## Summary Report on Toxic's in Black Women's Hair Products Caitlin Connelly

Hair products for women of color contain toxic chemicals that are detrimental to human health. In the short term, these products may cause skin irritation, eye irritation, respiratory irritation, skin burns, headaches, dizziness, nausea and weakness. In the long term these products may cause lung damage, kidney damage, skin damage, heart disease, neurological damage, reproductive effects, and cancer. The goal of this project was to determine the brands and ingredients of highest concern, find alternative products or ingredients that are less toxic without harmful substitutions, and reach out to organizations that may be working on alternative solutions.

These toxic ingredients are found in both professional salon products and products sold in drugstores, but collecting data at the salon level is difficult because each salon carries different brands and manufacturers are not required to label ingredients on salon products. Thus, our research focused on the brands and ingredients found in products sold at drug and beauty stores intended for home use. Finding alternative products was difficult due to the lack of available information. Regulations do not require extensive reporting on ingredients. In the early stages of the project, we investigated brands and products of concern. We organized these brands and products in an Excel matrix, and in doing so it became clear that the most toxic products are

relaxers and straighteners. Common chemicals considered harmful to human health include sodium hydroxide, calcium hydroxide, and DMDM hydantoin. The first two can cause chemical burns and the other generates formaldehyde, which is linked to respiratory and carcinogenic effects. Other ingredients in these products found in our research that are considered harmful according to the SkinDeep database are Ethanolamine, Retinyl Palmitate, Oxybenzone, and Methylene Glycol.

Alternative means for accomplishing the functions that these chemicals perform, in relaxers and straighteners, should be a focus for future research. We call this a "functional analysis" of the harmful chemicals that we have identified. Safer products would result from substituting safer chemicals that provide the same function without negative health impacts. However, because of the lack of regulation in the cosmetology industry and the need that companies perceive concerning the protection of formulas, it is difficult to find information on the function of many of these chemicals. However, it may be possible to learn more about how safer products can be made by contacting product specialists at the companies to understand how the product works.

We evaluated the availability of safer alternatives already on the market for relaxing and straightening. Using work performed by the Boston Public Health Commission, Brandeis University students, and the Environmental Working Group, we made up an Excel matrix, of

products and ingredients. Most did not have indications of harm except a few ingredients have been determined by the Environmental Working Group to be extremely harmful to human health. We observe that the ordinary consumer would not perform this evaluation, as it is time intensive.

Our evaluation included customer reviews, which showed that many of the alternative products do not seem to work as well as their conventional counterparts. Therefore, we believe that it is necessary to create demand for improved products, to stimulate the necessary work to develop them. To cause change concerning this risk of harm from hair treatments, we developed a sample query letter, for consumers to use to contact companies to ask for safer options.

We note that Black Women for Wellness has completed research on a variety of relevant topics surrounding toxics in hair products, and the Warner Babcock Institute, that focuses on green chemistry, are important resources on this topic, and should be consulted during further research.