

Behind the Scenes in Pharmacognosy

Magic Mushrooms!

by Amy Keller

In summer of 2008, the article entitled, "NF- κ B Inhibitory Activity of Compounds Isolated from *Cantharellus cibarius*" by Jeong Ah Kim, David Tay, and Esperanza Carcache de Blanco, appeared in *Phytotherapy Research's* 22nd volume. The *Newsletter* interviewed last author and ASP member Dr. Esperanza Carcache de Blanco, who took time out her busy schedule to give us insight into medicinal mushrooms.

How did you become interested in the medicinal properties of mushrooms?

Since my research is focused on cancer chemoprevention, I usually choose edible species to work with. Mushrooms are, in particular, part of our regular diet, but most of the time they are unnoted. Mushrooms have been shown to have many medicinal properties and these properties can be exploited to benefit particularly risk-prone individuals.

Who in your laboratory carried out the research?

Dr. Jeong Ah Kim did most of the experimental work.



DR. A. DOUGLAS KINGHORN

Drs. Kim and Carcache de Blanco

Could you provide a brief explanation of the work and results in your own words? In what way are the data in your paper new?

This publication includes isolation, identification, and biological evaluation of the isolates in two NF- κ B assays. The whole cell assay confirmed the effect exerted by the active metabolites. Three compounds of the ergosterol type exhibited significant activity in the NF- κ B p50 assay. This is the first time that these compounds were reported to show activity against NF- κ B p50 unit.

What impact does your research have on the research of inflammatory pathways and medicinal mushrooms? How does it influence the science?

The most common Rel/NF- κ B dimer in mammals contains p50/p65 heterodimers and is an attractive target for potential therapeutic in human inflammation and certain other diseases. NF- κ B p50, particularly, has distinctive functions in regulating immune response and inflammation. Since the chanterelle species studied in our lab was found to act on NF- κ B p50 subunit, the results of the research are in agreement with previous reports that edible mushroom constituents are suggested to modulate immunity. So, our findings could have great impact on the use of mushrooms in the diet.

What is a favorite nonscientific activity of your lab?

Our lab group loves to go out for lunch together and talk about the potential cancer chemopreventative properties of the items selected for a meal.

What is your lab's motto? Is there one idea or overall theme you like to promote, like hard work, or perseverance?

Researchers in my lab are driven by an entrepreneur spirit to search for the unknown.

