



TOXTALK

Publication of the Society of Forensic Toxicologists

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Alexander Oscar Gettler 1883 - 1968

by Henry C. Freimuth, PhD

If one man can be acknowledged as the founding father of forensic toxicology in the United States, Alexander Gettler is that person. This year represents the centennial of his birth, and it is altogether fitting that recognition be given, by modern toxicologists, of the debt which is owed to this pioneering giant in the field.

While it is true that Dr. Gettler did not have to contend with the present ever increasing numbers of pharmaceuticals and industrial products which may be involved as causative agents in deaths and illnesses, it is equally true that information about chemical methods of identification as well as methods of isolation from tissues was very scarce. The instrumental armamentarium available today was not even dreamed of, and all conclusions were based upon results of "wet" chemical analysis. In fact, the only analytical instruments available to him for at least the first 30 years of his activity in the New York City Medical Examiner's Office were an analytical balance, a Duboscq Colorimeter, a pH meter, a filter photometer, and a Van Slyke manometric gas analysis apparatus. Despite these limitations, Dr. Gettler and his students carried out many investigations into a wide variety of subjects of interest

to forensic toxicology. Among these were studies in chemical tests for alcohol intoxication; "normal" alcohol; cyanide poisoning; fluoride poisoning; carbon monoxide poisoning; micro-isolation of volatile toxic substances from tissue; thallium poisoning; investigation of the Reinsch test for metals; tests for drowning; and many others.

It is interesting to note that Dr. Gettler came into the field of toxicology primarily because he was employed as a clinical chemist at Bellevue Hospital at the time of the establishment of the Chief Medical Examiner's Office in New York City in 1918. Dr. Charles Norris, the first Chief Medical Examiner, whose office was located in the Pathology Building (popularly known as the City Morgue) of Bellevue Hospital, asked Dr. Gettler if he would do such chemical testing as was needed in Medical Examiner's cases, and Dr. Gettler agreed. Dr. Gettler had received his PhD in Biochemistry and, while serving as a chemist at Bellevue Hospital, was also teaching Biochemistry at the University and Bellevue Hospital Medical College (N.Y.U.). Hence, proximity was the major reason for his involvement in the field.

In accepting the responsibility for the toxicological work in the Medical Examiner's Office, Dr. Gettler knew that he

Gettler continued:

would be entering a work area where there were few guidelines since there was no place in the United States where such work was being done on a routine basis. Some institutions of forensic medicine existed in Europe, and some literature, mostly in German, was available but most of Dr. Gettler's work was in virgin territory. He was fond of telling how he used to buy liver at a local butcher shop and add to this different drugs which were the object of an investigation. He would then try various methods of extraction and different tests to identify the compounds.

In the 1920's, Dr. Gettler became Professor of Chemistry at Washington Square College of New York University and received a concurrent appointment in the N.Y.U. Graduate School. In his latter capacity, he instituted a graduate course in Toxicology in 1935 and he attracted a number of graduate students who subsequently made forensic toxicology their life's work. Among these, in addition to myself, were C. J. Umberger, A. Stolman, F. Rieders, S. Kaye, I. Sunshine, L. Goldbaum, A. Freireich, and M. Feldstein. Many of these trained others; thus Dr. Gettler's influence has become pervasive in the field.

Dr. Gettler continued teaching until 1948 when he reached the University's mandatory retirement age which he was very reluctant to accept. By special ruling of the New York City administration, he was permitted to remain in his position with the Medical Examiner's Office until January 1, 1959, when, after more than 40 years of pioneering activity, he retired at the age of 75. He continued to maintain an active interest in the field until his terminal illness brought death some ten years later.

Awards & Laurels

At the 35th Annual Meeting of the American Academy of Forensic Sciences held in Cincinnati, February 1983, two of our distinguished colleagues were honored by being presented the Toxicology Section Awards.

Professor Kurt Dubowski

(a charter member of SOFT) became the first recipient of the Rolla Harger Award for Outstanding Contributions to Forensic Toxicology.

Dr. Leo Goldbaum

was the first recipient of the Alexander Gettler Award for Analytical Achievements in Forensic Toxicology.

At the last meeting of the California Association of Toxicologists held in May 1983 in Newport Beach, California,

Norman Wade

a charter member of SOFT, was elected President of the CAT.

Research in Progress

by Raymond J. Bath, PhD
Univ. of Illinois, Rockford

The idea of basic research in forensic analytical toxicology laboratories, while not foreign to most members, seems to be an unattainable goal. Most of the forensic analytical toxicology research work is in applied areas that require no originality but only push them through, present an update, and publish (hoping the reviewers are friends). All forensic analytical toxicologists have had extensive training periods in chemistry, pharmacology, pathology, etc., and have shown by participation in the activities of SOFT, ABFT, AAFS, etc., that we are concerned with the level of research being conducted in analytical toxicology laboratories. Bearing all this in mind, here are some of the current "research areas" being investigated in toxicology laboratories. Any comments on these projects will be appreciated.

1. "Assessment of the problem of the transfer of environmental pollutants through mother's milk." A medical student, Edward Violante, has set up a protocol to screen mother's milk, a minimum of 60 participants, for volatile organic compounds (VOC's). The laboratory will assist in the determination of these compounds using standard EPA protocols. The numbers of samples should allow a health assessment to be made.
2. "The effect of added 2,3-DPG on the stability of carboxyhemoglobin." With Joseph Monforte, PhD, of the Wayne County Medical Examiner's Office and a Rockford College senior, Janet Neiswander, an investigation of the seemingly easy aspect of carboxyhemoglobin stability is being made. This very complex area may shed some light on the question of 20%-40% carboxyhemoglobin fatalities. For those interested in this area, bound 2,3-DPG is found in reduced hemoglobin but not in oxyhemoglobin or carboxyhemoglobin.
3. "The use of single point determination of fatal toxicity." In the determination of fatality when no other cause of death is available, can a single point determination of a chemical be used? That is, only knowing, the tissue distribution of a chemical, what can be reliably said about toxicity? Using the data gathered in the Virginia Lidocaine embalmed versus nonembalmed cases, a positive answer

can be given to the question of this toxicity. As cases are compiled from other deaths, it is becoming increasingly obvious that:

- a. The fluid (blood?) collected at autopsy is a poor indicator of toxicity.
- b. Tissue levels, liver and brain at least, must be quantitated.
- c. Other fluids such as CSF, vitreous, etc., must also be quantitated.

by Robert V. Blanke, PhD
Medical College of Virginia

With the Departments of Surgery and Psychiatry — A study of substance abuse and effects of response to trauma treatment.

With L. Mutter, PhD, a post-doctoral researcher — (a) A study of the acute, subacute, and chronic toxicity of chlorocone alcohol, and (b) The efficiency of nonabsorbable, binding agents in promoting the excretion of persistent, organochlorine compounds.

With J. J. Saady, a graduate student — The effect of PCB's and other P-450 inducing agents on glucuronate metabolism.

With S. Bogema, a graduate student — Distribution of tricyclic antidepressants and their active, polar metabolites between plasma, erythrocytes, and brain tissues in animal models and humans.

Nominations Invited

The Awards Committee of the Toxicology Section of the American Academy of Forensic Sciences invites members to make nominations for the 1985 awards. These awards are:

Alexander O. Gettler Award for Analytical Achievements in Forensic Toxicology AND

Rolla Harger Award for Outstanding Contributions to Forensic Toxicology

The nominations for these awards must be made by a member or fellow of the section and the nominee must also belong to the section. The written nomination credentials of the nominee, and any letters of support, must be received by the Awards Committee Chairman by September 1, 1983.

The Trainee Affiliate Award, which is to be given to a graduate student or postdoctoral fellow who is currently a Trainee Affiliate will be judged on the basis of an original manuscript, submitted with the credentials of the nominee. All material must be received by the Awards Committee Chairman by September 1, 1983.

Please address all communications to:
Rosemary L. Alstott, PhD
Public Health Laboratory
521 Hathaway Building
Cheyenne, WY 82002
Telephone: (307) 777-7868

Minutes of Annual Business Meeting

October 14, 1982

CALL TO ORDER

The meeting was called to order by President Balkon at approximately 1:40 p.m. Dr. Balkon informed the members that copies of our present by-laws and proposed amendments, plus copies of the by-laws committee reports, were available at the entrance to the meeting room.

1981 MEETING

The minutes of the 1981 annual business meeting were published in the newsletter which was mailed to all members. Dr. Bath moved that these be accepted. Dr. Bednarczyk seconded and the motion was carried.

REPORT FROM THE BOARD OF DIRECTORS

A. The President reported that the Board and/or Officers met three times since the last annual meeting. He stated that: the 1983 meeting will be in Detroit and hosted by Dr. Joseph Monforte; the 1984 meeting will be in St. Louis, hosted by Dr. Alphonse Poklis, and will be a joint meeting with SAT; the 1985 meeting will be in Montreal, hosted by Bill Robinson, and will be a joint meeting with the CSFS; and the 1986 meeting is tentatively set for the Reno/Lake Tahoe area, hosted by Norm Wade and Dick Prouty, and will be a joint meeting with CAT, SAT, and NWFS.

The membership will hear reports from the "Acceptable Methods" (Agenda 4.b.) Committee and from Tom Rejent on the Survey of Toxicology (Agenda 4.c.)

A new brochure has been prepared to describe the SOFT Educational Research Award. It will be used to inform educational institutions of the existence of the award and to encourage prospective donors of such research to lend financial support.

Two workshops are being offered at this meeting. The third workshop on Capillary Gas Chromatography, which had been in the preliminary plans for this meeting, will be offered next year in Detroit, hosted by Dick Prouty with Dave Anderson and Dick Stafford on the faculty.

The second special SOFT issue of JAT was published and copies will be available for distribution tomorrow. The success of this issue is due to the contributions of the authors and also Dr. Lynch for reviewing manuscripts.

SOFT will be represented by Dr. Balkon at the forthcoming 1st Inter-American Congress in Forensic Toxicology meeting in Sacramento, California.

B. Treasurer's Report - Mr. McGee explained that we are presently in a transition stage to get the Treasurer's Report on a fiscal year basis instead of the calendar year basis it had been on. This will be in line with the other Society operations. A copy of the report for F.Y. 1981-1982 is attached to the minutes. Of the total in the SOFT checking account, \$1331.43 has been allocated to the ERA fund. The Treasurer's Report was accepted. Dr. Balkon added that it was the intent of the Board to allocate any receipts in excess of expenses from all future annual meetings to the ERA fund whenever possible.

C. There was no report from the Secretary.

COMMITTEE REPORTS

A. By-Laws Committee - Dr. Balkon explained that the Society is trying to gain tax-exempt status. (Such status will greatly enhance our efforts to get outside support for the Educational Research Award Fund.) To achieve this status, we must make certain changes in our by-laws.

Dr. Kurt M. Dubowski is Chairman of the By-Laws Committee. The other members are Tom Rejent and Dr. Yale Caplan. Dr. Dubowski stated that we cannot vote on any amendment at this meeting since the membership must be notified of the proposed amendments 30 days in advance of the meeting. At such a meeting, a vote of 2/3 of the members present is required. The vote could be done by mail, however then 2/3 of ALL members eligible to vote (i.e. full members) must approve the amendments to carry. Dr. Dubowski then went through the draft of the proposed amendments item by item and explained each to the membership. A copy of the draft was available to each member at the meeting. Any part or section of the by-laws which is not specifically addressed in the draft of the amendments remains unchanged.

Following Dr. Dubowski's presentation, a member asked, "Is there any real question as to whether we will be a (c) (3) or (c) (6) organization?" Dr. Dubowski responded that he did not believe we could qualify for (c) (3), so what we are really trying to attain is (c) (6) status.

Dr. Field pointed out that Ch. IV Sect. 4.A. was somewhat limited in the modes of conducting Society business. Dr. Dubowski responded that any method of communication can be used informally to gather ideas, support, etc. However, formal action can only be taken by those methods described since they are the only ones permitted by the laws of most states regarding corporations.

Dr. Rieders suggested that Ch. I Sect. 2.B. include mention of licensure in forensic toxicology and that an additional paragraph be added to declare that the Society wishes to promote the development and welfare of (all) forensic toxicologists.

Dr. Dubowski stated that this was beyond the scope of simple by-laws revision and was really a matter of policy. He stated his personal opinion on the matter, saying in effect that anything upon which the IRS can gnaw is a potential problem.

Dr. Caplan stated that other amendments can be made at a later date but that it is imperative that we move rapidly to gain tax-free status. Dr. Caplan also emphasized the importance of the changes made in Ch. III Sect. 7. He stated that these changes were patterned after those of AAFC and were found to be very workable.

Dr. Lappas asked if SOFT had a Code of Ethics. Dr. Balkon responded that we had none. Dr. Lappas stated that without a written code, Ch. II Sect. 3.D. was not enforceable. Some discussion followed. Dr. Dubowski stated that the language of II 3.D. was similar to that of many organizations and had been tested in the courts. Dr. Caplan stated that if we came upon a problem, we could develop a written code when required. He said he did not want to make the by-laws too detailed or un-

wieldable at this time.

Mike McGee reminded Dr. Lappas that II 3.E. is still in effect. That is, final action on an accused individual must be approved by 2/3 of the voting members present at an annual business meeting.

Dr. Balkon asked for a motion from the membership to enable us to accept the amendments to the by-laws by a mail referendum. Dr. Monforte made the motion, which was seconded by Dr. Bath. In the discussion following the vote, Dr. Bath wanted to be sure that the proposed amendments had been found satisfactory by our legal counsel, so that we would not waste the expense of a mail ballot on a document that needed further revision. Dr. Balkon assured him that this would all be processed through our lawyer before it was sent to the membership. The motion was voted upon and carried.

It was also moved and seconded that Ch. I Sect. 2.B. be changed to add "and or licensure" following the word "certification." The motion was carried.

A motion was then made and seconded to add the phrase "and promote the welfare of forensic toxicologists" following the word "Profession" in Ch. I Sect. 2.I. The motion was also carried.

B. Nation Survey/Standards Committee - Tom Rejent, speaking as well for the other members of the committee, thanked all those who participated. (Copies of the 1982 Survey were available for all in attendance.) Mr. Rejent deferred further discussion and comments until the presentation in the technical sessions.

C. Referred Methods Committee - Dr. Bednarczyk, as chairman of the committee, provided copies of the report. The committee also included Mssrs. W. Matusiak and B. Donnelly. Dr. Bednarczyk briefly described highlights of the report. President Balkon then asked for a motion to accept the report. A motion was made and seconded and the report was accepted. The matter was then open for discussion.

Dr. Rieders suggested that we add the word "quantitative" before methods. Much discussion followed regarding the definition of an "acceptable" method. Dr. Balkon reviewed the history of the choice of the term "acceptable" over other possibilities such as "recognized," "standard," etc. Dr. Rieders stated that when a given method is termed "acceptable," it, in the eyes of many, immediately gains respectability and any other method appears to be inferior. He suggested the use of the phrase "method validating program" in place of "acceptable methods." Dr. Caplan suggested that a mechanism be included to validate a method within one's own laboratory. Dr. Bednarczyk stated that this was contained in the report. Dr. Balkon stated that if an Acceptable Methods Committee was created by the Society, the committee would have to develop a document to be used when one wished to submit a proposed method for evaluation.

Dr. Balkon entertained a motion to direct the Officers and Board create a Committee to List Acceptable Methods (Formulate Necessary Documents to Implement the Process of Listing, etc.) Dr. Rieders made the motion and Dr. Bidanset seconded. Following some discussion, the motion was carried.

Minutes continued

Treasurer's Report

D. Membership Committee - The Chairman of the Committee, Dr. H. H. McCurdy, reported that since the last SOFT meeting we have received 28 applications for membership. Eleven were for Full Membership, 13 for Associate, and 3 for Student. All but one were accepted. The exception is still pending. This compares with 19 applications last year. The new Full Members are:

Timothy Moriarity - BioScience, Chicago, IL

John J. Spikes - Illinois Dept. of Public Health, Chicago, IL

Blythe Olson - Forensic Tox. Assoc., Pasadena, CA

Clint Crooks - M. E. Office, Baltimore, MD
Halle Weingarten - Lab. of Criminalistics, San Jose, CA

N. G. S. Rao - Office of the State Tox., Fargo, ND

Dennis Crouch - Center for Human Tox., Salt Lake, UT

Michael Peat - Center for Human Tox., Salt Lake, UT

Pierre Margot - Center for Human Tox., Salt Lake, UT

Irving Sunshine - Cuyahoga Cty Coroners Lab, Cleveland, OH

George Hiime - Dade Cty M. E. Office, Miami, FL (promoted from Associate to Full Member)

E. Liaison Report from ABFT - Dr. Blanck reported that four applications for certification are currently in process. A means was also developed to create an Emeritus status for diplomates who retire. In addition, 28 diplomates applied for requalification. One was declined, and two are pending. A new examination for qualification has been prepared. This will not be mailed out but will be given during meetings such as this one. In an attempt to economize on legal fees, Dr. Leo Goldbaum has become the registered agent of the Board.

F. ToxTalk Editors Report - Dr. Bidanset said it was planned to write three issues. He is prepared to write as many as six if there was enough input from the membership to warrant printing. Dr. Bidanset solicited contributions of news and information for the newsletter as well as any suggestion or comments on how to solicit more such participation from the members.

G. Grants and Endowment Committee - Dr. Balkon had previously mentioned the new brochure prepared by Dr. Hodnett, Dr. Hodnett's wife, Jan, and Jay Cohen. Dr. Hodnett explained the proposed uses of the brochure, i.e. to solicit contributions to the ERA Fund from industry and other likely donors.

H. Meeting Host Reports - 1983 host, Dr. Monforte, reported that the meeting in Detroit will be held at the Book Cadillac Hotel from Tuesday, October 11th, through Friday, October 14th. The room rates are \$55 for a single and \$60 for a double.

I. (There was no discussion of meeting sites at this point since the information was covered in the President's Report.)

J. Report of the Nominating Committee - This Committee was chaired by Dr. Caplan, with Tom Rejent and Dr. Reading as members.

Balance in Checking Account,
July 1, 1981 \$1944.52

INCOME:
\$3920.00 Dues and Application Fees
300.00 Transfer from previous Treasurer
177.03 Interest on Checking Account
85.50 Miscellaneous

\$4482.53 Total Income 4482.53

Total Funds \$6427.05

EXPENSES:
\$ 140.60 Board of Directors Meeting (2-82)
68.00 President's office expenses
185.00 Secretary's office expenses
213.21 Treasurer's office expenses
1348.86 Newsletter and printing expenses

524.27 Membership Directory
400.00 1982 Meeting Advance
300.00 Reception at AAFS Meeting (2-82)
78.00 Incorporation and Filing Fees

\$3283.94 Total Expenses -3283.94

Balance in Checking Account,
June 30, 1982 \$3143.11

N.B. \$1331.43 of the balance in the Checking Account is allocated to the Educational Research Award Fund.

Respectfully Submitted
Michael P. McGee
Treasurer



The report was mailed to the membership on September 8, 1982. The proposed slate was and is:

President: Everett Solomons
Vice President: Joseph Monforte
Treasurer: Michael McGee
(2 year term)
Members of the Board:
H. Horton McCurdy
Marina Stajic
(3 year terms)

Dr. Caplan then explained the nominating process and reasons behind some selections. A motion was made by Dr. Backer and seconded by Dr. Baselt to accept the report of the Nominating Committee. The motion was carried.

OLD BUSINESS
None.

NEW BUSINESS

Dr. Richard Pinder stated that the FDA has expressed a renewed interest in a registry of poisoning cases. Since we have done so much work in this area, Dr. Pinder suggested that SOFT attempt to get some federal funds to help in this area. He said he wanted to speak to people who had worked on the Registry of Human Toxicology and see if something could be worked out. Dr. Rieders mentioned that another source of such information is the EPA. They published a series of volumes on chemicals found in human biological specimens. Dr. Rieders suggested that EPA might also support such work. Dr. Balkon suggested that the recommendations be taken under advisement by the Officers and Board for possible action.

NOMINATIONS FROM THE FLOOR

The following members in good standing were nominated, with seconds from the floor, for election to the Board of Directors of the Society:

Dr. Kurt Dubowski
Dr. Fred Rieders
Dr. Jesse Bidanset

Mark Lewis
A motion was made and seconded to close the nomination for the Board of Directors. The motion was carried.

Dr. Balkon asked for nominations from the floor for other offices. There being none, a motion was made and seconded that the nominations be closed. This motion was also carried.

ELECTION

Plain paper ballots were distributed to the members, with instructions to vote for two of the six Board nominees.

As a result of the voting, the Officers and Board for 1983 are as recommended by the Nominating Committee.

ADJOURNMENT

The meeting was adjourned at approximately 3:45 p.m.

Respectfully submitted,
Robert D. Eberhardt
Secretary, SOFT

T-Shirts!

T-shirts from the 12th Annual
SOFT Meeting
are for sale!

\$3 each

in assorted colors and sizes

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