

## THE RALPH AND BETTY ENGELSTAD CANCER RESEARCH BUILDING

Nevada Cancer Institute (NVCi) is the official cancer institute for the State of Nevada. A nonprofit organization dedicated to treatment and research, NVCi is committed to reducing the burden of cancer by pursuing the development of a comprehensive cancer center, as defined by the National Cancer Institute.

NVCi has a growing campus that includes a 142,000-square-foot treatment and research facility that opened in September 2005. A second facility, the 100,000-square-foot support services building, houses administrative departments such as Communications, Development, Finance, Human Resources and Information Technology.

The Ralph and Betty Engelstad Cancer Research Building is dedicated entirely to cancer research and will house up to 40 laboratories upon completion. Two floors of the three-story building and a full basement have been finished and will be occupied by NVCi research faculty starting in October 2009.

Concurrent with the development of a clinical program, NVCi has recruited research investigators from the most prestigious academic programs in the country to establish a solid research program currently focused on Drug Development and Biomarkers/Genetics.

The **Drug Development Program** represents the translational research component of NVCi. This program currently includes Clinical-Preclinical Pharmacology, Experimental Therapeutics, Research Imaging and the Inter-departmental Phase I Program. The tight interaction among the various programs and departments at NVCi, and the collaborative environment of the Institute has been critical to identifying new targets and developing new molecules with the goal of shortening the entire process of drug development.

The overriding research objective of the **Biomarkers/Genetics Program** is to develop better methods to diagnose early-stage cancer, establish better tools to monitor disease progression, identify new biological targets for drug intervention and to reduce the adverse side effects of radiation and chemotherapy. Models have been established to identify potentially new therapeutic targets, dissect regulatory pathways important in cancer initiation, progression or metastasis, or to develop new approaches to reduce the adverse side-effects induced by radiation or chemotherapy. The latter includes the exploration of induced pluripotent stem cell-based therapy to repair cellular or tissue damage induced by such treatments.





## VISION

The Ralph and Betty Engelstad Cancer Research Building owes much to the Engelstad Family Foundation, formed to honor the memory of Ralph Engelstad, Las Vegas casino/hotel owner and operator. The Foundation's philanthropic gift brought this project to reality and is helping make it possible for NVC I to fulfill its research mission by meeting the challenge of cancer in a high-tech setting with the most current equipment and sophisticated laboratories available.

## RESEARCH BUILDING PHYSICAL SPECIFICATIONS

- A 184,000-square foot facility, three-story with a full basement each floor of 46,000 square feet, housing 38 BSL-2 laboratories and a BSL-3 facility for research

Besides laboratory space, each floor features a series of support spaces to include:

- Autoclave rooms for glassware sterilization and biohazard material treatment
- Cold rooms for procedures such as protein purification and crystallization
- Service rooms for microscopy/cell culture, equipment and for small procedures
- Conference rooms
- Offices for research faculty and staff

## FUTURE

Since its opening, NVC I has been committed to obtaining the prestigious designation of a National Cancer Institute comprehensive cancer center. To continue this growth trajectory the Institute will house several new research programs in the Engelstad Building, including a team devoted to research in Lung Cancer.



**Nevada Cancer**  
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