Jess,

Since I left the Agency with cancer, I have studied the tumor process extensively and I have some mechanism comments which may be very valuable to CARC based on my decades of pathology experience. I'll pick one chemical to demonstrate my points.

Glyphosate was originally designed as a chelating agent and I strongly believe that is the identical process involved in its tumor formation, which is highly supported by the literature.

-Chelators inhibit apoptosis, the process by which our bodies kill tumor cells
-Chelators are endocrine disruptors, involved in tumorigenesis
-Glyphosate induces lymphocyte proliferation
-Glyphosate induces free radical formation
-Chelators inhibit free radical scavenging enzymes requiring Zn, Mn or Cu for activity (i.e. SODs)
-Chelators bind zinc, necessary for immune system function
-Glyphosate is genotoxic, a key cancer mechanism
-Chelators inhibit DNA repair enzymes requiring metal cofactors
-Chelators bind Ca, Zn, Mg, etc to make foods deficient for these essential nutrients
-Chelators bind calcium necessary for calcineurin-mediated immune response
-Chelators often damage the kidneys or pancreas, as glyphosate does, a mechanism to tumor formation
-Kidney/pancreas damage can lead to clinical chemistry changes to favor tumor growth
-Glyphosate kills bacteria in the gut and the gastrointestinal system is 80% of the immune system
-Chelators suppress the immune system making the body susceptible to tumors

Previously, CARC concluded that glyphosate was a "possible human carcinogen". The kidney pathology in the animal studies would lead to tumors with other mechanisms listed above. Any one of these mechanisms alone listed can cause tumors, but glyphosate causes all of them simultaneously. It is essentially certain that glyphosate causes cancer. With all of the evidence listed above, the CARC category should be changed to "probable human carcinogen". Blood cells are most exposed to chelators, if any study shows proliferation of lymphocytes, then that is confirmatory that glyphosate is a carcinogen.

Jess, you and I have argued many times on CARC. You often argued about topics outside of your knowledge, which is unethical. Your trivial MS degree from 1971 Nebraska is far outdated, thus CARC science is 10 years behind the literature in mechanisms. For once in your life, listen to me and don't play your political conniving games with the science to favor the registrants. For once do the right thing and don't make decisions based on how it affects your bonus. You and Anna Lowit intimidated staff on CARC and changed HIARC and HASPOC final reports to favor industry. Chelators clearly disrupt calcium signaling, a key signaling pathway in all cells and mediates tumor progression. Greg Ackerman is supposed to be our expert on mechanisms, but he never mentioned any of these concepts at CARC and when I tried to discuss it with him he put me off. Is Greg playing your political games as well, incompetent or does he have some conflict of interest of some kind? Your Nebraska colleague took industry funding, he clearly has a conflict of interest. Just promise me not to ever let Anna on the CARC committee, her decisions don't make rational sense. If anyone in OPP is taking bribes, it is her.

I have cancer and I don't want these serious issues in HED to go unaddressed before I go to my grave. I have done my duty.

Marion Copley
March 4, 2013