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August: pages 1243–1422
September: pages 1423–1554
October: pages 1555–1774
November: pages 1775–1954
December: pages 1955–2114
Charles D. Scott,¹ Robert S. Melville,² and Donald S. Young³

Many of the analytical concepts originally introduced in this symposium series are now extensively used in the clinical laboratory and perhaps, as such, no longer constitute “advanced concepts.” However, extensions and upgrading of these previous concepts are also an important part of the symposia. This has been true in this Eighth Annual Symposium, in which several papers have dealt with additional innovative use of chromatography, fast enzyme analysis, radioimmunoassays, automated measurement of bacterial growth, etc.

As in previous symposia, a major function is to maintain a continuing dialog between the various segments of health-care delivery, including clinicians, clinical laboratory scientists, instrument developers, and the commercial sector. Because advanced technology will have its greatest impact when it is commercialized, we were very pleased to have over 20 commercial firms represented at this symposium; several of the papers were presented by the staffs of instrument manufacturers.

The Eighth Annual Symposium on Advanced Analytical Concepts for the Clinical Laboratory was sponsored by the National Institute of General Medical Sciences, the Energy Research and Development Administration, and the Academy of Clinical Laboratory Physicians and Scientists. It was organized and directed by:

Cochairmen:
Charles D. Scott (Oak Ridge National Laboratory)
Robert S. Melville (National Institute of General Medical Sciences)
Donald S. Young (Clinical Center, NIH)

References
AMERICAN ASSOCIATION FOR CLINICAL CHEMISTRY

CONSTITUTION

Article I. NAME AND INCORPORATION
The name of the Association is the "American Association for Clinical Chemistry, Incorporated." Pursuant to the original certificate of incorporation, this Association shall conform to the provisions of the Membership Corporation Law of the State of New York.

Article II. PURPOSE
The purpose for which the Association is formed is to further the public interest by encouraging the study, advancing the science, and improving the practice of clinical chemistry. To achieve these objectives the Association shall:

1. Establish standards for education and training in the field of clinical chemistry.
2. Encourage the creation, promotion and maintenance of standards for certification of individuals in the field of clinical chemistry.
3. Encourage individuals in the field to pursue advanced studies and to engage in scientific investigations.
4. Promote scientific knowledge of clinical chemistry through meetings, seminars, discussions, reports and publications.
5. Initiate and participate in programs related to clinical chemistry that are in the interest of the public.
6. Promote programs for the recognition of the profession of clinical chemistry.

BYLAWS

Article I. MEMBERSHIP
1. This Association shall consist of Members, Honorary Members, Emeritus Members, and Student Affiliates.
2. Persons admitted as members shall a) possess an earned baccalaureate or higher degree in science or medicine or the academic equivalent of the above, and b) be engaged in professional activities commonly associated with the practice of clinical chemistry. (Membership in the Association is not to be construed as certification.)
3. Scientists who have attained distinction by their contributions to clinical chemistry may be elected as Honorary Members of the Association upon nomination by the Board of Directors and by vote of the Council. Such members shall have no vote nor hold office in the Association, but shall be entitled to certain privileges.
4. An individual who has been a Member in good standing for a period exceeding one-half the age of the Association (starting in 1949) or for 25 years, whichever is smaller, and who is retired from employment because of age or illness, may upon application and upon recommendation of the local section be elected an Emeritus Member by the Membership Committee of the Association. An Emeritus Member retains all the membership rights, is exempt from the payment of dues, but may receive the Association publications at a reduced charge.
5. Admission as a member shall be by application through and nomination by a Local Section, referral to the Association Membership Committee, endorsement and election by vote of the Membership Committee. An applicant rejected by a Local Section may appeal to the Association Membership Committee with all available information upon which the rejection was based. Where no Local Section exists, application may be made directly to the Association.
6. Reinstatement. After a lapse of more than one year subsequent to resignation, reinstatement shall be by the usual procedure required for election to any class of membership: Application, election, and payment of dues for the current year in advance. Within a period of one year following resignation, reinstatement to previous status may be affected by the payment of all indebtedness to the Association.
7. Only Members and Emeritus Members who are in good standing shall have any right, title or interest in the property and funds of the Association. Only Members and Emeritus Members may hold Association office or Association committee memberships. Only Members and Emeritus Members may represent the Association in professional matters.
8. Students, graduate or undergraduate, majoring in clinical chemistry or closely related academic disciplines, shall be entitled to become Student Affiliates at a discount in membership dues as long as they annually certify that they are undergraduates or graduate students doing full-time academic studies. "Full time" is to represent any combination of course, work, teaching and/or research assistantships or fellowships that the respective institution considers a full-time load. In all cases, the institution shall be acceptable to the Association.

Instructions for Completing Membership Application Form

The American Association for Clinical Chemistry is an organization of professional individuals who subscribe to the goals of the Association as outlined in the Constitution and Bylaws. The Constitution in its entirety and Article I of the Bylaws are reproduced here. Please read the Constitution, the Bylaws and these instructions before filling out the membership application.

1. Please print clearly or type your name, address including zip code, and phone numbers. Indicate whether you wish your correspondence at your home or business address.
2. Answer all questions or check the appropriate blocks. Missing information is the single most frequent cause for return of applications.
3. Summarize, in hours, your educational experience in the scientific disciplines. Other disciplines than are listed may be added in the space provided (i.e., physics).
4. If two members of the AACC are not available as sponsors, please attach two letters of recommendation from persons appraising your qualifications in clinical chemistry.
5. If you are applying for reclassification, the requirement for sponsors is waived.
6. If you are applying for reinstatement, please read Bylaw Article I-6.
7. If you are applying for EMERITUS, please read Bylaw Article I-6. Education, experience, and sponsors are waived.
8. Please attach a check for the appropriate amount to the application. If you desire a membership certificate, include an additional $3.00 in your check.

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Annual Dues</th>
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<tbody>
<tr>
<td>Member</td>
<td>$40.00</td>
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<tr>
<td>Student</td>
<td>$15.00</td>
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<tr>
<td>Emeritus (Journal Subscription)</td>
<td>$12.50</td>
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9. The AACC is composed of geographically distinct local sections (currently 21). For the most rapid processing of your application please submit it to the local section for your area at the below address. Local section secretaries are also listed in CLINICAL CHEMISTRY. If that box is blank or you do not know to which section to apply, you may return the completed application to the National Office as listed below.

10. You will be notified of the action on your application by the National Membership Committee.

Local Section Membership Chairman
Mail the application to this address.
If blank mail to National Office.

National Office
APPLICATION FOR MEMBERSHIP

INSTRUCTIONS: Before completing the application please read the instructions, the Constitution, and Bylaw I which deals with membership. Complete all questions on the application. You may supplement your answers with confirming information, bibliographies, and descriptions of responsibilities in clinical chemistry, but your application will not be accepted unless you have answered all questions. MAKE SURE THE APPLICATION CAN BE READ.

GENERAL INFORMATION (please type or print with black ink)

Dr. Mr.
Name: Ms. Last First Middle Age: Years
Mrs. Miss

Indicate Preferred Mailing Address:

Business Home

Phone Phone
 Zip Code Zip Code

Membership applied for: □ Member, □ Student Affiliate, □ Reinstatement, □ Reclassification from _________ to __________

QUALIFICATIONS FOR MEMBERSHIP. Acceptance for membership requires that each applicant meets certain minimum requirements in education and experience. Education and experience are considered together. Thus it is important that you complete the information requested below. If additional information is needed you will be contacted, but time would be saved if complete information relative to clinical chemistry is provided.

1. Education. If your degree is from a foreign university, please include a transcript or certificate of graduation.

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<tr>
<th>SCHOOL AND CITY</th>
<th>DATE ATTENDED</th>
<th>MAJOR</th>
<th>MINOR</th>
<th>DEGREE AND YEAR</th>
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Please summarize your educational experience in the following disciplines:

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<th>DISCIPLINE</th>
<th>QUARTER HOURS</th>
<th>SEMESTER HOURS</th>
<th>DISCIPLINE (OTHER)</th>
<th>QUARTER HOURS</th>
<th>SEMESTER HOURS</th>
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<td>CHEMISTRY</td>
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<td>BIOLOGY</td>
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<td>MATHEMATICS</td>
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FOR OFFICIAL ACTION:

DUES AMOUNT RECEIVED $ ____________
ROUTING: DATE RECEIVED ____________ BY ____________

DATE RECEIVED PLACE RECEIVED DISPOSITION BY

________________ ____________ ___________________ ____________

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Experience: Start with the present and include the last 10 years.

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Briefly describe your present responsibilities and activities in clinical chemistry. If the activity is in an area others may not think of as clinical chemistry, show the relationship of your work to clinical chemistry:

_____________________________________________________________________________________

Honors, scholarships, __________________________________________________________________

Certifications _________________________________________________________________________

Membership in professional societies ___________________________________________________

**Sponsors and Alternate References**

Signatures of 2 sponsors who are members of the AACC are preferable. However, if unavailable, names and addresses should be given of 2 responsible persons who have knowledge of your work and whom you have asked to write recommendations appraising your qualifications in clinical chemistry. These recommendations should accompany the application, if possible.

<table>
<thead>
<tr>
<th>SIGNATURES OF AACC MEMBER OR NAMES OF REFERENCES</th>
<th>ADDRESS</th>
<th>DATE SIGNED</th>
<th>AACC MEMBER?</th>
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**Greement**

I hereby apply for membership in the AACC and agree to abide by its Constitution and Bylaws, and to support its objectives. Payment of $_________ for the first year's dues is enclosed.

_____________________________________________________________________________________

Date ___________________________ Signature of Applicant _____________________________

Membership, unless otherwise requested, becomes effective on January 1 of the current year when final acceptance is before October 1, otherwise on January 1 of the following year. Membership includes a subscription to CLINICAL CHEMISTRY.

Please make checks for dues payable to the AACC. If you are now a subscriber to CLINICAL CHEMISTRY you will receive full credit for your subscription payment. Are you a subscriber? □ Yes □ No

If you wish a membership certificate ($3.00 each) □ Yes □ No. Please include this amount with the check for the dues.
Bio-Rad's FIA (FluorolimmunoAssay) offers same-day results for the quantitative determinations of the immunoglobulins G, A, and M in a variety of physiological fluids.

Our trade name for this precise FIA technique is Immuno-Fluor®. Reports from users of Immuno-Fluor in both clinical and research laboratories show excellent sensitivity over a wide operating range.

Compared to RIA

The Immuno-Fluor system is similar in precision and performance to RIA methods used for many diagnostic tests, but that's where the similarity ends. Since Immuno-Fluor is nonradioactive, there's no half-life problem. The shelf life on each of the three Immuno-Fluor assays is two years from date of manufacture!

Compared to RID

Immuno-Fluor offers decided advantages over RID plates. It's more precise, less expensive, and far faster.

Because samples of many different concentrations can be assayed at the same time, using the same reagents and the same standard curve, results are usually available in one working shift.

Wide operating range

Immuno-Fluor can measure IgG levels from 500 to 3500 mg% and IgA and IgM from 50 to 350 mg%. Samples that fall outside the range on the first pass are simply diluted differently and added to the next run. If you suspect at the outset that the samples are outside the normal range, you simply use different dilutions initially and still obtain results in 4 to 6 hours.

Immuno-Fluor is economical

Immuno-Fluor's initial cost is lower than any other immunoglobulin system. Immuno-Fluor also offers the lowest cost per test, and the cost advantage improves with increased testing. Furthermore, there's no wastage—a common occurrence with RID. There's nothing else to buy except the Immuno-Fluor kits. Assays are performed using your existing instrumentation—fluorometer, centrifuge and pipettes.

Immuno-Fluor comes in three different assay kits, one each for IgG, IgA, and IgM. Each kit is complete for 50 assays. Prices start at $41.50 per kit, or less than $1.00 per assay.

The technology

Immuno-Fluor by FIA combines standard fluorometric techniques with Bio-Rad's unique solid phase antibody called Immuno-beads®. These tiny microspherical supports are covalently coupled to antibody to human immunoglobulins to form a stable suspension on which fluorescence can be measured directly.

More on FIA

Bulletin 1039 describes Immuno-Fluor tests by FIA in detail. For your free copy, contact Paul Proom at:

BIO-RAD Laboratories
2200 Wright Avenue
Richmond, CA 94804
Phone (415) 234-4130
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By RIA in Serum

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- Available in 3 formats: 150, 300 & 500 A.T.
- Incubation time: 30 minutes
- Ether Extraction

PROGESTERONE KIT

125I

By RIA in Serum

- No Cross-reaction
- Available in 1 format: 100 A.T.
- Incubation time: One hour
- Petroleum Ether Extraction

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