

#387 Prostate-specific antigen induction by a steroid hormone in T47D cells growing in SCID mice. Kogan, I., Ballinger, J.R., Diamandis, E.P., Melegos, D.N., and Rauth, A.M. *The Ontario Cancer Institute/Princess Margaret Hospital, ON, M5G 2M9, Canada, University of Toronto, Toronto, ON, M5G 2M9, Canada, Mount Sinai Hospital, Toronto, ON, M5G 1X5, Canada*

Prostate-specific antigen (PSA) is present in >30% of human breast tumors. Multivariate analysis showed that patients with PSA-producing tumors have a reduced risk for relapse, suggesting PSA to be a favorable prognostic marker. We established an *in vivo* model for PSA induction using the T47D human breast cancer cell-line growing in female SCID mice. After tumor development, these mice were stimulated with norgestrel for 5 or 7 days to produce PSA, and sacrificed on day 8. The prostate cancer cell-line LNCaP was grown in male mice as a positive control for PSA production. A sensitive immunofluorometric assay was used to analyze the PSA concentration in tumors and other tissues. Five- and 7-day norgestrel-stimulated mice had significantly greater tumor PSA levels (means: 47 and 140 pg/mg protein, respectively) compared to control mice (mean: 2.4 pg/mg protein). However, tumor PSA levels of stimulated T47D mice were significantly lower than those in LNCaP mice (mean: 9080 pg/mg protein). Background PSA levels were present in blood and normal tissue of norgestrel-stimulated/control T47D mice. This mouse model will be a valuable tool for investigating/screening new therapies for a subgroup of breast cancer patients who have significant PSA concentrations in their tumors.