

Editorial

From Molecular Biology to Molecular Cardiology ?

The medical community around the world is only now beginning to wake up to the slow realization that Molecular Biology has grown out of the laboratory and taken a seat right in the midst of clinical Medicine. Anatomy both normal and morbid has literally been broken down to the level of atoms and molecules. But the capability of studying ultrastructure had been around for a long time. The exciting new development has been the ability to characterize abnormalities at this level in disease states and to be able to manipulate changes for the better by using new tools like the recombinant DNA techniques.

Suddenly, the whole game is changing. Instead of the decades of slow clinical work and synthesis leading to indirect inferences, the disease states are beginning to be understood by looking directly at alterations at the cell membrane level, the myriads of enzyme systems and characterization of the structure of the proteins involved. A growing number of such proteins have been isolated, purified, cloned, sequenced and made amenable to modification. The very fundamentals are being attacked.

In Cardiology too, Molecular Biology has entered, though a little late, but, in a big way. There is great interest in interactions at the cardiac myocyte membrane level, the various receptor characterization and work on the contractile proteins. The whole area of lipid metabolism, in particular the revolutionary work on lipoprotein metabolism and endothelial regulation promises to answer the macroscopic atheroma problem at the molecular level. Who knows, we may even one day be able to modify the gene structure that makes some of us so vulnerable to the ravages of coronary disease or hypertension and so on.

The future Internist and the Cardiologist will certainly be much more of a biochemist and physicist than we are. I hope the clinician never dies, to be replaced by laboratory technicians as some people fear. I hope the clinician arms himself with this new knowledge and remains in charge. It would be a pity not to be able to tell the trees from the woods.

Editor