Caroline Stroud and Meghan Mumpower

* Our drug, Waxicol, is a drug that is used to treat colon cancer. It uses nanotechnology to tell it to go through and stop at the cancerous cells of the colon. It is a pill that is swallowed and is covered in a waxy collagen coating that can’t be digested by stomach acid and the small intestine. The wax layer dissolves when it reaches the large intestine and immediately begins looking for cells with multiple nucleuses. Then, it attaches onto a receptor and signals get transferred to the nucleus. Once it has reached the nucleus, the protein cell creators are blocked and are told to break down the proteins. This causes apoptosis and the cancer cells will begin to die.

Clinical Trial

* Name: Waxicol putting a stop to colon cancer
* The population being studied is men over the age of 50 who have colon cancer and are not responding to treatments.
* The Nano particles could have error and not go directly to the cancer. This could result in killing other cells. It also could not work and the cancer could grow and spread.
* The nanopartical treatment will be orally introduced into the stomach.
* The nanoparticals will have markers on them directing them to the specific cancerous cells.
* Waxicol has a wax casing, similar to corn, that prevents the stomach from digesting it. The colon can dissolve the casing and so the drug will be released into the colon where the cancer is.
* The cells the treatment will target are the cancer cells. The treatment is designed not to harm any other cells.
* The treatment will break open the nucleus and destroy its DNA.
* It will disrupt the protein synthesizes in the nucleus and make the cell die or just not know what to do.
* Trial Objectives and Purpose:
* The goal of this trial is to eradicate colon cancer in men over 50 and possibly everyone with the nanotechnology used.
* The Waxicol nanotechnology treatment will cure the colon cancer within the tested subjects and will eventually be used to cure all colon cancer.
* This will be better than chemotherapy because the subject will not have any other cells destroyed by the treatment. The Waxicol will only target the cancerous cells. It is also better than radiation because it is less harmful to the surrounding area and goes directly to the spot it needs to.
* Trial Design:
* The trial design is an open trial; this is where both the tester and the test subject know what is being given.
* Selection of Subjects:
* The subject must be older than 50 and have colon cancer. They must be healthy enough to walk on their own and have had no recent chemotherapy (last year). They must be male. The cancer has to be continuing to grow but not metastasized to other parts of the body.
* Assessment of Safety:
* The patient will be hospitalized and watched carefully to see how they react. A doctor will be on call at all times to watch the patient.