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You Need to Pop a Pill!! A Study of Saccharomyces cervasiae and Metformin

The purpose of this project was to determine if a prescription drug, Metformin, can prevent several cancers. Metformin is typically prescribed to diabetes patients to help maintain sugar levels in the blood stream. The researcher used Saccharomyces cerevisiae to represent the metastasis of cancer. Yeast studies have shown exactly how yeast divides and goes through its cell cycle. This information is useful since many drugs used to treat cancer act by interfering with the cell cycle. To test this, the researcher had to prepare 50 test tubes of sterile water. Metformin solutions were made. 27 granules of yeast were added to each tube. In 10 of the test tubes the researcher placed .3mL of each dilution adding up to 50 test tubes. Plating consisted of pouring each of the test tube contents onto the plates, and incubating for 24 hours. Colonies were counted. The hypothesis was accepted, it had been seen that Saccharomyces cervasiae had the largest amount of colonies in the control and 500 mg group, followed by the 750 mg, 850 mg, and with the least amount of growth at the 1,275 mg group. For example, in the control group, of the 10 -8 serial dilution it had 2,591 colonies, the 500 mg group had 2,355 colonies in the serial dilution of 10 -7 , it was also found in the 750 mg group that there was 1,492 colonies in the 10 -1 serial dilution. In the 850 mg group, there was found to be 1,021 colonies in the 10 -5 serial dilution. The final serial dilution of 1,275 mg there was found to be 942 colonies in the 10 -8 serial dilution. It appears that by taking Metformin, this could possibly prevent, or even treat the development of several cancers.