commercial instruments make it likely that plasma spectrometric methods are about to move from being a research technique to a bench-level tool in the forensic laboratory. This talk presents an introduction to the methods, using inductively coupled plasma-atomic emission spectrometry as an example, and an overview of the instrument considerations specific to forensic samples. The need for precise multi-elemental analysis of small samples or dilute solutions in forensic situations places limitations on the instrument which must be considered in selecting among the available instrument configurations. The ability to make background and inter-element corrections in a wide variety of generally unknown sample matrices requires flexibility and high resolution in spectrometer design. Sample introduction should allow for small solid samples, hydride generation, and flow injection techniques. Applications which have been reported in the literature will be discussed, including multi-element analysis of glass, metals, single-layer paint fragments, precious metal ores, detection of gunshot residues and toxic metal screens.

**"Identification of Skeleton Missing Skull and Hands"**Dr. Charline Smith, University of Montana  
Anthropology Department**"New TLC Verification Procedure Employing Reverse Phase TLC"**

Peggy Eide, Marion Laboratories

**"Handling the Media"**John Camper, Montana Dept. of Administration,  
Professional Development Center**"Iso-Electric Focusing Technique Applied to Electrophoresis in Forensic Serology"**

Dale Dykes, War Memorial Blood Bank

**"Poppies Will Make Them Sleep - Dorothy Never Knew What Hit Her"**

Gary Knowles, OSP Crime Lab - Medford

The wicked witch of the West planted a narcotic barrier across the path of Dorothy and her friends on their way to Oz. As this presentation suggests, there are more than one species of poppy which could have been used to render the animal and human members of the band doped. There are approximately 110, academically argued, species of Papaver and over 600, even more argued, varieties. In 1986 the Southern Oregon area 'blossomed' with the blooms of opium poppies. Submissions to the Medford Crime Lab represented over 5000 plants. This paper shows trends of abuse and the occurrence of controlled substances of several poppy species.

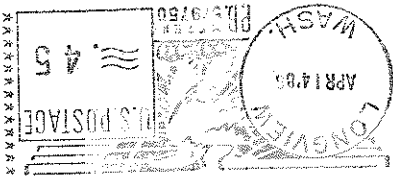
**"Survey Proposal for Combining Evidence In Sexual Assault Cases: Probative or Unwarranted Use of Time"**

Rex Riis, South Dakota Crime Lab

This survey is to be submitted to the NWAFS labs involved with sexual assault combining evidence and it will be used to obtain methods, procedures, policies and techniques dealing with combining evidence. The purpose of the survey is an attempt to maximize efforts and efficiencies when managing combining evidence cases. The survey format will sample ten sexual assault cases and the lab results from each of the NWAFS labs who choose to participate.

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- Minutes from the Spring Meeting in Missoula
- Proposed changes in Bylaws
- Proposal on replacing lab mice with attorneys
- Calif. Attorney General speaks on DNA Typing
- Reference abstracts
- Abstracts of papers presented at Spring meeting

**IN THIS ISSUE OF THE NEWSLETTER:**