

News

21 Years of the Tenovus Institute

The Tenovus Institute in Cardiff is 21 years old. The building, completed in 1966, was funded by those "Good Samaritans of Wales", the Tenovus Organization, a charity founded in 1943 by 10 Cardiff businessmen (TEN-OF-US). The Tenovus Institute for Cancer Research, often referred to later as the Welsh Cancer Centre, was opened in 1967 by its patron, H.R.H. The Princess Margaret. The organisation appointed Professor Keith Griffiths as the original (and present) Director and committed itself to funding a research programme directed towards the aetiology, early detection and treatment of endocrine-related cancers. Almost 1500 publications and 100 postgraduate theses have resulted from this programme, including such topics as environment and cancer; cellular and molecular biology and treatment of cancers of the breast and prostate; canine mammary cancer; leukaemia; immunoassay development for the measurement of steroids, polypeptide hormones and tumour markers in biological fluids; chronobiology; mass spectrometry; quality control and chemistry.

In the early years, attention was focussed on environmental cancer, with the use of electron microscopy and related techniques for an assessment of particles or fibres or heavy metals in normal and neoplastic tissues. Of special interest were those forms of asbestos which may give rise to lung cancer, the possible dangers of glass fibre, the significance of siliceous diatoms in Japanese stomach tumours and occupational exposure to cadmium, which may increase the risk of prostate cancer.

In breast cancer, the legendary Bulbrook discriminant was pursued. A collaborative programme with Professor Sir Patrick Forrest was established to study androgen and 17-hydroxycorticosteroid excretion in urine and found that the levels of 11-

deoxy-17 β oxosteroid excretion were indistinguishable in women with no known breast disease, those with benign breast disease or those with primary breast cancer. In the early 1970s, the Institute evaluated the "anti-oestrogenic" activity of tamoxifen for the treatment of breast cancer, firstly by studying tumour regression in a dimethylbenzanthracene-induced rat mammary tumour model, and later by demonstrating that tamoxifen influenced the specific binding of oestradiol by receptor proteins of rat and human breast tissue. Similarly another success was research on the use of Goserelin for the treatment of breast cancer. Goserelin's potential value in combination therapy with tamoxifen has been reviewed. In prostate cancer, the Institute focussed on plasma hormone concentrations in "normal" men and those with benign prostatic hypertrophy or cancer; low testosterone and high concentrations of growth hormone indicated a poor prognosis in patients with metastatic disease. Studies of androgen metabolism in the prostate, the effect of diethylstilboestrol on the hypothalamic-pituitary axis and the possibility of a direct effect on the testis and prostate contributed significantly to our understanding of the genesis of prostatic tumours. In collaboration with ICI Pharmaceuticals, a phase III, randomised clinical trial demonstrated that monthly depot injections of Goserelin were as effective as bilateral orchidectomy for the management of metastatic prostatic cancer. The work of other cancer programmes and that of the analytical support groups have their own success stories, which are described in *Tenovus Institute—The First 21 years*.

Research embracing dietary phyto-oestrogens and their effect on endocrine cancer risk; lifestyle factors as they relate to breast cancer risk; Health Gain programmes for prostatic cancer; studies of new anti-oestrogens for the treatment of breast cancer; and major molecular and cellular biology programmes will lay the foundations for the next 21 years of scientific endeavour.

Douglas W. Wilson



Fig. 1.

**Tenovus Institute—The First 21 Years*. Cardiff, Tenovus Institute Publications, 1990.