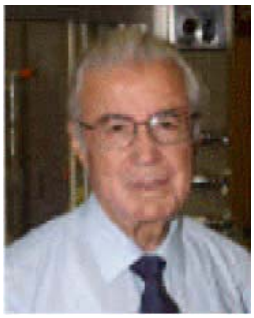
Professor Rudy Abramovitch

A Tribute



Rudy Abramovitch was born in Alexandria, Egypt. There he attended the British Boys' School and went on to Farouk 1st University in Alexandria. After an "in-and-out", but academically brilliant career-- (he was acting high school principal at the age of 17: but that is another story) -- he graduated "externally" as the top student in the University in his year. He also gained a first class honors B.Sc., London University External, Special Chemistry, 1950. When he was barred from attending the University in Alexandria, he carried out research at a local high school (Lyçée Français) with a human skeleton for a coworker! This work merited publication in *J.Chem.Soc.* The work demonstrated an early penchant for mechanistic investigation, and the venue revealed his close association with the French world. After these early endeavors, he joined Professor D.H. Hey's research group at King's College London, where he was the recipient of the Keddey-Fletcher-Ward studentship of the University of London. There he worked on Pschorr cyclizations and obtained his Ph.D. in 1953, the banks of the Thames providing a more tranquil backdrop than the banks of the Nile. Among extramural activities that our honoree has admitted to during this period, were appearances in goal for the Kings soccer team.

After the Ph.D., it was on to Exeter for a postdoctoral with K. Schofield to work on the synthesis of benzotriazoles. He spent one year at the Weizmann Institute in Israel, and then returned to King's College London on an ICI Fellowship. There he investigated applications of the Japp-Klingemann reaction, which led to a series of publications on tryptamines, carbolines, and related compounds.

Rudy joined the University of Saskatchewan in 1957 as an assistant professor and he rose to the rank of full professor within seven years. He held positions of Secretary, Vice-President, and President of the Organic Division of the Chemical Institute of Canada during this time. He was awarded the D.Sc. of the University of London in 1964. He continued his work on carbolines at Saskatoon. Furthermore, he became keeper of the department's infrared spectrophotometer in due deference to a mastery of the instrument gained in London and Rehovot. This resulted in several papers in the area of infrared spectroscopy of esters and heterocycles. However, he is most remembered in his Saskatoon period for his work on substitution reactions on the pyridine ring. This started with some pioneering work on the reaction of phenyllithium with 3-substituted

pyridines and a mechanistic rationalization of the nature of the products formed. Work on homolytic substitution followed. He made contributions to the understanding of the mechanisms of the Chichibabin and the Emertt reactions. He then moved to a study of nucleophilic substitution in halopyridines by oxygen and sulfur nucleophiles. He is proud to relate that some of his mechanistic proposals, which were considered rather provocative at the time, passed the close scrunity of Professors Ingold and H.C. Brown, who both visited Saskatoon during this period. Much of this mechanistic work set against the knowledge of the time is captured in a perspicatious review in *Advances in Heterocyclic Chem., Vol. 6.* On a practical note, his group was an early developer of the power of quantative gas chromatography.

Rudy moved from Saskatoon to the University of Alabama as research professor in the late sixties. There he built up rapidly a world-class very diverse research group. The focus of the group was on two major areas the reactivity of nitrenes and azides, and on the reactivity of pyridines—especially rearrangements of N-oxides. The chemistry of sulfonylnitrenes was delineated and new intermolecular reactions of arylnitrenes were discovered. He also found time to edit the second edition of *Pyridine and its Derivatives* in the Chemistry of Heterocyclic Compounds Series.

He moved to Clemson University as head of department in 1977 and he remained as head until 1981. His work at Clemson has been concerned with a study of nitrenium and oxenium ions, microwave work, and recently, studies of molecular recognition. He is editor of the multivolume series *Reactive Intermediates*. He was a Fulbright Fellow in France in 1983. He serves on several editorial boards, including *Heterocycles, Organic Preparations and Procedures International,* and *Advances in Heterocyclic Chemistry.*

Rudy Abramovitch, with his many excellent co-workers over the years, has been at the forefront of research in new areas in their pioneering stage. He has always tackled the most difficult problems (usually mechanistic) with the deepest thought. He always has demanded the best effort from his co-workers, both intellectually and experimentally. His mechanistic arguments are always based on the most extensive validated experimental observations. His command of the English (and French) language has resulted in his excellent scientific work appearing as erudite papers in the learned journals. One remembers ones best efforts at “writing-up” invariably drawing much red ink from his editorial pen - however, looking back, a good educational experience. He lectures in a style that gets one involved with his thesis, which has led many of his undergraduate students to chose a career in organic chemistry. Many of his former students and postdoctorals have gone on to success in academic life at universities world wide, and a lot of those who chose industry have risen to the highest levels in R&D in their respective companies.

Publications

First Paper – Work carried out in a high-school

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