

SIGNIFICANCE OF FEBS TO WORLD BIOCHEMISTRY

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Biochemistry, like other branches of natural sciences, has its roots in Europe. In the period between the two world wars, although America was beginning to play a more important role, European biochemists still dominated the subject, and discoveries that form the basis of the most elementary teaching of biochemistry were reported particularly in *Biochemische Zeitschrift* and the *Biochemical Journal*. The world's biochemists gathered together with the chemists and the physiologists in International Congresses organized by the International Union of Pure and Applied Chemistry, and the International Union of Physiological Sciences, respectively.

Biochemistry had, however, long become an independent discipline and a few years after the end of the 1939–1945 war, the first International Congress of Biochemistry was held in Cambridge in 1949, and steps were taken which led to the formation of an International Union of Biochemistry, constituted along the lines of other scientific unions affiliated with the International Council of Scientific Unions. The historic Cambridge Congress was followed by equally successful ones in Brussels (1952), Paris (1955), Vienna (1958) and Moscow (1961). At each of these Congresses the great advances in biochemistry that were being made in the two decades after the end of the war were reported to the assembled world's biochemists.

It is at first sight paradoxical that the first five Congresses were all held in Europe, because the balance in world biochemistry, as in many other matters, had shifted from Europe to U.S.A. Although individuals and individual laboratories in England, France, Germany and Sweden made contributions as important as any made in the U.S.A., the great bulk of the information that is now to be found in any reasonably comprehensive treatise on biochemistry was coming

out of the American laboratories, and was being reported in the *Journal of Biological Chemistry* (or in an international journal that happens to be published in Amsterdam) or to the Annual Meetings of the American Society of Biological Chemistry, held in conjunction with the American Federation of Biochemical Societies at Atlantic City. Indeed, in the 1950s these Easter meetings on the often inhospitable (only so far as the weather was concerned) Atlantic seaboard became perhaps the most important biochemical meetings.

The reason for holding the first five Congresses in Europe was non-biochemical and therefore trivial. Shortage of convertible currency or even simply money made it impossible for most European biochemists to travel to America, whereas our American colleagues, in the period of intensive Government support for pure scientific research, had less difficulty in this respect. By 1964, Europeans were becoming richer and the Americans were not yet becoming poorer, and with the help of most generous grants from American sources, it became possible to hold a Congress in New York in 1964. This, judged by many as the most successful Congress to date, was followed by an equally memorable one in Tokyo in 1967.

The movement of IUB from Europe between 1961 and 1970 created, however, a gap, since there was nothing corresponding to the Atlantic City meetings in Europe. There were, of course, regular meetings of the biochemical societies of the individual countries of Europe, but these were in no way comparable to the American meetings, first because they were usually held at intervals much more frequently than once a year and most importantly because the number of biochemists working on a particular topic was too small for a fruitful exchange. It also coincided with the gradual realization that the period of overwhelming

dominance by American biochemistry was coming to an end. Helped by generous grants from the U.S.A. and by a large number of young biochemists returning to Europe after one or two years post-doctorate training in the U.S.A., European biochemistry was beginning to catch up again. In biochemistry as in many other fields the idea was in the air that if European countries pooled their resources, they might be able to approach an equal footing with the U.S.A. I can remember that when in 1965 a group of Bari and Amsterdam mitochondriacs decided to organize a purely European symposium, we considered this a daring experiment, but worth trying since it gave the opportunity for those who did not yet make the 'first team' (those who were invited to give symposium talks at International meetings) to bring their work to the fore. I imagine that similar considerations were part of the motivation of those who founded FEBS.

In any case, FEBS clearly filled a gap, and it was an immediate success. In fact, it could be said to have over-filled one gap, because there are many Americans who now seem to prefer the FEBS yearly meetings to those of the American Society of Biological Chemistry, particularly when the latter are associated with the Federation Meetings. Furthermore, the vigorous young FEBS immediately began to take much of the limelight from the staid and rather too silent IUB. European biochemists, who through their membership of the national societies are members of FEBS, identified themselves with this body rather than with IUB, which does not have individual members but Adhering Bodies representing biochemical communities. One of the main impacts the FEBS has had on IUB and on its Adhering Bodies is to induce them to develop contacts with the individual biochemist.

The success of FEBS has stimulated the foundation of two other regional organizations, PAABS and FAOB, which leaves only Africa not covered in this way. Thus, most biochemical communities belong to two organizations, the regional and the mondial. The question needs to be faced whether this does not represent an unnecessary duplication of effort.

The short answer is that it could, were it not for the close liaison that exists between IUB and the regional organizations, out of which a clear division of function has emerged. It is clearly the task of IUB to deal with questions of biochemical nomenclature, to promote cooperation with biochemical journals, to

collaborate, especially in the International Council of Scientific Unions, with other disciplines, to promote biochemistry particularly in those countries not adhering to a regional organization, and in particular to coordinate activities that require a mondial approach. The IUB committee on biochemical Education with representatives from IUB, FEBS, PAABS and FAOB is a recent example of this. Since most of the income from IUB comes, directly or indirectly, from Governments, it has greater financial resources than the regional organizations. The latter, however, particularly FEBS, with a large individual membership in the regions, is in a better position to organize courses and to arrange regional collaboration. Both can and do organize large meetings and smaller symposia, but care is taken that they do not overlap. Many symposia are jointly sponsored by IUB and a regional organization. From the outset, FEBS resolved not to hold a large meeting in the year in which an International Congress of Biochemistry was held in Europe.

At one time FEBS offered a real danger to IUB. Its prestige was high at a time when, largely because of the abandonment of the projected International Congress in Rome, IUB's was low. Fortunately, biochemists recognized their responsibility to the mondial organization as well as to the regional and IUB was able to meet this challenge. Indeed, the intensive collaboration with the regional organizations has greatly strengthened IUB.

The foundation by FEBS of the *European Journal of Biochemistry* was also an event of great significance to world biochemistry. It was clear, at that time, that the existing journals would not be able to cope with the growth of biochemical literature in its logarithmic phase and that a logarithmic proliferation of biochemical journals threatened. By converting *Biochemische Zeitschrift* into a European Journal of Biochemistry the slack was immediately taken up, and indeed no major journal for the publication of regular papers in biochemistry has since been started, to the undoubted benefit of biochemists who are better served by a small number of large journals than a large number of small. The significance of this event was that it showed the way that biochemists working together could shape the structure of biochemical literature in the interest of biochemists. The establishment of *FEBS Letters* followed the same pattern. Biochemical publication is also a field where close liaison between IUB and the regional organizations is desirable.

It is a great surprise to learn that FEBS is only 10 years old. She seems to have been always with us. However that may be, IUB salutes her and congratulates her on reaching double figures. It looks forward

with lively expectation to the further development of the relationship as FEBS reaches her teens and majority.