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With the use of genomic microarrays covering the 18q21-18q23 region, we have performed array comparative genomic hybridization (array CGH) experiments using prostate cancer specimens and have identified a copy number gain at 18q22.1. This region includes the gene for cadherin 7. The cadherins are a superfamily of transmembrane glycoproteins that mediate cellular adhesion. We are developing a transgenic mouse that overexpresses cadherin-7 to determine the role that increased copies of this gene plays in prostate cancer progression.

We are also investigating the homozygous loss of sequences at 18q detected by array CGH in 58% of prostate tumors and 70% of breast tumors. We have identified a novel transcript that is encoded in this region of loss and are in the process of characterizing this transcript.

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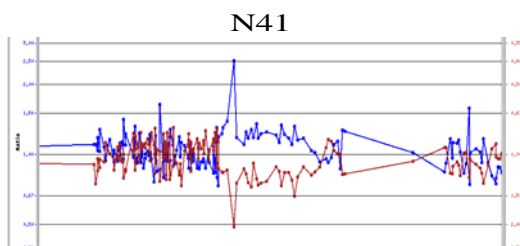
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Array comparative hybridization ratio plot from a prostate cancer specimen showing regions of altered copy number at 18q.