#4196 Expression of a New Splice Variant of Prostase/KLK4 Is Associated with Tissues Regulated by Steroids. Christina V. Obiezu, Klaus Jung, Dionyssios Katsaros, and Eleftherios P. Diamandis. *Dept. of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, ON, Canada, Dept. of Obstetrics and Gynecology, Gynecologic Oncology Unit, University of Turin, Turin, Italy, Dept. of Pathology and Laboratory Medicine, Mount Sinai Hospital, Toronto, ON, Canada, and Dept. of Urology, University Hospital Charite, Humboldt University, Berlin, Germany.*

Prostase/KLK4, a recently discovered member of the human kallikrein gene family, has initially been demonstrated by Northern blotting to be expressed almost exclusively in prostate tissue, and is upregulated by androgens in the LNCaP prostatic carcinoma cell line. Subsequently, our group has shown that this gene is expressed in many other human tissues, as well as in the BT-474 breast carcinoma cell line where it is upregulated by both androgens and progestins. Expression of KLK4 has proved to be an independent indicator of poor prognosis in grade I and II ovarian tumors. During our efforts to characterize KLK4 at the protein level, we have identified a new splice variant of this gene which is the result of an intronic segment retention after coding exon 2. This splicing creates a stop codon (tga), putatively leading to premature termination of translation at amino acid 75. To characterize the expression of the splice variant in several tissues, commercially available total RNA was reverse-transcribed into cDNA. Using primers specific for this splice variant, we demonstrated that its expression was much more restricted than that of its native counterpart, with detectable expression occurring only in steroid-regulated tissues such as the prostate, uterus, and breast. Currently we are characterizing its expression in the respective cancerous tissues to examine its relevance as a marker of malignancy.