Chemistry Professors Involved in Research

by Mark P. Braniff

Three professors from the Canisius Chemistry Department are currently engaged in different types of chemical research. They are Dr. Frank J. Dinan, Dr. James E. Van Verth, and Dr. Peter M. Schaber.

Dr. Frank J. Dinan is presently working in collaboration with the Eastman-Kodak Company in two different research areas. The first involves nuclear magnetic resonance (NMR), which allows the structures of chemical compounds to be resolved. This procedure is of paramount importance to the study of anti-viral and anti-cancer agents.

Secondly Dr. Dinan is interested in the synthesis of polynucleosides. By the use of NMR he gets a picture of the molecule in minute detail, allowing him to recognize physical characteristics that could make the chemical commercially useful.

But above all there is a much better reason for doing research. Dr. Dinan feels that besides keeping abreast on new developments in chemistry, research allows him to get better acquainted with students. According to Dinan, "Research is a great way to work with students, and the best teaching device."

Within the past year Dr. Dinan has published three papers on his work, the last of which came out last month.

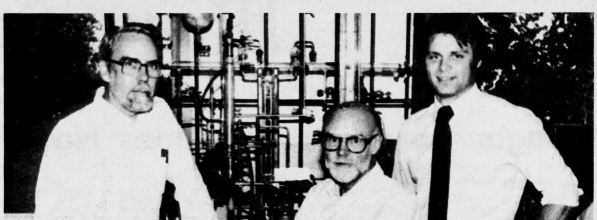
Dr. James E. Van Verth is presently investigating alternative methods of producing esters. This ongoing research has been funded by a Petroleum Research Film for the last three summers.

This research is valuable because most methods of synthesizing esters have very low yields. To find a cheap method of producing esters in good yields would benefit both the industries and medical technologies.

Dr. Van Verth feels that research allows him to work out an idea he finds challenging. "90% of the things don't work, you need optimism and patience, and when you find out what works, the payoff is satisfaction."

Dr. Peter M. Schaber is conducting research on two diferent fronts. The first problem, is how do plants take light energy and transform it into chemical energy. Chlorophyll does the transforming, but just how the mechanism takes place is what needs to be learned.

The benefits of this research are far-reaching. First, finding a mechanism that mimics a plant's production of energy could help reduce our oil dependence. Secondly, agriculture could boast bigger and more fruitful plants. Also plants could be adapted to areas which are not conducive to their growth. Looking to the future, plants could be adapted to an artificial environment, such as outer space.



Researching Scientists - Dr. Van Verth, Dr. Dinan and Dr. Schaber.

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Dr. Schaber's second project deals with proteins containing copper as one of the key atoms. This research is valuable because such proteins are related to Wilson's Disease and Menke'e Kinky Hair Syndrome.

This research's main drive is to find out the function of these proteins, thus providing answers leading to cures of the beforementioned diseases. Secondly the enzymes formed by these proteins are the best catalysts. Thus if the synthesis of these copper proteins is developed, there can be many commercial applications.

Dr. Schaber feels that it takes a certain type of person to be a chemist, and furthermore to do research you must enjoy your work. According to Schaber, "Scientists enjoy pushing back the boundaries of ignorance, chasing after the unknown, and possibly the ego trip."