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Podcast Transcript
Episode30

Hello everyone and welcome back to *Mollie Medcast*, the podcast for the biomedical journal, *Molecular Medicine*. My name is Margot Puerta. I'm the Associate Editor here at *Molecular Medicine* and I'll be your host for this podcast episode. In this week's podcast instead of having two primary research papers and one review paper, I'm going to flip it around and have one primary research paper "Purification of Human AMBP-1", and two review papers: "Renal Oxygenation Pathways", and the second on, "Estrogen, NFkB and HSPs."

If you're a frequent *Mollie Medcast* listener, then you probably know our mission, but it's so important I want to just take a mission to re-emphasize it. Our goal here, at *Molecular Medicine* is to publish novel work that's concerned with understanding the pathogenesis of disease at the molecular level, so that we may be able to design specific molecular tools for disease diagnosis, treatment and prevention. If you have a manuscript you'd like to submit to *Molecular Medicine*, you can find out more information on our website, www.molmed.org. So I'm going to start with our first primary research paper, which is the only one actually, for this episode, and the summary title is:

Purification of Human AMBP-1

Vascular responsiveness to adrenomedullin (AM), which is a potent vasoactive peptide, decreases during sepsis and hemorrhage and improves after administration of its binding protein (AMBP-1). While AM/AMBP-1 may be a leading candidate for sepsis and hemorrhage treatment, the high cost of commercial AMBP-1 has limited the development of human AM and AMBP-1 as therapeutic agents. In this work Dr. Xiaoling Qiang and her colleagues at the Feinstein Institute for Medical Research successfully isolated and purified AMBP-1 from human serum and demonstrated its stability and biological activity in vitro and in vivo. This technique allows further development of human AM/AMBP-1 as a therapy for safe and effective treatment of hemorrhagic shock, sepsis, and ischemic injury.

And, now on to our review section. The first review and assess paper has the summary title:

Renal Oxygenation Pathways

Ischemia is the most common cause of acute renal failure, which is a common condition that develops in 5% of hospitalized patients. Recent investigations have identified a central role of microvascular dysfunction leading to decreased renal oxygen supply and changes in oxygen consumption during the ischemia-reperfusion injury process. Dr. Matthieu Legrand and his colleagues provide an overview of how renal oxygenation pathways are affected by ischemia-reperfusion in the kidney, and how these processes affect organ failure. The title of their review paper is, "Renal Hypoxia and Dysoxia After Reperfusion of the Ischemic Kidney."

Estrogen, NFkB and HSPs

Oh my.

Estrogen is known to induce a number of beneficial physiological effects, particularly in the neurological and cardiovascular systems. These benefits can be attributed to the antioxidant and vasodilatory effects of E2, the most biologically active metabolite of estrogen. E2 interacts with and modulates NFκB activity, inducing expression of the protective class of proteins, HSPs, or the Heat Shock Proteins. In this review, Drs. James Stice

and Anne Knowlton focus on the molecular mechanisms and biological relevance of cross-talk between E2, NFκB, and HSPs. The title of the paper is, “Estrogen, NFκB and the Heat Shock Response.”

Thanks for joining us for this week’s episode of *Mollie Medcast*. Join us next time when we “Clamp Down on Placental Vascular Disease” and have a drink of some green tea to prevent colon cancer. 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 send me an email at: margot@molmed.org.

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

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