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特別寄稿

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## A Tribute to Hiroyasu Taguchi

Wilfred L. F. Armarego

It is a privilege and an honour for me to write a few words for a former co-worker and close friend Hiro (Hiroyasu) Taguchi. Hiro first came to Canberra (Australia) in January 1970 when he was awarded a prestigious Australian National University Postgraduate Scholarship to carry out research towards a PhD degree under the supervision of the late Professor Adrien Albert FAA. The research was carried out in the Department of Medical Chemistry of the John Curtin School of Medical Research. This School is a world famous medical research institute which so far has had three Nobel Prize winners.

Several months after Hiro came to Canberra his wife Michi and baby daughter Ako followed. Their son Masato was later born in Canberra. Hiro soon introduced himself to me and we found that we had a common interest in Tetrodotoxin (the fugu fish poison). He had worked on the degradation products of Tetrodotoxin when he was a student of Toshio Goto and Professor Y. Hirata in Nagoya University. At that time I was working with simpler analogues of the toxin for physiological evaluation. Although he was carrying out research on Azapurines and related compounds with Professor Albert, Hiro regularly attended and actively contributed to my regular weekly research discussions. Hiro did excellent research which resulted in six research papers in the Chemical Society of London journals and in 1972 he was awarded a PhD degree in Medical Chemistry by the Australian National University.

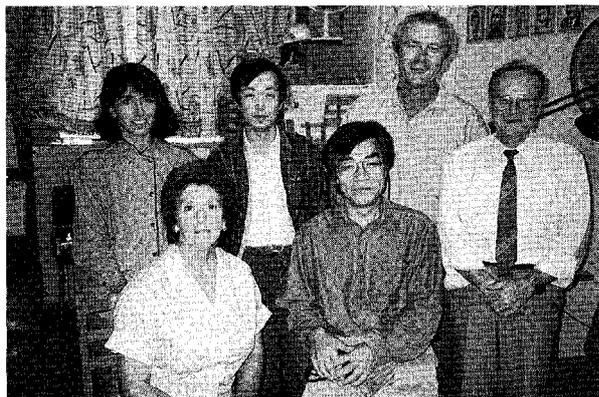
During his three years in Medical Chemistry my wife and I got to know Hiro and Michi very well and we felt very sorry when they left Canberra. However our life long association with them and their children continued (see below).

Hiro then proceeded to a Postdoctoral Fellowship in the School of Hygiene and Public Health, Johns Hopkins University (Baltimore, USA) working with Professor S.Y. Wang on pyrimidine photodimers followed by a Research Fellowship in the Chemistry Department of Harvard

University working with Professor Y. Kishi (a former mentor at Nagoya University) on Saxitoxin synthesis. After a short period as an Instructor in the Faculty of Pharmacology at Meijo University he was appointed Associate Professor in the Faculty of Home Economics at Kyoto Women's University in 1976 where he rose to Professor in 1986 and was Dean in 1999-2001. Currently he is also a Visiting Professor at Shiga University of Medical Science.

My association with Hiro Taguchi continued over the years. He spent a full sabbatical year (Apr 1982-Mar 1983) with me when the whole family also came to Canberra. My research interests had changed from mainly organic chemistry to biochemistry and molecular biology. Hiro also made this transition and was very successful in the synthesis of tetrahydrobiopterin and related substances as substrates or inhibitors, and in measuring their kinetic parameters for the ubiquitous enzyme dihydropteridine reductase. He spent further short periods of three months (1985) and two months (1986) during his Summer vacations working in my laboratory on related topics where he demonstrated that he was also a very good enzyme kineticist. During this period a former student of his, Miss Akiko Ohnishi, from Kyoto Women's University whom he had trained in research was awarded a Postgraduate Scholarship to carry out research under my supervision. She turned out to be an exceedingly talented student and did some first class research in organic chemistry, enzymology and protein biochemistry. She was awarded a PhD in Medical Chemistry in 1986.

In 1983 I was an invited Plenary Lecturer at the 9<sup>th</sup> International Heterocyclic Chemistry Conference in Tokyo and had the opportunity as a host of the Pharmaceutical Society of Japan to visit several centres. Hiro Taguchi kindly accompanied me on the lecture and visiting tour to Universities in Tokyo, Kyoto, Nagoya, Okayama and Kumamoto which was a memorable experience for me.



1993年当時の Armarego 研究室

右から ; Dr. Armarego, Mr. Paal (テクニシャン : 田口の35年来の友人), 田口, Dr. Yang (研究員), Ms. Davies (テクニシャン), Dr. Hashemi (研究員)

Again in 1992-1993 he spent a second sabbatical year as well as two Summer vacations in 1994 (2 months) and 1995 (2 months) with me. By this time I had further interests in a microsomal enzyme, glyceryl-ether monooxygenase which also required tetrahydrobiopterin as cofactor. We were the only research workers in the world actively investigating this rather difficult membrane bound enzyme. The known assays for this enzyme were complicated, involved and inaccurate. We developed a new, accurate and rapid spectroscopic assay for this enzyme which opened up an important research area in lipid metabolism. All the kinetic and other work had to be performed in the presence of detergents which were required to solubilise the enzyme and substrates in the aqueous buffers. Hiro synthesized a large variety of lipids where he proved to be an excellent stereochemist. Many of the ether lipids were substrates or inhibitors of the monooxygenase and he prepared several optically active lipids as well as stereospecifically deuteriated and tritiated ether lipids. This work succeeded in mapping the active site of this membrane bound enzyme as well as unraveling the stereospecificity of the oxygen transfer. All in all his collaboration had resulted in fourteen substantial research papers which were published in internationally reputable chemical and biochemical journals. Soon after my formal retirement, Hiro Taguchi and I wrote a definitive review on Glyceryl-Ether Monooxygenase in *Medicinal Research Reviews* (48 pages long with 191 references) in 1998 which has activated many researches in ether lipid metabolism.

Hiro Taguchi was a well known, affable and helpful figure in the John Curtin School of Medical Research and we all welcomed him with open arms whenever he came to Canberra. My research team and I have gained considerably from his experience and contribution to our research. On most occasions he was accompanied by his family. His wife Michi is a most charming person and has endeared herself not only to us but to a large number of people in Canberra. She made many friends here and was a member of many women social groups. She was very popular and much loved by everybody who knew her; she was very much "at home" in Canberra. Their children Masato and Ako have attended schools in Canberra and later Masato attended courses at the University of Canberra. After Ako had successfully completed her University degree in Japan she returned to Australia and enrolled at the Canberra School of Arts. She is an extremely talented artist and after the three years course she graduated with First Class Honours which confirmed her abilities.

My family and I had many happy experiences with Hiro and all his family, together and separately in Canberra and at our holiday residence in Rosedale on the New South Wales south coast. All of them are memorable and treasured times for us.

I am aware that Hiro will ease himself into retirement by doing some important medical research at Shiga University of Medical Science, and also by pursuing his hobbies such as choir singing and leather work. No doubt Michi will get Hiro into the garden of their beautiful new home.

I am sorry that I will not be able to attend Hiro's retirement celebrations but Pauline and I, and my three children who have got to know the Taguchi family well, very sincerely wish Hiro a healthy, long and active retirement.

Wilf.

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