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Mollie Medcast

Episode 16 Transcript: Chronic Kidney Disease, Acute Hepatitis, Trauma-Hemorrhage

Hello and thanks for downloading us! Welcome back to “Mollie Medcast,” the podcast for the biomedical journal, *Molecular Medicine*. My name is Margot Gallowitsch-Puerta. I’m the Associate Editor here at *Molecular Medicine* and your host for this podcast episode.

In this week’s podcast: “HMGB1 in Chronic Kidney Disease,” “Hypoxia-Triggered Pathway Provides Protection In Acute Hepatitis,” and “Therapeutic Estrogen.”

But before we get on with that, let me remind you about what our goal here at *Molecular Medicine* is. Our mission is to publish novel work concerned with understanding the pathogenesis of disease at the molecular level, which may lead to the design of specific molecular tools for diagnosis, treatment and prevention. *Molecular Medicine* was introduced in 1994 to serve as a forum through which scientists and researchers could communicate recent discoveries to a multi-disciplinary, international audience interested in understanding and curing disease.

If you’re interested in submitting a manuscript to *Molecular Medicine*, please visit our website, www.molmed.org and click on ‘author center.’ Okay, so let’s get started with the papers for this podcast.

The first paper in this “Mollie Medcast” episode is:

HMGB1 in Chronic Kidney Disease

Chronic kidney disease (CKD) is associated with inflammation, malnutrition and an increased risk of cardiovascular disease. High mobility group box 1 or HMGB1, is a proinflammatory mediator of tissue injury. It’s implicated in several inflammatory diseases. Dr. Annette Bruchfeld and her colleagues completed a cross-sectional study analyzing chronic kidney disease patients to determine if HMGB1 is elevated. The results reveal that HMGB1 is significantly elevated in chronic kidney disease patients and correlates with glomerular filtration rate and markers of inflammation and malnutrition. Future studies are needed to determine if HMGB1 may be used as a marker of disease activity, severity and outcome in chronic kidney disease.

For those interested, the North Shore-LIJ Health System on Long Island (<http://www.northshorelij.com>) has over 1000 clinical research studies going on right now in a variety of diseases. Several of these deal with kidney disease. So if you are interested in finding out more about this or any of our other studies, you can call 516-562-4874 for information and ask for Ruth. That number again in case you need it is 516-562-4874. And if you want you can look at the website, where you’ll be able to find the transcript of this episode with the website and phone numbers.

Hypoxia-Triggered Pathway Provides Protection In Acute Hepatitis

Acute or chronic hepatitis due to viral infections or autoimmunity affects millions of patients and results in high morbidity. It is important to uncover the mechanisms that regulate immune responses in the liver and those that protect liver tissues from excessive collateral damage. Dr. Alexander Choukèr and his colleagues focused on the relationship between tissue hypoxia and extracellular adenosine-mediated immunosuppression. They tested whether inflammatory tissue damage-associated hypoxia and extracellular adenosine receptor (A2AR) signaling

plays a role in the physiological anti-inflammatory mechanism that limits liver damage during fulminant hepatitis. Their data demonstrate that the total body hypoxia-triggered pathway provides protection in acute hepatitis and that hypoxia and A2AR function in the same immunosuppressive and liver tissue-protecting pathway.

Therapeutic Estrogen

Trauma-hemorrhage leads to prolonged immune suppression, sepsis and multiple organ failure. The immunological events following trauma-hemorrhage have been elucidated and may be gender dependent. The hormone estrogen protects women from complications associated with injury, trauma and sepsis. In this review, Drs. Raju, Bland and Chaudry summarize current knowledge regarding estrogen modulation of immunity and its promise as a therapeutic for the treatment of adverse conditions following trauma-hemorrhage.

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

If you're taking a coffee break and have a second, check out our podcast webpage www.molmed.org/podcast. You can play around with our frappr map and see where other *Molecular Medicine* readers are coming from. If you have a moment, help us expand our community by adding your own pin to the map. If you're not shy you can even include your picture.

This podcast is available on molmed.org and is up on also up in iTunes. *Molecular Medicine* is published bi-monthly by the Feinstein Institute for Medical Research.

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

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