

George Warburton Ashcroft,
(MB ChB, DRCOG, MRCPedin, DPM, FRCPEdin, DSc, MRCPsych, FRSE)
formerly Director MRC Brain Metabolism Unit, Edinburgh (1970-78) and Professor of Mental Health, University of Aberdeen (1978-91);
born Bolton 1930, qualified Manchester 1953, died Aberdeen 18th November 2009

Appreciation by Professor Emeritus John Mallard, OBE, FRSE, FREng, DSc

Professor George Ashcroft was deeply interested in the brain, and how and where it performs its multitude of functions. He was amongst the first to realise the potential of acquiring information which could lead to a greater understanding of brain malfunctions to help his patients, when I was struggling in the 1970s and onwards to set-up in Scotland – the first outside London – a facility to image radio-active isotopes from a cyclotron, now known as PET (positron emission tomography), which is now widely used. George became a real ally, and when this was finally achieved, he was the first to start using it.

Unfortunately, the resolution which could be achieved at that time did not give sufficiently clear images to give meaningful results from his many attempts, which was a sore disappointment to us both. However, improvements in the imaging technology since then, and also the advent of functional MRIU (magnetic resonance imaging) has led to many of the problems which were his goals, now being gainfully attacked.

He was a real leader in his field, well ahead of his time.

Obituary by Prof John S Kelly, Division of Neuroscience, University of Edinburgh

The Department of Pharmacology (Materia Medica) in the University of Edinburgh dates from 1768 and during the first 200 years the holders of the chair did much to shape the subject(1);- Christison, Fraser, Cushny, Clark and Gaddum have all become, in essence, household names. George Ashcroft did much to uphold this tradition but somehow escaped joining their ranks as a household name except amongst a chosen few who had the good fortune to work with him or simply the privilege of occupying an office in the same building. He was undoubtedly amongst the first to pursue with vigour and skill the idea that the basis of mental illness was just like any other illness with a definable organic cause that could be characterised and quantified using physical methods; a pioneer of biological psychiatry.

In Edinburgh, as a young clinician with almost no laboratory training he built on the earlier work of Gaddum on brain amines, in particular 5-hydroxytryptamine (5-HT), and with others developed new methods which allowed him to argue that the mood of patients was correlated with the levels of 5-HT in the brain. He confirmed this concept by showing that a number of drugs that influenced mood in man altered the turnover of 5-HT in man and the levels of 5-HT in the brains of animals. As we will see later this was no flash in the pan; George like his predecessors not only retained this innovative streak throughout his career but motivated his colleagues to do the same.

Professor George Warburton Ashcroft, who has died aged 79 was born in Bolton, Lancashire, left school at 17 and went straight to university in 1947. His parents ran a greengrocers and it was during his fourth year at university studying civil engineering that a conversation with one of their customers led to his interest in psychiatry. She was secretary to the local consultant psychiatrist and arranged for him to attend the consultant's clinic. In order to enter medicine he had to take biology at night school

He graduated in medicine from Manchester University in 1953, registering as a doctor with the General Medical Council the following year, the same year that he married his wife Pat.

National Service followed, for which he served in Egypt, refusing to carry a weapon and being escorted on his rounds by an armed soldier. After military service George's career in psychiatry began in 1957 at the Royal Edinburgh Hospital. In 1958 he obtained the Membership of the Royal

College of Physicians of Edinburgh In 1959 he was awarded an MRC Fellowship for Training in Clinical Research. This included five months in Edinburgh University's Department of Pharmacology, nine months in the Pharmacology Laboratory at the ARC Institute of Animal Physiology in Babraham and one year in the MRC Clinical Endocrinology Research Laboratory, Edinburgh. During this period his work on cerebral amine metabolism was supervised by Dr Martha Vogt and Dr Tom Crawford. His was able to continue his research in the Pharmacology Department with the award of a Mental Health Research Fund Senior Fellowship (1962 to 1965). After which he was appointed Clinical Scientist in what became the MRC Brain Metabolism Unit, within the Pharmacology Department of Edinburgh University and became assistant director in 1967 and director in 1970. In 1976 he was made a Fellow of the Royal Society of Edinburgh.

The work on 5-HT was conducted with painstaking methodology and great insight. In the first paper in Nature in 1960 (2;3) we read "in one of the samples [we were able] to identify 5-hydroxyindolyl-3-acetic acid by paper chromatography, colour reactions and fluorescence" and in the 1966 Lancet paper(4) "The work was complete in 1960 and at the time posed considerable problems in the interpretation of the results, since we were unable to explain the gradient between ventricular and lumbar c.s.F. levels of 5-H.I.A.A., or the results after air-encephalography. Since this time, we have paid considerable attention to the mechanisms of addition and removal of 5-H.I.A.A. to c.s.F. in animals. " and " One advantage of carrying out this work in 1959 was that it preceded widespread use of antidepressant drugs in general practice, hence there was a large number of depressed patients available for study who were not taking specific antidepressant drugs." Ashcroft was clearly determined to steer clear of the bitter controversies surrounding the contemporary findings from other laboratories that claimed that in the brain of schizophrenics there was an abnormal accumulation of methylated amines (3) identifiable by the occurrence of urinary constituents yielding pink spots on chromatograms (5;6). Finally his demonstration that the turnover of 5HT was greatly increased by the administration of the amino acid L-tryptophan (7) and led to the introduction of a new therapy using L-tryptophan either alone or combined with other drugs, such as clomipramine and lithium, in severe depressive disorder(8). These treatments frequently produced dramatic improvement in chronically treatment-resistant depressive patients.

In spite of tryptophan being, in general, regarded as a safe medicine the persistent appearance of reports of adverse side effects from the ingestion of the amino acid led in the early nineties to warnings from the regulators and no new controlled studies of its use in depression have been published for about 40 years(8;9). However, current research has consistently shown that many people experience a temporary worsening of mood following the reverse, acute tryptophan depletion, and that concurrent use of antidepressant medication may exaggerate such mood responses. This is particularly true of women with anorexia or bulimia where acute tryptophan depletion which may occur on proprietary low calorie diets, intensifies the level of depression and the subjective urge to binge(10;11).

In parallel with his basic research, George ran a small research ward at the Royal Edinburgh Hospital, where he participated in the everyday assessment and treatment of patients. As a psychiatrist, he represented a brand of therapeutic optimism, which insisted that no patient was untreatable. In the presence of personality disorder, some of which would have been classed as 'borderline', he continued with his own pragmatic brand of psychotherapy. He made himself available as a lifeline to many disturbed patients who could phone him from any part of the country often at inconvenient hours.

In 1978 he and his family moved to Aberdeen when he was appointed Professor of Mental Health at Aberdeen University and Cornhill Hospital, a post he held until 1991. In spite of the savage cuts to Aberdeen's budget during the late seventies and eighties, at least equal to those in most UK universities, George managed to recruit a number of key scientists. John Besson initiated a pioneering imaging programme in collaboration with John Mallard's internationally leading Department of Medical Physics and Frank Smith's Department of Nuclear Medicine(12-18). Roger Makanjuola and Tomás Palomo joined the team to continue the pharmacological research initiated in Edinburgh(19-23).

The imaging studies allowed Ashcroft to successfully join the debate about the use of morphological changes in the brain to diagnose and manage senile dementia of the Alzheimer type (SDAT) and to distinguish patients with multi-infarct dementia (MID) from normal controls. The pharmacology expanded to encompass measures of other neurotransmitters including dopamine and vasopressin. This mix encouraged a number of junior psychiatrists-in-training to acquire scientific knowledge and skills and to become the obvious candidates for the next generation of Chairs of Psychiatry in Aberdeen, Dundee, Edinburgh, Newcastle and Oxford (24-30). Equally importantly, he trained a cohort of clinicians, psychiatrists and GPs, who now populate and energise many clinical centres in the country.

While the MRC Brain Metabolism Unit had included clinical beds and a large outpatient load, there was no tradition in Aberdeen for members of the Department of Mental Health to take general psychiatric responsibility for patients. However within two years of his appointment the Department was entrusted with the responsibility for Gordon District, which he transformed into an exemplary service. Decades before community psychiatry became fashionable, it was flourishing with GP outpatient clinics in Inverurie and Ellon, joint ward rounds in Inverurie Community Hospital and close liaison with the local authority social work departments. Finally he established a GP-run multi-disciplinary dementia assessment unit in Inverurie(30). In the absence of community psychiatric nurses, he educated general nurses, health visitors and GPs to take over the care of psychiatric patients, and to be good at it.

In the academic department undergraduate teaching and examination were rejuvenated, with an emphasis on clinical bedside experience forcing students to engage with patients by making a one-hour clinical examination the centrepiece of the psychiatry degree-examination. Students had to examine the (real) patient for 40 minutes in front of the two examiners, and then proceeded to take a 20 minute viva both on the clinical examination and issues, such as further assessment, differential diagnosis and management.

He retired, aged 65, but took up psycho-geriatrics, working in Inverurie where he set up a model for psycho-geriatric treatment to be rolled out elsewhere. Inverurie Hospital named the Ashcroft ward after him. Retiring for the second time aged 67, he continued to make active contributions to self-help groups: young people with diabetes, older patients and their relatives and to enjoy a lifelong love of cricket as well as gardening, fishing and music, particularly jazz.

During his long and distinguished career Professor Ashcroft created a cadre of dedicated young psychiatrists who went on to work around the world. He was a loyal, incredibly kind and loving family man, a father of four, daughter Suzy and sons Paddy, Blair and Michael, grandfather of eight and great-grandfather of two. He is survived by his wife Pat, 80, whom he met at a tennis tournament in Farnworth, Bolton: "He was absolutely wonderful. He loved his work, he really enjoyed it and was excellent at it. He would have kept on and on forever"

I am grateful to Donald Eccleston and Klaus Ebmeier for access to their rather more extensive account of George's clinical work submitted to The Psychiatrist.

John S Kelly

George Warburton Ashcroft, MB ChB, DRCOG, MRCPedin, DPM, FRCPEdin, DSc, MRCPsych, FRSE. Born: 16 January 1930. Elected FRSE: 1975. Died: 18 November 2009

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