ASBMB: ‘down’-under the microscope

Biochemists and molecular biologists investigate all forms of life, such as viruses, bacteria, yeast, fungi, plants and animals. The field is progressing at a breath-taking rate and the possibilities of discovery continue to expand. Professor Leann Tilley, President of the Australian Society for Biochemistry and Molecular Biology (ASBMB) spoke to us at Research Features to further discuss this and how ASBMB is devoted to promoting research, new developments and education in biochemistry and molecular biology in Australia.

Progress in science is achieved through observation and experiment. Biochemistry and its close cousin, molecular biology, are experimental sciences that advance from well-thought out investigations in the laboratory. Biochemistry and molecular biology are dynamic, exciting sciences that contribute important information to biology, medicine, nutrition, agriculture, physiology, genetics, and immunology – practically all the primary specialties in the life sciences. They can be defined as the sciences concerned with the chemical basis of life as these sciences allow an understanding of how the natural world works.

Biochemists and molecular biologists are interested in the molecular functions of all living organisms, from the smallest virus to the largest whale and the ASBMB aims to build their interest and promote their research and molecular biology achievements to members of the academic, research and industry communities, and more generally to the public. The Executive group also seeks to advise Government bodies on policies relevant to biochemistry and molecular biology.

Why was ASBMB set up and what are its founding aims and objectives? The Society was established in 1955 as the Australian Biochemical Society. It underwent a name change to incorporate molecular biology in 1990. ASBMB aims to:

1. Promote, support and facilitate research.
2. Advance knowledge of biochemistry and molecular biology.
3. Facilitate the dissemination of information relating to research and teaching among professional biochemists and molecular biologists and students of these sciences by means of publications, by conducting conferences, seminars and lectures at local, national and international levels, and by facilitating interactions between Australian and international biochemists and molecular biologists.
4. Advise appropriate government, industrial and educational bodies on matters relating to research and teaching in biochemistry and molecular biology.
5. Inform the Australian community about research contributions to agricultural, chemical, food, medical and pharmaceutical sciences, and promote an appreciation of the roles of biochemistry and molecular biology in the maintenance and improvement of living standards in the Australian and international communities, and in enhancing the economy through the development of innovative technology.

I believe that answering the major medical and biotechnology questions of the 21st century will require convergence of the life and physical sciences and we embrace a large range of technologies, from drug and protein biochemistry to molecular cell biology and novel imaging technologies. I believe that answering the major medical and biotechnology questions of the 21st century will require convergence of the life and physical sciences, with particular reliance on advanced imaging techniques and biocomputational approaches. My lab would like to be part of the exciting developments in this area.

When ASBMB was first established back in 1955, it was known as the Australian Society for Biochemistry and Molecular Biology. It underwent a name change to incorporate molecular biology in 1990. ASBMB aims to:

1. Promote, support and facilitate research.
2. Advance knowledge of biochemistry and molecular biology.
3. Facilitate the dissemination of information relating to research and teaching among professional biochemists and molecular biologists and students of these sciences by means of publications, by conducting conferences, seminars and lectures at local, national and international levels, and by facilitating interactions between Australian and international biochemists and molecular biologists.
4. Advise appropriate government, industrial and educational bodies on matters relating to research and teaching in biochemistry and molecular biology.
5. Inform the Australian community about research contributions to agricultural, chemical, food, medical and pharmaceutical sciences, and promote an appreciation of the roles of biochemistry and molecular biology in the maintenance and improvement of living standards in the Australian and international communities, and in enhancing the economy through the development of innovative technology.

Hi Prof Tilley! How would you define your responsibilities in your current role as President of the Australian Society for Biochemistry and Molecular Biology (ASBMB)? As the President of ASBMB, I work with the ASBMB Council and the Executive Committee to promote research, new developments and education in biochemistry and molecular biology in Australia. The Executive group works to encourage excellence in biochemistry and molecular biology and to disseminate information about biochemistry and molecular biology achievements to members of the academic, research and industry communities, and more generally to the public. The Executive group also seeks to advise Government bodies on policies relevant to biochemistry and molecular biology.

From a more personal perspective, which areas of biochemistry and molecular biology do you focus your research on? My laboratory is working to understand the action of and resistance to the antimalarial drug, artemisinin. We embrace a large range of technologies, from drug and protein biochemistry to molecular cell biology and novel imaging technologies. I believe that answering the major medical and biotechnology questions of the 21st century will require convergence of the life and physical sciences, with particular reliance on advanced imaging techniques and biocomputational approaches. My lab would like to be part of the exciting developments in this area.

Leadership

Professor Leann Tilley, President of the ASBMB.
I am confident that the next decade will see biochemists and molecular biologists embrace new integrative approaches, which will change biochemistry and molecular biology from phenomenon-focused observational disciplines into a more quantitative, information-driven, holistic discipline.