

BREAKTHROUGH SPECIAL FEATURE: NVC I SCIENTIFIC RESEARCH UPDATE



Report from the Director

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The Nevada Cancer Institute is committed to making a difference in finding the cure to cancer through on-going, thoughtful clinical and science-based research. In this edition of Breakthrough, I am proud to begin reporting on some of the research that is underway. My colleagues will look forward to further discussing the outcomes of our research in future editions of this publication.

CURRENT RESEARCH

We have opened our laboratory in Las Vegas on the campus of the University of Nevada (UNLV). Research co-authored by David C. Ward, Ph.D. and Patricia Bray-Ward, Ph.D. of the Nevada Cancer Institute has identified four analytes that can provide early detection of epithelial ovarian cancer (EOC) in women before they present with physical symptoms. The breakthrough study "Serum Protein Markers for Early Detection of Ovarian Cancer" was reported in the Proceedings of the National Academy of Sciences on May 9, 2005.

Ovarian cancer is one of the leading cancers and detection before symptoms are manifested is difficult. With researchers from Yale University and George Washington University the Wards, husband and wife researchers, identified that leptin, prolactin, osteopontin, and insulin-like growth factor-II can make possible the early detection of EOC before onset of symptoms.

Six research technicians are conducting research in areas such as high-throughput genotyping studies with robotic instruments; New serum biomarker screening using blood collection from patients; Identifying haplotype in HLA locus on human chromosome 6 that confers 10-fold increased risk of developing autism

CLINICAL TRIALS OFFICE

We have initiated six new clinical trials opened with 12 additional clinical trial protocols pending IRB approval. Multiple other clinical trials initiated earlier have been completed and published. To support clinical trial research we have established and opened a practice at Summerlin Medical Center.

Our researchers are evaluating the role of Uridine Phosphorylase (UPase) in the development of breast tumors and in the regulation of uridine homeostasis and pyrimidine nucleotide metabolism. The use of NMR imaging and spectroscopy (^1H and ^{19}F) to evaluate tissue distribution and metabolism of drugs in tumor versus normal tissue as well as monitoring the accumulation and proliferation of Salmonella (gene therapy vector) in tumors. We are conducting testing of gene therapy vectors containing drug activating proteins such as cytosine deaminase and orotate phosphoribosyl transferase.

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