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ARRTI member Thakor presents on his cancer research program

The research done by Assistant Professor of Biochemistry, Dr. Nehal Thakor, here at the University of Lethbridge explores the connections between cancer and the regulation of gene expression.

“Our goal is to understand exactly the fundamental mechanisms by which cancer cells escape normal regulation of gene expression, and how we can apply this understanding to the problem of therapeutic resistance in cancer,” says Thakor, Campus Alberta Innovation Program (CAIP) Chair of Synthetic Biology and RNA-based Systems. “With this understanding in place, we can develop better therapeutics for some of the deadliest cancers, like glioblastoma, that use these mechanisms.”

As a long-standing member of the Alberta RNA Research and Training Institute, Thakor will be presenting on this research in the ARRTI Speaker Series on Monday, May 27 at 1:45 p.m. in room C640 in University Hall. His talk is titled *Regulation of mRNA translation: from mechanism to cancer cell survival*. Everyone is welcome to attend.

The regulation of which genes are expressed and to what levels is a key element for healthy cellular processes. If certain genes are under- or over-expressed, they can produce either too little or too much of its protein product, which can lead to various disorders including cancer. This regulation can occur in several manners, but the focus of this research is on the regulation of messenger RNA (mRNA). The genetic information, in the form of DNA, is transcribed into an mRNA molecule to serve as a template for translation into a protein product. The amount of mRNA produced, as well as the rate at which it is translated into protein, are both levels at which regulation can occur.

The production of protein through abnormal translation initiation is one of the key elements in resistance of cancer cells to chemotherapy and radiotherapy agents. The Thakor lab studies the mechanisms of this abnormal process to understand how this resistance develops.

For more information about the Thakor lab, check out the [ARRTI website](#).

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