

# MAPLETHORPE FELLOWSHIPS

## PROMOTING EDUCATION AND RESEARCH

By Alexander T. Florence, FRPharmS, and Christopher Marriott, FRPharmS

Since 1983, many young pharmacists and other scientists interested in pharmacy research have benefited from Maplethorpe fellowships. This article, published to coincide with a call for fellowship applications (see pA33), looks at the history of the fellowships and describes the work of previous Maplethorpe fellows

Cyril Wheatley Maplethorpe was President of the Pharmaceutical Society from 1963 to 1965. These were the latter years of his period as managing director of Allen and Hanburys, a position he held from 1944 until 1965. One of his abiding passions was education. Pharmaceutical education in the United Kingdom owes much to him for his strength of purpose in seeking an all-degree profession. To young graduates of today, it must seem bizarre that committed members of the Society had to fight for members of the profession to be educated to the standard of a degree. He had an ally in F. W. Adams, the Secretary and Registrar of the day.

On his death in 1983, *The Pharmaceutical Journal* wrote in a leading article (5 November 1983, p534): "If the late F. W. Adams was the architect of the modern pharmaceutical education system, C. W. Maplethorpe was the builder." The leader points out that there was a large or "at least vociferous" section of the membership who were against what Adams and Maplethorpe stood for. But it was not only with undergraduate education that he was concerned. He understood the need to train the next generation of academic pharmacists and he laid the foundation for what is probably a unique fund in the UK, directed for the benefit of pharmacists who wish to carry out postdoctoral research. Undoubtedly his own experiences will have informed his views strongly.

### BEQUEST

When he died in 1983, his will made provision through a bequest to the University of London specifically to establish C. W. Maplethorpe postdoctoral fellowships in pharmacy. The university was instructed to establish a committee appointed by the vice-chancellor with a representative of the Society, a member of the committee *ex officio* to select candidates "if possible registered pharmacists, for the promotion of pharmaceutical education or research at Chelsea College and the School of Pharmacy, University of London" after "considering recommendations from the heads of the schools concerned".

Cyril Maplethorpe qualified from the Society's school in 1922, being awarded the Society's bronze medal and the silver medal for practical chemistry. He was a founder member of the council of the School of Pharmacy after being part of the team that negotiated the school's transition to the uni-



Cyril Maplethorpe: builder of the modern pharmaceutical education system

versity. He was also a governor of (the then) Chelsea College, hence his dual loyalties to London's two pharmacy schools. The original bequest was added to by Margery Maplethorpe, Cyril's wife.

Mr Maplethorpe had recognised that a profession can only progress if its teachers are well-trained through research at PhD level and through postdoctoral training. His ambitions for undergraduate education had been won in 1964 when entry to the profession became by degree only. His endowment of postdoctoral fellowships was to provide another memorial.

Each year a committee chooses two or three fellows after open competition. The Royal Pharmaceutical Society is represented on the panel, which is chaired by a "neutral" appointee of the university. Competition is strong for these rare scholarships which, as its donor wished, encourage both teaching and research. Around 40 fellows have been supported since the beginnings of the scheme in October 1987. In the first year Derek Balon, Melwyn Eureby, Kenneth Ho and Annette Leeman were selected. The list (see Panel) includes several who have gone on to become academic pharmacists, which was one of the hopes of the bequest: Felicity Smith (now a reader in Pharmacy Practice, the Square), Colin Wright (lecturer in pharmacognosy Univer-

sity of Bradford), Amala Raman (senior lecturer in pharmacognosy at King's College London), Geoffrey Harding (senior lecturer, St George's Medical School, London), and Anya Hillery (first at the Department of Pharmacy, University of Brighton, and now lecturing in Spain, and co-editor of a new textbook in drug delivery and targeting). Others are Alison Lansley (lecturer in pharmaceuticals at King's), Imogen Savage (lecturer in pharmacy practice at King's), Chris van der Walle (lecturer in pharmaceuticals at the University of Bath, following a postdoctoral appointment in the Nuffield department of obstetrics and gynaecology, University of Oxford) and Ana Miljkovic (lecturer in microbiology, King's). This relatively small number of former fellows who are presently in academia perhaps reflects the paucity of new appointments in the past decade. The expansion of the degree programme coupled with an increasing average age of staff is already making itself felt in increased advertisements for staff so it is to be hoped that the Maplethorpe fellowships will be the launch-pad of the academic career of more young people.

### FELLOWS AND INTERESTS

Maplethorpe fellows come not only from the two London schools. The positions are advertised and candidates are short-listed by the committee members. The successful candidates have pursued a wide range of subjects: the committee does not impose quotas in relation to subject or school.

The emphasis has been on the natural sciences although there have been notable exceptions. In the early days, Derek Balon at King's and Geoffrey Harding at "the Square" were selected for work in pharmacy practice. Since Dr Harding was, unusually for Maplethorpe fellows, a sociologist, his topic had the then bold title "Social and behavioural pharmacy". He made significant inroads to the topic at a time when there was still scepticism in the air. He continues to collaborate with Dr Kevin Taylor of the School of Pharmacy, a professional relationship which has led to commentaries, papers and three books, the latest 'Pharmacy practice' having just been published. Dr Harding has written: "Being awarded a Maplethorpe fellowship has proved to be a seminal influence on my career as a social scientist working in primary health care. To my knowledge at the time I was the first sociologist to work in a school of pharmacy in the UK." He has been encouraged to see the development of

Professor Florence is dean of the School of Pharmacy, University of London, and Professor Marriott is from the department of pharmacy at King's College London

## Past and present Maplethorpe fellows

Derek A.J. Balon	King's	Computer based diagnosis of minor ailments
Melwyn R. Eureby	Square	War on worms
Kenneth.K.L. Ho	King's	Techniques of analysis of aerosols in medicine
Annette Leeman	Square	Optimising high dose methotrexate administration
Lam.Sui Ping	King's	Amine-imine tautomerism
Marguerita S.L.Lim	Square	Structural characterisation of the AIDS retroviral protease
Amala Raman	King's	Metabolic N-Hydroxylation of cyclic amides in plants
Felicity Smith	Square	Health care in residential homes of the elderly
Majed Shamat	King's	Metabolic and absorption studies
Colin Wright	Square	Development of anti-moebic and antimalarial agents
Geoffrey Harding	Square	Social and behavioural sciences in pharmacy
Prafal Jani	Square	Oral absorption of peptides and proteins
Caron Wood	King's	Collagen peptides and their role in oral tolerance
Mark Helliwell	King's	Lymphatic absorption
Klara Valko	Square	Parasite specific drug development
Alison Batts	King's	Respiratory cell culture system
Philip Gordge	Square	Isolation of phorbol ester kinase receptors
Imogen Savage	King's	Counselling provided by pharmacists
Janine Bragger	King's	Colonic oxidation-reduction potentials
Anya Hillery	Square	Novel particulate delivery systems
Jacqueline Miller	Square	Distribution of 5-HT and GABA receptor sites
Gary Tilbrook	King's	Aluminium chelators for neurobiological application
Susan Kenyon	Square	Vitamin B <sub>12</sub> -dependent methionine synthase in cancer formation and treatment
Belinda Krishek	Square	Modulation of GABA receptors
Fiona Mortimer	King's	Mechanisms of action of chlorhexidine
Christopher Richardson	King's	Sequence-based protein 3D structure preparation
Xian Zeng	King's	Dry powders for inhalation aerosols
Christopher van der Walle	King's	Cloning of the PepTi oligopeptide transporter
Cheryl Hemingway	Square	Regulation of acetyl-CoA carboxylase
Thiagarajan Sakthivel	Square	Bacterial protein mediated dendrimer carrier uptake
Reem Kayyali	King's	Mechanism of agranulocytosis induction
Atiya Rao (Shah)	King's	Cellular mechanisms of drug absorption from the lungs
Ana Miljkovic	King's	Normal bioactive secondary metabolites
Weng Li Yoon	Square	Transferability of near infra-red spectra for the identification of pharmaceuticals
John Malkinson	Square	Solid phase synthesis of C- and N-terminal Carbohydrate modified peptides and lipopeptides
Seah Kee Tee	King's	The use of biodegradable microspheres for the pulmonary delivery of hydrophobic drugs
Nicola Potz	King's	Elucidation of the genes involved in bacterial resistance acquired due to prolonged exposure to biocides
Zu Dong Liu	King's	Design and application of novel ion-specific fluorescent probes

what we now call "social pharmacy", the title of one of the Harding-Taylor books.

Felicity Smith and Imogen Savage were other winners of a "Maplethorpe" who presented with practice-related projects. Dr Savage, when asked about her fellowship said: "Cyril Maplethorpe changed my life." The fellowship allowed her to leave in 1992 her post at *The Pharmaceutical Journal* to join the practice research group at King's, finding out at that crucial time "what made community pharmacists tick". In 1995, she left to join a health authority as an audit facilitator, then to St George's Hospital Medical School and some work with the University of Kent.

Another early winner, Mel Euerby, now works for AstraZeneca. He says that the time as a fellow was a springboard for his move into pharmaceutical research in the area of chromatography and electrophoretic separation science with a major pharmaceutical company and it has helped him to become an international respected expert in electrochromatography.

Klara Valko's fellowship followed after a period as a lecturer at the school of pharmacy in Budapest, and during her fellowship she was able not only to pursue her new

research but to write up work that she had started in Hungary: she published 15 papers in the two years and three months of her fellowship. She works for GlaxoSmithKline but retains links with the School of Pharmacy as a visiting professor. She was awarded a doctor of science degree by the Hungarian Academy of Sciences in 1995 and started work for GlaxoWellcome, as it then was, in 1996. The fellowship served as a "milestone" in her career.

Caron Wood has worked for AstraZeneca since completing her fellowship and Mark Helliwell works for the same company. Gary Tilbrook is head of medical chemistry at CeNeS and leads their research in antioxidant and dopaminergic ligand design.

Xian Ming Zeng, who was one of the overseas pharmacists to gain an award, is now head of pulmonary research and development at Norton Healthcare and recently was co-author of a book entitled 'Particulate interactions in dry powder formulations for inhalation', which was centred on the work that he carried out during his fellowship.

Sui Ping Lam's fellowship was awarded in 1988 and he carried out his work under the direction of Professor John Gorrod on the mechanism and enzymology involved in

the N-oxidation of amino-aza heterocyclic compounds. He assisted with teaching on the undergraduate and MSc programmes at King's. He left in 1989 to join the Medicines Control Agency and he has no doubt that the valuable experience gained during his postdoctoral period has allowed him, with his knowledge of chemical metabolism, better to contribute to the MCA's objective to safeguard public health.

Janine Bragger combined microbiology and drug delivery in her work at King's investigating the role of azo-reductase in the delivery of drugs to the colon. This combination of topics has no doubt also assisted Dr Bragger in her role assessing new formulation and delivery systems in the MCA. Fiona Mortimer also works as an assessor for the MCA where her background in preservation and disinfection has been put to good use.

Colin Wright's fellowship allowed him to continue research in a field that was difficult to fund, in the area of antiprotozoal natural products. The travel grant associated with the fellowship helped to pay for a visit to Mongolia and China to learn more about the work of institutes of traditional medicine and its practice in these countries. The experience of research, travel and teaching undoubtedly helped him to secure an academic post at Bradford.

Amala Raman is another pharmacognosist who graduated from a fellowship to an academic post in pharmacognosy. She has established a research programme examining traditional plant remedies for diabetes, psoriasis and vitiligo as sources of new agents. She has coauthored with Professor Peter Houghton a 'Handbook for the fractionation of natural extracts'.

All fields in pharmacy have been covered, from pharmacology to pharmacognosy to pharmacy practice, with many of the new disciplines less readily classifiable by traditional labels. Reem Kayyali has investigated the mechanisms of agranulocytosis induction and Christopher van der Walle, the cloning, expression and structure determination of the major cellular domain of the PepT1 oligopeptide transporter.

Thiagarajan Sakthivel has probed the effect of bacterial ligands on the uptake and disposition of dendrimers that he synthesised at "the Square". He remains there as a senior research fellow, where he has been instrumental in attracting a number of Indian postdoctoral scientists to the school.

Bhavesh Patel is working at King's on a molecular biology approach to express an enzyme (2-arypropionyl-CoA epimerase) responsible for the conversion of the R-enantiomer of the "profens" to the active S-configuration *in vivo*.

"The Square" recently commemorated the donor of this valuable legacy, by naming their new lecture hall the Maplethorpe Theatre. The chancellor of the university, the Princess Royal, opened the theatre in the presence of those who were closest to the Maplethorpes. Cyril and Margery had no family but the wider group of Maplethorpe fellows who have benefited from their foresight and generosity are surely their heirs.