Molecular Medicine

Podcast Transcript
Episode 41

Hello *Mollie Medcast* listeners and welcome back. *Mollie Medcast* is the podcast for the biomedical journal, *Molecular Medicine*. My name is Veronica Davis, assistant editor here at *Molecular Medicine* and your host for this podcast episode. In this week's podcast we're going to discuss two research articles: M-I-F or "MIF Busters: Diagnosing Colorectal Cancer", and ask if there's a "New Link Between Chronic Kidney & Vascular Diseases?" For your listening pleasure, we're also going to discuss a special mini-review on the field of molecular medicine.

First, let me take a minute to remind you about what our goal here is at *Molecular Medicine*. 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 Web site 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:

MIF Busters: Diagnosing Colorectal Cancer

Despite advances in colorectal cancer diagnosis and treatment, this disease remains a major cause of cancer deaths worldwide. Approximately half of all patients with colorectal cancer develop liver metastasis and die within 5 years of diagnosis. A growing body of evidence implicates macrophage migration inhibitory factor, or M-I-F, in tumorigenesis and metastasis. Dr. He and colleagues investigated two things: first, whether M-I-F expression was associated with clinicopathologic features of colorectal carcinoma, or CRC; and second, does neutralization of endogenous M-I-F using anti-M-I-F therapeutics inhibit tumor growth and frequency of colorectal hepatic metastases? Their results show that M-I-F is positively correlated with an increased risk of hepatic metastasis in patients with CRC and may play a direct role in cancer development. These findings suggest that the M-I-F level in both serum and colorectal tissue may be a useful marker in the diagnosis of colorectal cancer and its metastasis to the liver.

The next paper asks is there a:

New Link Between Chronic Kidney & Vascular Diseases?

Patients with chronic kidney disease, or CKD, experience reduced kidney function over time, and have an increased risk of cardiovascular disease. Our friend, macrophage migration inhibitory factor (M-I-F), as we now know, is a cytokine that has been implicated in autoimmune diseases. But, knowledge regarding the role of M-I-F in renal patients is limited. In this work, Dr .Annette Bruchfeld, and colleagues at both the Karolinska and Feinstein Institutes, investigated whether circulating M-I-F levels were elevated in patients with CKD. While M-I-F concentrations were elevated significantly in CKD patients compared with controls, they did not correlate with glomerular filtration rate, a measurement of kidney function, or with other inflammatory markers such as CRP, IL-6, and TNF. The data suggest that increased M-I-F found in CKD may not be caused by poor renal function, but may be associated with markers of oxidative stress and endothelial activation with possible implications for a role in vascular processes in this population.

Lastly, our mini-review:

Educational and Social-Ethical Issues in the Pursuit of Molecular Medicine
Molecular medicine is transforming everyday clinical practice, providing a more personalized approach to disease prevention, prognosis, and treatment. Hmmm…that sounds familiar. The successful translation of the advances of biomedical research in everyday clinical practice depends largely upon our ability to train researchers and health professionals in molecular medicine, and to inform and educate the public. In this mini-review, Dr. Konstantinopoulos and colleagues at Harvard Medical School discuss the educational and social-ethical issues raised by the advances of biomedical research as related to medical practice, outline the implications of molecular medicine, and emphasize the responsibility of academia and the pharmaceutical industry to translate the scientific knowledge to an improved quality of life.

That's it for this week's episode of *Mollie Medcast*. You can find all these papers and many more of them on our Web site, 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 e-mail at: veronica@molmed.org.

If you're taking a coffee break and have a moment, check out our podcast webpage molmed.org/podcast. For all of you online networking fans, Mollie is now on both Facebook and Twitter.com. We'd like to congratulate our iPod shuffle winner, Nicola Cirillo. Nicola won by adding Mollie as a friend on Facebook.

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 veronica@molmed.org, thanks for listening!

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