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Podcast Transcript
Episode 34

Hello *Mollie Medcast* listeners and welcome back to the *Mollie Medcast*. The *Mollie Medcast* is the podcast for the biomedical journal, *Molecular Medicine*. My name is Margot Puerta, Managing Editor here at *Molecular Medicine* and your podcast host. In this week's podcast we'll be looking at three research papers: "Gene Expression In Recurrent Respiratory Papillomatosis," "Bcl-2 Surface Membrane Expression In Chronic Lymphocytic Leukemia," and last but not least, "Burn Injury And Wound Healing".

Here at *Molecular Medicine* our mission is to publish novel work that's concerned with understanding the pathogenesis of disease at the molecular level. We hope this understanding may lead to the design of molecular tools that could be used for disease diagnosis, treatment and ultimately prevention. Manuscripts submitted to *Molecular Medicine* should maintain this focus, and if you're interested in submitting a manuscript to us, please visit our website for information, www.molmed.org.

So let's start with our first paper for this week's episode:

Gene Expression In RRP

RRP or Recurrent respiratory papillomatosis is primarily caused by the human papillomavirus, types 6 and 11, and what happens in this disease is that the viruses induce tumor growth in the larynx and sometimes in the lower respiratory tract. Now, the tumors are benign, but they still cause significant morbidity and on occasion, mortality. And, this is because the tumors are bulky tissues and they block the airway. The standard treatment is surgery to remove the papillomas, and that's so that the patient doesn't suffocate. Unfortunately, after you remove the tumors, they come back. The interval between surgical intervention varies between patients, ranging from anywhere between 3 weeks to several years. In order to identify novel targets for future therapy, Dr. James DeVoti and his colleagues established transcriptional profiles for actively growing papillomas. The title of their paper is, "Immune Dysregulation and Tumor-Associated Gene Changes in Recurrent Respiratory Papillomatosis: A Paired Microarray Analysis." The results support the role of a systemic TH2-like adaptive immune response and suggest a role for altered innate immunity in this disease. Dr. DeVoti and his colleagues also identify possible targets for future therapeutic interventions in recurrent respiratory papillomatosis.

The next research paper in this podcast deals with:

Bcl-2 Surface Membrane Expression In CLL

Chronic lymphocytic leukemia, or CLL, is a cancer which starts out in cells in the bone marrow and then spreads to the blood.^{1,2} It's a more slowly progressing cancer compared with some of the other cancers that are out there. B cell lymphoma 2, more commonly called, Bcl-2³ has been widely studied in oncology since its discovery in follicular lymphoma cells. Bcl-2 can locate as an integral mitochondrial membrane component. Its primary role there is to block apoptosis by maintaining membrane integrity. In this work, Dr. Brian McCarthy and his colleagues demonstrate the presence of Bcl-2 on the surface membrane of human chronic lymphocytic leukemia B cells. Although the function of cell surface-associated Bcl-2 is not clear at this time, its appearance primarily on cells undergoing apoptosis suggests a relationship between surface membrane re-localization and

the apoptotic process.

Burn Injury And Wound Healing

Even though patient care for burn injuries has improved, delayed wound healing remains one of the major complications associated with burn injury. While it's obvious that healing of the burn site is essential, the healing of distal injury sites is also important. This could include things like surgical interventions for skin grafting. In this work, Dr. Martin Schwacha from the University of Texas Health Science Center at San Antonio and his colleagues from the University of Alabama at Birmingham, explored the mechanisms of distal wound healing. They found some changes in the wound inflammatory response that correlated with reduced levels of hypoxia inducible factor (HIF)-1 α . This suggests that therapeutic interventions which could increase the hypoxia inducible factor (HIF)-1 α may improve the healing process and warrant further investigation.

That's it for this week's episode of the Mollie Medcast. You can find all these papers and many more of them on our website, www.molmed.org that's www.m-o-l-m-e-d.org. For questions or comments regarding this podcast, please feel free to send me an email at: margot@molmed.org.

This podcast is available on molmed.org and is up in iTunes. *Molecular Medicine* is published bimonthly by The Feinstein Institute for Medical Research.

From Long Island, New York, this is margot@molmed.org, thanks for listening!

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