94. STEROID RECEPTORS IN THE CYTOSOL OF HUMAN MENINGIOMA TISSUE.
Blankenstein, M.A.[1], Blaauw, G.[2], van Voorthuizen, E.M.[3], Mulder, E.[4] and Lamberts, S.W.J.[5] - Dept. of Biochemistry, Rotterdamsch Radio-Therapeutisch Instituut[1] and Depts of Urology[1,3], Neurosurgery[2], Biochemistry II[4] and Internal Medicine III[5], Erasmus University Rotterdam, The Netherlands.

The presence of binding proteins for oestrogens and progestagens in human meningiomas has been described. The aim of this study was to characterize this binding with respect to capacity, steroid specificity and affinity. Receptors were assayed by the dextran-coated-charcoal method with Scatchard plot analysis routinely employed for human mammary tumour tissue. Tissues from 20 patients with intracranial meningioma were studied. Oestrogen receptors were not detected, although they were found in the majority of mammary tumours. Binding of R-5020 was observed in 18 out of 20 meningioma cytosols. The binding was saturable (205±220 fmol/mg protein), of high affinity (K_d=1.5±1.0 nM) and specific for progestagens. The cross reaction observed for progesterone was 35%, whereas oestradiol, DES, R-2858, testosterone, dihydrotestosterone and cortisol did not cross-react. Megestrol acetate showed a cross reaction of 31%.
We have concluded that the progesterone binding protein is a receptor. Its occurrence without detectable oestrogen receptor levels is a remarkable observation. The presence of a progesterone receptor in human meningioma tissue may indicate that progestational therapy may be of potential value in cases which can not be treated by surgery alone.

95. ABSENCE OF SEASONAL VARIATION IN THE CONTENT OF OESTROGEN AND PROGESTERONE RECEPTORS OF HUMAN PRIMARY MAMMARY TUMOURS.
Blankenstein, M.A., Teulings, F.A.G.*, Henkelman, M.S., Portengen, H., Peters, H.A., van der Meij-van der Vlis, J. and Klijn, J.G.M.** - Departments of Biochemistry and **Clinical Endocrinology, Rotterdamsch Radio-Therapeutisch Instituut, Rotterdam, The Netherlands (*deceased).

A seasonal variation has been suggested to exist in the content of oestrogen receptors (ER) of human mammary tumours, although literature data on this subject are conflicting. No data on such a rhythm in the content of progesterone receptors (PR) of these tumours have been presented yet. Therefore, we analysed our data obtained during the past three years for the existence of such periodical fluctuations. ER and PR were assayed in human mammary tumour cytosols by the dextran-coated-charcoal method and Scatchard plot analysis. ER were found in 834/1046 (80%) of the samples tested, whereas PR were found in 598/938 (64%). We observed no rhythmic fluctuations in either the percentage of ER- and PR-positive samples, or in the mean receptor content of receptor-positive tumours from pre- and postmenopausal patients. The median ER content of mammary tumours from postmenopausal patients drifted upwards during the past three years, from 80 through 120 to 160 fmol/mg protein. For PR the drift was less pronounced. These drifts may be due to standardisation of the procedures used for collection and storage of tissue and assay of receptors and protein. We suggest that other laboratories inspect their data for the occurrence of the trends we noticed in our data.

96. A HUMAN PROSTATIC STEROID BINDING PROTEIN
Wotiz, H.H., Muller, R.E., and Traish, A.M.-Department of Biochemistry, Boston University School of Medicine, Boston, MA USA

In studying human prostatic androgen receptor we observed that DCC treatment of cytosol revealed a new steroid binding moiety different in character from the receptor. That this new binder is neither SSBG nor the receptor, is shown by its reactivity with R-1881, pregenolone and 2-methoxy estradiol. Its K_D is about one magnitude lower than the androgen receptor and it is found only in the prostate. It appears to be a protein, as shown by the effects of DNAse, RNAse, and trypsin, sediments at 4S on low salt gradient and is excluded from Sephadex G-25. The binding R-1881 to this protein is unaffected by mersalyl acid and is not eluted with 1M phosphate from HAP. It is present in BPH and cancer tissue. Attempts at purification on DEAE cellulose, HAP, gel-electrophoresis and HPLC will be described.