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Catalogue of biographical material relating to

James Francis Tait FRS

(b. 1925)

and

Sylvia Agnes Sophia Tait FRS

(1917-2003)

by Timothy E. Powell and Peter Harper
NCUACS catalogue no. 128/1/04

Title: Catalogue of the papers and correspondence of James Francis Tait FRS (b. 1925), biochemist, and Sylvia Agnes Sophia Tait FRS (1917-2003), biochemist

Compiled by: Timothy E. Powell and Peter Harper

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GENERAL INTRODUCTION

PROVENANCE

The material was received from Professor J.F. Tait FRS in 2003.

OUTLINE OF THE CAREERS OF J.F. TAIT AND S.A.S. TAIT

The Taites were a rare example of a married couple both being elected to the Fellowship of the Royal Society. Even more remarkably they were elected together for their joint work; their careers ran together from the late 1940s.

James Francis Tait was born in Stockton-on-Tees in 1925. He was educated at the University of Leeds, graduating B.Sc. in Physics 1946 and receiving his Ph.D. in 1948. He lectured at the Department of Medical Physics, Middlesex Hospital Medical School 1948-1955 before being taken on to the External Scientific Staff of the Medical Research Council until 1958. In 1956 J.F. Tait married Sylvia Simpson, a colleague and fellow-researcher in the Medical School.

Sylvia Agnes Sophia Tait (née Wardropper) was born in Tumen, Russia, on 8 January 1917. Her father was a British agronomist and her Russian mother was a mathematician. The family fled Russia during the Revolution and arrived in the UK in 1919. She studied at University College London, 1935-1939, being awarded B.Sc in Zoology and thereafter undertook postgraduate research. In 1940 she married a fellow student, Anthony Simpson, who was killed in action a year later. She continued research, working in the Department of Anatomy, University of Oxford as assistant to J.Z. Young, 1941-1944 and then moved to the Courtauld Institute of Biochemistry in the Middlesex Hospital Medical School, London where she worked 1944-1955 before, with J.F. Tait, being taken onto the staff of the MRC in 1955.

In 1958 the Taites were jointly invited to go to work with G. Pincus at the Worcester Foundation for Experimental Biology, Shrewsbury, Massachusetts, USA. After a decade of productive research they returned to the UK and posts at the Middlesex Hospital Medical School in 1970. J.F. Tait was appointed Joel Professor of Physics as Applied to Medicine 1970-1982 and Sylvia Tait was Research Associate. Together they jointly headed the Middlesex Hospital Medical School Biophysical Endocrinology Unit 1970 to 1985.

In the early 1950s the Taites were part of an international scientific team which, with colleagues in Switzerland including Tadeus Reichstein, isolated and identified aldosterone (initially termed

electrocortin), a hormone secreted by the cortex of the adrenal gland, and the last of the major steroid hormones to be discovered. The identification of aldosterone caused widespread scientific excitement for the hormone is part of the complex mechanism used by the body to regulate blood pressure. Its isolation and identification opened up research in a wide range of medically significant areas such as the regulation of salt and water balance, blood pressure and cardiovascular disease. The Taits continued their joint research into aldosterone - a field they were to dominate for thirty years - and the adrenal glands both in the UK and then in the USA in the 1960s. On their return to the Middlesex Hospital Medical School in 1970 they continued research focused on the cellular functions of the adrenal cortex.

The Taits were both elected to the Royal Society in 1959. Joint awards also included the Tadeus Reichstein Award of the International Society for Endocrinology (1976), the Gregory Pincus Memorial Medal (1977) and the American Heart Association's Ciba Award for Hypertension Research (1977).

Sylvia Tait died in February 2003, shortly before an anniversary meeting to mark the discovery of aldosterone, which was then held in her honour.

DESCRIPTION OF THE COLLECTION

The chief component of this small collection is the unpublished typescript of the Taits' book 'A Quartet of Scientific Discoveries', which recounted a number of the significant scientific breakthroughs in which they were involved or witnessed at first hand. There are also obituaries of Sylvia Tait, curricula vitae of the Taits including lists of their publications, and a little further material relating to the fiftieth anniversary of the discovery of aldosterone in 1953.

LOCATION OF OTHER MATERIAL

The Wellcome Library for the History and Understanding of Medicine also holds correspondence between Professor Tadeus Reichstein, Organisch-chemische Anstalt der Universität Basel, and Sylvia Tait and James Tait, Middlesex Hospital Medical School, on the isolation of electrocortin (later renamed aldosterone), 1952-1959; abstracts of the letters, with explanatory notes; reprints. Reference: GC/224. 1 box.

Timothy E. Powell
Bath 2004

A.1-A.3 **OBITUARIES AND CURRICULA VITAE** **2003**

A.1 Obituaries of S.A.S. Tait 2003

The Times, 31 March 2003

Independent, by J.P. Coghlan and G.P. Vinson, 12 March
2003

Daily Telegraph, 26 March 2003

A.2 Curriculum vitae of S.A.S. Tait

Includes list of publications.

A.3 Curriculum vitae of J.F. Tait

Includes list of publications.

B.1-B.10 **'A QUARTET OF SCIENTIFIC DISCOVERIES'** **2003**

195pp typescript of unpublished book.

B.1 I. Introduction

B.2 Chapter II. Research on the structure of DNA, particularly
at King's College London

B.3, B.4 Chapter III. Aspects of the early history of aldosterone,
particularly at the Middlesex Hospital Medical School
(MHMS)

2 folders.

B.5 Chapter IV. Studies on oral contraceptives, particularly at
the Worcester Foundation for Experimental Biology
(WFEB)

B.6 Chapter V. The discovery of saturation analysis,
particularly at the Middlesex Hospital Medical School

B.7 Chapter VI. Recent personal research and Chapter VII.
General conclusions

B.8 General acknowledgements and references

B.9, B.10 Figures

2 folders.

C.1-C.3 OTHER BIOGRAPHICAL MATERIAL 2003

C.1 'Vaccination News' webpages on the credit due for 'photograph 51' of DNA 2003

J.F. Tait's discovery of aldosterone is mentioned, as is his stress on the role played by R. Gosling in the elucidation of DNA structure.

C.2 Copy of tribute to Sylvia Tait from programme of International Symposium on Aldosterone, Royal Society, London, 27-30 April 2003 2003

C.3 Interview with G.H. Williams, Professor of Medicine, Harvard Medical School and President of the Endocrine Society, on aldosterone 2003

6pp typescript.

This interview took place during the 85th Annual Meeting of the Endocrine Society, Philadelphia, USA, 18-22 June 2003. It marked the fiftieth anniversary of the Tait's' discovery of aldosterone and reference is made to this in the interview.