ADDRESS OF WELCOME

It is both a pleasure and an honour to have been invited to give the Address of Welcome to the Second International Colloquium on Endocytobiology. The term 'Endocytobiology' was coined, I believe, by the organizers of the First Colloquium. They felt there was a need for a forum to bring together researchers in cell biology and researchers in intracellular symbiosis. 'Endocytobiology' seemed an appropriate term to cover both of these interests.

Just as there had been an explosion in cell biology in the last two or three decades, so also had there been an explosion in research into various kinds of intracellular symbiosis. It was not uncommon for the two types of researchers to have been interested in similar problems. Examples would include: transport mechanisms between organelle or symbiont and cytoplasm; interactions between nuclear DNA and organelle or symbiont DNA; and, regulation by host cell of organelles or symbionts, etc.

The organizers of the First Colloquium saw it as the logical culmination of a series of earlier symposia which had begun to attempt this bringing together of cell biologists and 'symbiologists'. In 1978, the Royal Society of London held a symposium "The Cell as a Habitat". This was followed in 1979 by "Cellular interaction in symbiosis and parasitism" at Ohio, and "Origin and evolution of eukaryotic intracellular organelles" at New York. However, these earlier symposia had a clear bias in one direction or another, and did not have the overt aim of bringing different disciplines together.

Thus, the First Colloquium was a unique opportunity to be more positive and definite in creating an appropriate forum for discussing problems of mutual interest to symbiologists and cell biologists. It proved to be a remarkable and stimulating success - so successful, indeed, that at the end of

the meeting, there was some discussion as to whether or not an International Society should be formed. Sober considerations prevailed, and there was a general feeling that it would be better to wait for three years until the present meeting to see if interest in the subject was still maintained, and if as many people were still interested in forming a Society.

Also, some of us thought it important to see if this subject called 'Endocytobiology' was in a dynamic and developing condition. One way to examine how the subject is developing is to compare the programme of this Colloquium with that of the 1980 Colloquium. There are a number of major topics whose treatment at this meeting is much expanded.

Viruses. Neither the First Colloquium nor earlier symposia had any proper consideration of viruses, despite their essential relevance to our understanding of relationships between nuclear and non-nuclear DNA. The bringing together of cell biology and symbiosis raises the very important question of role of viruses in introducing foreign DNA during the course of evolution. It is therefore heartening that this Colloquium has at least one session on viruses.

Organellar-nuclear interactions. This has obvious relevance to those of us interested in intracellular symbiosis. The fact that these were not properly stressed in the First Colloquium is remedied here, and indeed some fascinating evolutionary aspects are discussed in some depth.

Circadian rhythms. This is an example of a topic which is an all-pervasive phenomenon in cell biology but so far has received little or no consideration by symbiologists. Was symbiosis involved in the evolution of Circadian rhythms? When an association becomes established, how quickly do the Circadian rhythms of the symbionts come into synchrony?

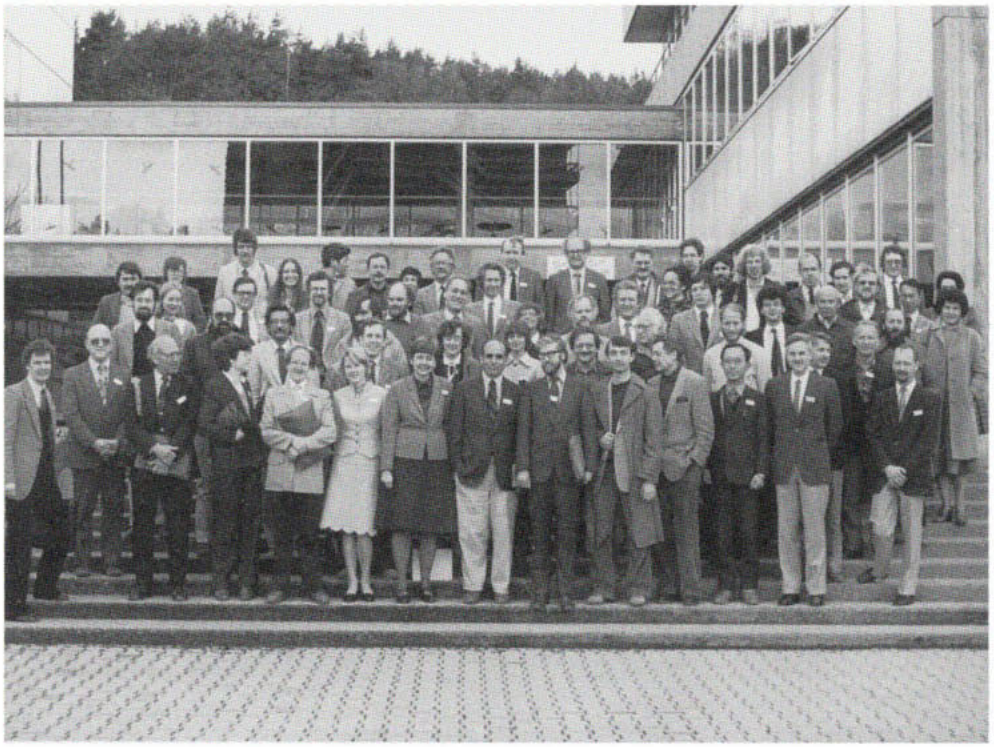
Comparative studies of symbiosis. Originally, symbiosis was considered a series of discrete phenomena. The fact that these phenomena may have features in common was highlighted in the last decade by comparative studies of carbohydrate transport in autotroph/heterotroph associations. This Colloquium now takes the matter a stage farther by considering other comparative aspects of symbiotic associations, such as regulation of symbionts, the establishment of an association, and the effects on host metabolism. Some associations, such as those involving plant roots, received fragmentary treatment in the First Colloquium, and they did not include mycorrhizae. Indeed, Agrobacterium was included in the same session as Paramecium bursaria! It is thus refreshing in this Colloquium to see more on Agrobacterium and Rhizobium, and especially to welcome the introduction of mycorrhizal associations.

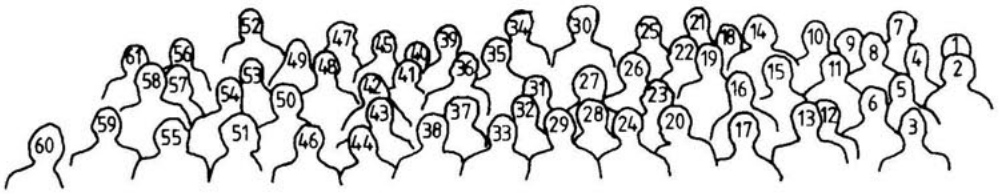
In general, this Colloquium has more on bacteria, and it is especially pleasing to see people talking on the mysterious symbionts of aphids and other insects. The Colloquium ends with a session in which there is considerable clarification of those single-celled organisms which may have been of great importance in cell evolution such as Prochloron, Archaebacteria, etc.

We may conclude then, that the subject of Endocytobiology is in a both rich and dynamic condition. It may therefore be now very appropriate to give serious thought to the founding of a Society, and this will be discussed later on in the Colloquium.

Finally, I wish to turn to our organizers, Professor Schenk and Dr. Schwemmler. We owe much to them, not simply for organizing the two colloquia, but for conceiving the basic idea of them. Their names should always be remembered in the history of Endocytobiology.

D. C. Smith





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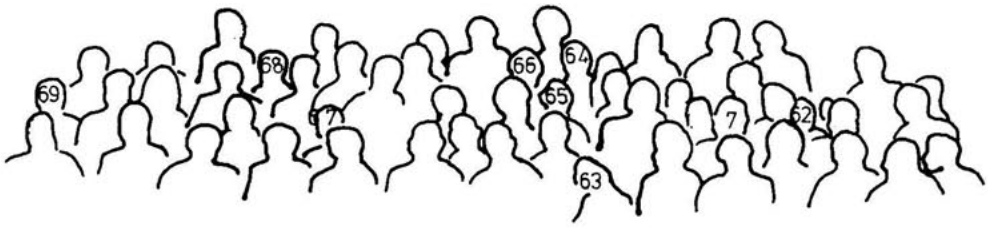

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