

Therapeutic Potential of Curcumin: Inhibition of MIC-1/GDF-15 Expression

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I am a senior biology major, and during the summer, I did an internship at University of Nebraska Medical Center.

MIC-1, macrophage inhibitory cytokine-1, is a member of the human transforming growth factor betas. This study utilized nickel chloride and cobalt chloride, heavy metals that are major environmental pollutants which are hazardous to human health. Curcumin is a component of turmeric and has been used in traditional Indian medicine for 6000 years. Curcumin can stop the metastases of cancer; it down-regulates MIC-1.

The study findings demonstrate the tumor suppressive effects of curcumin by down-regulating MIC-1 expression induced in response to heavy metal mediated hypoxic conditions in prostate cancer cells. Future directions: we plan to use mice for in vivo studies to observe how curcumin works against the MIC-1 regulation.

Dr. Litwin

Jacquelyne, you have had a really substantial and valuable research project that you have seen to completion. Having been through all that you have today, what lesson do you take home that will impact you for the rest of your life as a young physician, and then hopefully as a middle aged and senior physician, as you go through your life as a doctor?

Ms. Gaddy

I first want to thank Mr. Simons and The Prostate Net for giving me this opportunity to present my poster. It is hard to summarize one take-home message because as I was sitting here today, I took lengthy notes. What I definitely will take home is it is not really just about the science of medicine. You can go to medical school, you can learn the science, you can get your Masters, you can get your undergrad degree, but it is really about patient interaction: having that ability to sit down and relate to a patient, to be able to talk to them, like you said, at eye level. The patient matters: the majority of the people in this room are not physicians are actually patients, and these are the people that matter the most. Going forward, I think I would just learn to have a greater ability to relate to patients, to be able to be compassionate, and have that time to understand that they matter just as anybody else.

Dr. Litwin

You can tell your mother to rest assured that with your entry into the field of medicine, she will have left this world better than the way she found it.