MAAFS NEWSLETTER

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The MAAFS Newsletter is the official publication of the Mid-Atlantic Association of Forensic Scientists, Inc., and is published at least twice each year. All communications regarding the Newsletter should be sent to the Editor, Dr. Edward Sykes Franzosa, at the DEA Special Testing & Research Lab, 7704 Old Springhouse Road, McLean, Virginia 22101.

Fall 1979 Meeting Call for Papers

The Fall 1979 MAAFS meeting will be held at the Kings Quarters-Best Western Motel, immediately adjacent to the Kings Dominion Park, Doswell, Virginia (20 miles north of Richmond on I-95) on Friday September 28 and Saturday morning September 29. Kings Dominion is open only on Saturday and Sundays after Labor Day weekend, so at least on Friday our attentions will not be diverted by the lure of the Rebel Yell or the Lost World. Kings Quarters rates for MAAFS meeting participants will be $22 for a single room and $32 for a double. Each additional person, including children, is an extra $5.

Friday evening we will have a pool-side barbeque which should be a pleasant ocassion if the weather holds up. The $15 registration fee for the meeting includes Friday's luncheon and admission on Saturday to Kings Dominion. If we can get 25 additional requests for Kings Dominion admissions for spouses, children and so on, we can get the additional tickets for a $7 per person group rate.

The fall meeting program will feature a series of panel discussions in the fields of questioned documents, trace evidence analysis, arson, serology and drug analysis during which the participants from various laboratories will have the opportunity to discuss the whys and wherefores of how they go about their casework. Audience reaction questions and comments will be avidly sought after. Certification is gradually creeping up on MAAFS, and in order to make informed judgements it will be quite useful to spend some time at our meeting hearing about how the other half lives (and works), not in the show-stopper cases, but rather in the tedious, everyday bread & butter work we all see so much of.

Before the business meeting on Friday afternoon we will have a commentary by Tony Cantu on the certification question followed by a discussion session.

We DO want papers for our fall program. If you are interested in presenting one, please submit the title and a short abstract suitable for inclusion in the program to one of the program Co-Chairmen by August 15th. Also indicate the estimated time for presentation and any special equipment needed.

Registration forms and reservation information will be in the newsletter at the end of August.

MAAFS is your organization and we hope to encourage your participation by making the programs both useful and interesting.

PROGRAM CO-CHAIRMEN

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July 11, 1979

Dear Forensic Serologist:

Enclosed for your consideration is a package of information concerning proposed procedures for certification in forensic serology. The package represents the completed work product of the Serology Peer Group, prepared in accordance with the guidelines of the Criminalistics Certification Study Committee.

At some time prior to the end of 1979, American criminalists will have an opportunity to vote on the continuation of efforts to establish a mechanism for certification. Among the primary concerns of the Serology Peer Group was the desire to present criminalists with a clear and thorough explanation of the proposed certification procedures to assist criminalists in reaching a decision.

A special section of supplemental information is enclosed to help provide more detailed explanations of those topics which generated the most feedback to the Serology Peer Group from the regional committees. Perhaps it is worth re-emphasizing that the content of the subject matter for examination purposes was based on majority opinions expressed on the national questionnaire, representing some two hundred sixty respondents. Every attempt was made to produce what an average forensic serologist would consider fair requirements for certification that were neither unreasonably rigorous nor lenient. In addition, proposals are included to provide for temporary waivers of educational requirements and/or examination requirements for otherwise qualified candidates.

Please scrutinize the enclosed documents. If you have suggestions or care for additional information, please contact your regional representative on the Serology Peer Group or the Criminalistics Certification Study Committee.

Thank you.

Respectfully submitted,

Mark D. Stolorow
Meeting Secretary
Serology Peer Group

MINUTES

SECOND SEROLOGY PEER GROUP MEETING
PALM BEACH, FLORIDA
JUNE 21-22, 1979

The meeting was called to order at 9:00 a.m., June 21, 1979, by Committee Chairperson W. C. Stuver. The following persons were in attendance:

Henry C. Lee, representing NEAFS

Cornelius Glen McWright, representing MAAFS

Donald C. MacLaren, representing NWAFS

George F. Sensabaugh, representing CAC

Mark D. Stolorow, representing MAFS

Willard C. Stuver, representing SAFS

Sally Williams, representing SWAFS

Joseph L. Peterson, monitor, Forensic Sciences Foundation, Inc.

Introductory remarks were made by Mr. Stuver, charging the committee with the crucial task of producing a clear and comprehensive package describing the certification proposal to the forensic serology community.

Minutes prepared by Mr. MacLaren of the first meeting of the Serology Peer Group in Kenner, Louisiana, April 28-29, 1979, were discussed and approved.

Dr. Peterson reported on the progress of the other forensic science certification programs, in particular, the AFTE National Peer Group and the Drug Chemistry Peer Group.

Representatives from each regional forensic science association gave a brief progress report concerning topics discussed by national peer group members with their regional groups since the first meeting of the national peer group. The general attitudes expressed by the regional groups were conveyed to the committee. Responses from each region were then discussed in regard to particular topics including:

1. Minimum education requirements.

2. Minimum professional requirements.

3. Minimum requirements for work experience.

4. Certain temporary and limited waivers of qualifications.

5. The proposed structure and content of the written and practical examinations.

6. The formation of a bibliography as a study guide for candidates.

7. The requirements and logistics of recertification.

At this point, it was proposed and agreed to commence with the preparation of the actual written documents which would constitute the committee's "work product" consisting of three parts:

1. A list of qualifications for application and a brochure-style description of the processes of examination, recertification, and temporary waivers of required qualifications.

2. An additional report detailing more thoroughly the scope and actual mechanics (places, dates, topics, costs) of the written and practical examinations.

3. A set of sample questions representative of the written examination, including both technical questions dealing directly with forensic serology and general questions dealing with criminalistics and evidence handling procedures as they relate to forensic serology.

Part I was prepared and approved by the end of the first day of the meeting which was adjourned at 5:15 p.m., June 21, 1979.

The meeting was reconvened at 8:15 a.m. on June 22, 1979, with all parties in attendance.

The committee proceeded directly into the tasks of preparing a detailed written explanation of the proposed logistics for the certification process and a set of sample questions representing the written examination.

During the course of deliberation on the central issues, the positions of each region were reported by the representatives and, not infrequently, considerable discussion was required in order to establish a consensus opinion. Objections which were raised were noted and recorded and it was agreed to let the written "work product" reflect the substance of the actual decisions or compromises that were finally achieved.

However, it was requested to have the minutes reflect two points in particular. First, a reminder that the timetable for certification is only tentative and depends entirely on how expeditiously the national ballot (scheduled for Fall 1979) can be taken and evaluated on the question of certification. Second, it was agreed that a syllabus or list of references to assist as a study guide can be prepared at an appropriate future date, also pending the outcome of the national ballot.

With the completion of all three parts of the "work product" the meeting was adjourned at 3:30 p.m. on June 22, 1979.

Respectfully submitted,

Mark D. Stolorow
Meeting Secretary

June 26, 1979

CERTIFICATION
IN
FORENSIC SEROLOGY

QUALIFICATIONS & REQUIREMENTS

1. GENERAL QUALIFICATIONS

Applicants must be persons of good moral character and scientific integrity with high ethical and professional standing.

2. EDUCATIONAL QUALIFICATIONS

Applicants must possess a minimum of an earned baccalaureate degree in a natural science or an appropriate related field from an accredited institution. Accredited institutions are those approved by regional accrediting commissions recognized by the U.S. Office of Education. Other institutions may be approved at the discretion of the Board.

3. PROFESSIONAL EXPERIENCE

A. Applicants must have a minimum of one year experience (including on-the-job training) actively working in the field of forensic serology. Qualifying activities may include casework, teaching, research, and supervision.

B. Applicants must be working in the field of forensic serology at the time of application for certification.

C. Applicants will be required to submit as references the names and addresses of two individuals who can attest to the applicant's qualifications. At least one of the references must be an individual actively working in the field of forensic serology at the time of application for certification.

D. Applicants are required to furnish (on the application) a record of appropriate professional activities in keeping with the concept that "Forensic Serology is the science directed to the recognition; identification, individualization, and evaluation of physiological material related to law-science matters".

4. EXAMINATIONS

A. Applicants who meet the requirements set forth in the preceeding sections will be allowed to take a comprehensive written examination on basic principles of forensic serology.

B. Applicants who pass the written examination will be further required to pass a practical examination to demonstrate proficiency in the analysis and interpretation of physiological evidence.

C. Applicants will be required to complete the written and practical sections of the examination within a period of two years following approval of their applications.

D. Applicants who fail either the written or practical examinations may apply within a period of one year for one re-examination without any additional fee.

5. RECERTIFICATION

A. Certification will be valid for a period of five years.

B. Application for recertification must be made within the five-year period of certification.

C. Recertification will be granted on the basis of an evaluation of the applicants' documentation of continuing education and other demonstration of professional advancement (including, for example, participation in workshops, seminars, symposia, research, and presentation or publication of formal papers related to forensic serology) or upon the applicant's taking and passing a recertification examination.

D. Recertification will be valid for a period of five years.

6. TEMPORARY WAIVERS

A. Temporary Waiver of Educational Requirement

For a period of one year from the official date of the announcement that applications for certification will be accepted, the requirement of a baccalaureate degree will be waived for otherwise qualified applicants.

B. Temporary Waiver of Examination Requirement

For a period of one year from the official date of the announcement that applications for certification will be accepted, applicants who have a minimum of five years experience actively working in forensic serology as of the date of this announcement, and who are otherwise qualified, may be certified without being required to take either the written or practical examination.

Certification granted under the conditions of this temporary waiver of examination will expire three years following the date of certification.

In order to be recertified, individuals certified under this temporary waiver of examination must pass the written and practical examination.

CERTIFICATION IN FORENSIC SEROLOGY

SUPPLEMENTAL INFORMATION

1. WRITTEN EXAMINATION

The written examination will be administered twice annually at the locations and dates of the meetings of the regional forensic science associations. Membership in a regional forensic science association is not required to gain admission into the examination. The examinations will

be proctored by the regional serology peer group committees. Questions appearing on the examinations will be selected from those submitted by individual peer group committees from the regional forensic science associations. The responsibility for the preparation, administration, and evaluation of the written examination rests with the National Serology Peer Group.

2. PRACTICAL EXAMINATION

The practical examination will be administered upon successful completion of the written examination. The nature of the practical examination will be simulated case situations which will be mailed to the candidate for examination within the candidate's own laboratory facility. Specific instructions will accompany the samples. The responsibility for the preparation, administration, and evaluation of the practical examination rests with the National Serology Peer Group.

3. SCOPE OF THE EXAMINATIONS

A. General
   1. The following topics were derived from the nationwide survey:
      a. Identification of blood
         i. Catalytic tests
         ii. Crystal tests
         iii. Anti-human hemoglobin serum
         iv. Electrophoretic methods
      b. Determination of species origin (immunological methods)
      c. Individualization of blood
         i. Red cell antigens
         ii. Isozymes
         iii. Serum proteins
         iv. Miscellaneous
      d. Semen identification
         i. Microscopical
         ii. Chemical
         iii. Immunological
         iv. Electrophoretic
      e. Semen or semen/vaginal fluid mixtures
      f. Saliva identification
      g. Urine identification
      h. Other (for example, sex determination, menstrual blood, bloodstain pattern distribution)
   2. In addition, candidates will be held responsible for the relevant general concepts in biochemistry, genetics and immunology.
   3. In addition to testing, specific knowledge in forensic serology, the written examination will include questions in the following general areas regarded as common skills in criminalistics:
      a. Basic principles of identification and individualization
      b. Scientific methodology
      c. Evidence handling
      d. Basic microscopy
      e. Communication
      f. Legal aspects and court testimony
      g. Literature of criminalistics
      h. General knowledge of criminalistics

B. Written Examination

The written examination will consist of 100 objective questions that can be completed within a two-hour period. The following are sample questions: (See Attachment)

C. Practical Examination

1. The practical examination will represent simulated case situations and may include the following:
   a. Characterization of liquid whole blood
   b. Characterization of dried bloodstains
   c. Characterization of dried stains from physiological fluids other than blood
2. Candidates will be evaluated on the basis of their approach to the problem, their analytical methods, and their conclusions. Candidates will be permitted a reasonable period of time to complete the practical examination.

4. BIBLIOGRAPHY

A list of suitable bibliographies will be prepared by the National Serology Peer Group and made available to applicants in order to assist them in locating reference material pertinent to the subject matter which will appear on the examinations.

5. COST OF CERTIFICATION

The cost of certification is estimated at $75 for the application fee (applicable as well to other areas of criminalistics certification) and $50 for the examinations fee.

6. COST OF RECERTIFICATION

The Criminalistics Certification Study Committee has not presented any estimate for the cost of recertification, however, they are expected to be nominal.

7. TIMETABLE (PROJECTED DATES)

April 1, 1980 - Announcement date of acceptance of applications for certification in forensic serology. (This date also marks the deadline for the 5-year experience requirement in order to qualify for the temporary waiver of examination.)

Fall - 1980 - First written examination

Early - 1981 - First certification in forensic serology

WRITTEN EXAMINATION
IN
FORENSIC SEROLOGY
SAMPLE QUESTIONS

-NOTE: * Denotes correct answer

1. A positive phenolphthalein test was obtained on a stain present on a pair of trousers taken from a suspect in a rape-murder case. Based upon this result, one may conclude that the stain:

a. Contains blood
b. Contains human blood
c. Contains blood and semen
* d. May contain blood

2. The crystals that result from a Takayama crystal test using pyridine, glucose, and sodium hydroxide are:

a. Hematin chloride
b. Hemochromogen chloride
* c. Pyridine hemochromogen
d. Pure hemoglobin

3. The ring precipitin test has an advantage over the Ouchterlony gel-double diffusion test in that:

* a. Test results can be obtained more rapidly
b. It indicates the number of antigen & antibody systems reacting
c. It does not require an uncontaminated antigen solution
d. One can readily establish the immunological relationship between two antigens

4. Which of the following species of animals is most closely related to humans in terms of its serum protein composition as detected by immunological cross reactivity:

a. Rhesus monkey
b. Pig
* c. Chimpanzee
d. Alligator

5. Studies have shown that the A and B blood group antigens may be present on:

a. Erythrocytes
b. Leukocytes
c. Bacterial cells
* d. Red cells, white cells and bacterial cells

6. Which of the following statements best describes the biochemical differences between the A, B and H antigens:

a. A, B and H antigens are all proteins, and they differ from one another in amino acid compositions.

b. A, B and H antigens are chemically identical, but give differing immunological reactions based purely on the way in which they are arranged in the red cell membrane.

* c. A, B and H antigens differ from one another by a single monosaccharide residue attached to a polysaccharide chain.

d. All of the above.

e. None of the above.

7. Blanks are run in ABO typing of stains because the following materials can cause false positives:

   a. Cloth sizing
   b. Room dust
   c. Sweat stains
* d. All of the above

8. In the following example, pick the statement that best applies as a valid opinion as to the source of the questioned blood:

INDIVIDUAL	ABO TYPE	PGM	EAP	POPULATION FREQUENCY
1	A	1	BA	10.5%
2	A	2	CB	0.1%
3	A	2	A	.3%
Questioned Blood	A	2	CB	0.1%

   a. The questioned blood could only have come from individual #2.
   b. The blood could not have come from individuals #1 and #3.
   c. The blood could have come from individual #2.
   d. a and b above.
* e. b and c above.

9. The source of commercial anti A and anti B is usually:

   a. Guinea pigs
   b. Rabbits
* c. Humans
   d. Goats

10. Which of the following is true about the relationship between ABH secretor status and the red cell Lewis types of the same individual (do not consider Bombay types):

   a. Secretors of ABH always have the Lewis red cell type Le (a - b+).
   b. Non-secretors of ABH always have the Lewis red cell type Le (a + b-).
* c. People with the red cell Lewis type Le (a - b-) may be secretors or non-secretors of ABH.
   d. People with the red cell Lewis type Le (a + b+) are uniformly non-secretors of ABH.

11. In a staining reaction for phosphoglucomutase (PGM), the enzyme converts:

   a. Glucose-1-phosphate to 6-phosphogluconate
   b. Glucose-6-phosphate to 6-phosphogluconate
* c. Glucose-1-phosphate to glucose-6-phosphate
   d. Glucose-6-phosphate to glucose-1-phosphate
   e. None of the above

12. Which of the following is considered a variant hemoglobin:

   a. HbA_1
   b. HbA_2
* c. HbC
   d. HbF
   e. All of the above

13. In the thread, absorption-elution technique for ABO blood group, the step most critical to accurate interpretation is:

a. The absorption of the blood onto the fibers
b. The absorption of the anti-sera onto the bloodstained fibers
* c. The washing of the anti-sera bloodstain complexed fibers
d. 56° C. is required for elution
e. None of the above

14. Matching Definitions

a. Proteins which act as catalysts of biological reactions	a. Enzyme
b. The basic unit of heredity	b. Gene
c. Variation, usually genetically determined, in a characteristic trait	c. Polymorphism
d. Alternative genes occurring at a single genetic locus	d. Alleles
e. Observed expression of genes	e. Phenotype
f. The combination of genes found in an individual	f. Genotype
g. Genotype in which the two alleles at a locus differ	g. Heterozygote
h. Genotype in which the two alleles at a locus are identical	h. Homozygote
i. Multiple molecular forms of enzymes	i. Isozymes

15. Indicate which of the following statements about haptoglobin are correct:

a. Haptoglobin is a serum protein which can form complexes with hemoglobin.

b. The biological function of haptoglobin is thought to be the prevention of undue iron loss by blocking the urinary excretion of hemoglobin.

c. The commonly occurring haptoglobin phenotypes (>5%) in Negro population are Hp 1, Hp 2, Hp 2-1, and Hp 2-1M.

d. Haptoglobin molecules consist of two types of polypeptide chains, Alpha and Beta; the Alpha peptide is polymorphic.

e. The haptoglobin polymorphism is unique in that the allelic polypeptide chains differ markedly in molecular weight.

f. The haptoglobin polymorphism exhibits typical dominant-recessive expression.

a. All of the above
b. A, C, E, and F
c. A, B, D, E and F
* d. A, B, C, D, and E
e. A, B, D and E

16. Boiling saliva destroys soluble ABH substance and renders them undetectable.

(True or False)

17. Acid phosphatase cannot be detected in seminal stains from a vasectomised male.

(True or False)

18. The acid phosphatase test is specific to semen because there is no acid phosphatase normally found in the vagina.

(True or False)

19. PGM pattern in semen stains differ from PGM patterns in bloodstains in which of the following ways:

a. Locus 1 isozymes are generally not visible.
* b. Locus 2 isozymes are generally not visible.
c. Locus 3 isozymes are generally not visible.
d. Visible PGM phenotypes in semen stains do not necessarily correspond to the donor's inherited PGM genotype.

20. Which of the following enzymes has served as the basis for many identification tests for saliva in stains:

a. Acid phosphatase
b. Alkaline phosphatase
* c. Amylase
d. Isocitrate dehydrogenase

GENERAL QUESTIONS

1. A serology report read into the court record satisfies the best evidence rule.

(True or False)

2. The substage condenser's primary function is to control the amount of light focused on the specimen.

(True or False)

3. Treatment of bloodstains with ninhydrin or silver nitrate for the visualization of latent fingerprints has no effect on subsequent serological analysis.

(True or False)

4. According to the following citation:

J. Forens. Sci. Soc., 16, (1976), 128-134.

the number "16" represents:

a. Issue number
* b. Volume number
c. Page number
d. Author's reference number

MAAFS

MID-ATLANTIC ASSOCIATION of FORENSIC SCIENTISTS

July 31, 1979

Mr. Mike Horvath
President, MAAFS

Dear Mike,

The following is the slate of officers being presented by the Nominating Committee:

President-Elect --- Gerald B. Richards
FBI Laboratory
Washington, DC

Member-at-Large - Richard P. Gervasoni
Montgomery County Crime Lab
Rockville, MD

Leonard K. Read
Postal Inspection Service Crime Lab
Washington, DC

The nominations are open to other MAAFS members by a petition of 25 members sent to me. All nominations will close on August 30, 1979. The election ballot, along with a stamped envelope for return, listing all the nominees including those by petition will be sent to all MAAFS members in the MAAFS Newsletter preceding the Fall 1979 business meeting.

Sincerely,

Antonio A. Cantu
Nominating Committee Chairman