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Urological Research

Report of the Second Meeting of the ESUOE

The second meeting of the European Society for Urologic Oncology and Endocrinology took place in Stockholm on 11 and 12 June 1982 in the New Huddinge University Hospital.

Again, as in previous meetings, a substantial number of papers of high quality on various subjects were presented, steroid metabolism and the prostate being one of the main items. *Pierrepoint* gave a good survey of the distribution of steroids in the prostate as well as the oestrogen and androgen receptors in epithelial and stromal cells. His findings concerning the amount of testosterone and its metabolites in the vena deferentialis and vena testicularis, which suggested a possible influence by the testis on the prostate, were most interesting.

Bruchovsky reported his research on the localization of 5α-reductase in stromal cells of the ventral prostate and epididymis of the rat, showing opposite findings. Two additional papers had controversial results about the presence of 5α-reductase in stromal and epithelial cells, which underlines the fact that more research in this field will have to be done.

Very interesting was the paper of *Coert* et al., who performed tests on old castrated rats, by which he could demonstrate that oestrogens and testosterone have a synergistic effect on the induction of androgen receptors in the prostate.

The work of *Rao* on the adaptation on an anaplastic Dunning-tumour cell-line to oestrogens also attracted attention.

After a good but very difficult introduction by *French* on cloning and structural analysis of genes encoding prostatein, four papers discussed several prostatic proteins. Most of the work on prostatic binding protein is done by *Gustafsson* and his co-workers and by Heyns. There seems to be agreement now on the existence and significance of this protein, but the question whether or not this is an artefact of the in vitro cell-free systems used remained unanswered.

As to hormone receptors and prostatic cancer there was a good lecture by *Liao* who is still doing excellent work on unraveling androgen receptor action in rat prostates. *Geller* produced the latest results on the regulation of androgen receptors in human prostate, pointing out that androgens regulate their own receptors.

Habib spoke about the reliability and limitations of receptor assay systems, pointing out that 250 mg of tissue is the minimum amount necessary for a 10 point Scatchard plot. But with a one point saturating dose assay the amount of tissue can be reduced to 25 à 50 mg, and *Poussette* told about his attempts to develop an assay on material from aspiration cytology. *Ghanadian* produced his results showing that the amount of nuclear androgen receptors correlates well with response to endocrine therapy, the cut-off point being at 500 fmol/mg DNA.

It seems to be difficult to demonstrate prolactin receptors, according to *Blankesteyn,* but maybe in the future we will be hearing more about it. The newest development is the use of LHRH, which influences gonadotropin secretion as well as prolactin.

There were a few papers on tumours other than prostatic cancer. *Otto* talked about renal cell carcinoma growing in nude mice. This tumour model seemed very suitable for growth inhibition studies with radio- or chemotherapy. *Kurth* had similar results but pointed out that he could only see growth inhibition when the carcinoma cells were implanted subcapsularly in the kidneys of nude mice.

Immuno-cytochemistry of prostatic cancer is still a very difficult issue, as most of the participants had to admit after the very good introduction to the subject by *Ackermann.* He concluded that cytotoxicity had to be due to T-lymphocytes and to a subpopulation of NK-cells, probably precursors that are transformed into active NK-cells.

Rübben warned against intravesical instillations with cytotoxic agents, as he saw in rats that after several instillations and with increasing dosages first a dysplasia and finally infiltrative bladder tumours developed.

Two papers were concerned with the prostatic acid phosphatase activity of prostatic cancer. *Aumüller* demonstrated that there are different iso-enzymes of prostatic acid phosphatase with different localisations in the cells. *v. Steenbrugge,* using the PC 82 tumour model, found that PAP activity is not significantly influenced by hormones.

Finally co-workers of *Gustafsson* told the audience of their work on certain promutagenic substances such as cytochrome P-450 which are able to form metabolites with DNA that have mutagenic activity. This promises important developments on the genesis of prostatic cancer in the future.

The organisation of the meeting in the hands of our host Prof. Gustafsson was excellent with a boat trip among the Stockholm Archipelago as one of the many much appreciated highlights.

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H. J. de Voogt, secretary of the ESUOE

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