Molecular Medicine

Podcast Transcript
Episode 29

Hello "Mollie Medcast" listeners and welcome back. "Mollie Medcast," is the podcast for the biomedical journal, *Molecular Medicine*. My name is Margot Puerta. I'm the Associate Editor here at *Molecular Medicine* and your host for this podcast episode. In this week's podcast: "An ACE In The Hole," "Biomarker For Atherosclerosis," and a review paper dealing with "Sex Steroids & Stem Cell Function."

Let me take a minute to remind you about what our goal here at *Molecular Medicine* is. Our mission is to publish novel work that's concerned with understanding the pathogenesis of disease at the molecular level, which may lead to the design of specific molecular tools for disease diagnosis, treatment and prevention. If you're interested in submitting a manuscript to the journal, please visit our website for information, www.molmed.org. Alright, so let's get started with the papers in this podcast. The first paper in this "Mollie Medcast" episode is:

An ACE In The Hole
Hypertension, or high blood pressure, is a critical public health problem. Hypertensive patients often don't exhibit symptoms, leaving them unaware of their risk. Development of early biomarkers for hypertension may help identify those at risk before an adverse outcome, such heart attack or stroke, may occur. Dr. Fernanda Fernandes and colleagues from the Federal University of São Paulo in Brazil examined the association between urinary angiotension I-converting enzyme or ACE, a vascular regulator, and other hypertensive elements including C-reactive protein, homocysteine plasma levels, urinary nitric oxide and endothelial function. The title of their paper is, "Association of Urinary N-Domain Angiotension I-Converting Enzyme with Plasma Inflammatory Markers and Endothelial Function." Their findings suggest that healthy subjects with the 90kDa isoform of ACE and a family history of hypertension exhibited endothelial dysfunction. This data may lead to the development of a biomarker to assess future hypertension risks.

And, speaking of biomarkers…
A Biomarker For Atherosclerosis
The name atherosclerosis comes from a combination of the two Greek words for paste (athero) and hardness (sclerosis).[1] Atherosclerosis is the buildup of plaque deposits in the arteries, and macrophages play a major role in this vascular lesion development. The FcγRIIIa (CD16) receptor is expressed in a minor subset of peripheral blood monocytes and is present in human atherosclerotic plaques. Soluble FcγRIIIaMϕ is found in plasma and is significantly increased in patients with coronary artery disease. Dr. Midori Masuda and colleagues investigated the potential of FcγRIIIaMϕ as a biomarker for atherosclerosis in patients who came in for an annual medical checkup. Their results showed the soluble FcγRIIIaMϕ levels were related to a number of risk factors for atherosclerosis including aging, smoking, diabetes, hypertension and cholesterolemia, as well as carotid maximum intima-media thickness. This indicates macrophage activation during the incipient stage of atherosclerosis and the potential use of soluble FcγRIIIaMϕ as a predictive marker for this disease.

And last up for this week, our "Review and Assess" article:

Sex Steroids And Stem Cell Function
Gender dimorphisms exist in a variety of disorders. Estrogens influence myocardial remodeling following insult, facilitate mobilization of endothelial progenitor cells to the ischemic myocardium, and, as if that wasn't enough, it also enhances neovascularization at the ischemic border zone. Stem cell transplantation has improved treatment for several disorders; however, a greater understanding of the effects of sex hormones on stem cell populations is required to improve clinical efficacy. In this review, Dr. Rinki Ray and colleagues summarize current knowledge regarding the effects of estrogens and androgens on various stem cell populations.

That's it for this week's episode of "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.

If you're taking a coffee break and have a moment, check out our podcast webpage molmed.org/podcast. You can play around with our frappr map and see where other *Molecular Medicine* readers are coming from. I've got my pin up there with a picture too; help us expand our community by adding your very own pin to the map. And, if you're not shy you can even include a picture of yourself.

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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1. American Heart Association – http://www.americanheart.org/presenter.jhtml?identifier=228
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