

Advanced Cell Biology Lab 4.

DNA discovery: discussion

February 21th, 2011

Background Discovering of DNA was the result of long and complicated research, from Koltsov (1927) “template” hypothesis to series of papers in Nature (1953). Our goal will be to elucidate this chain of research through the review and discussions of three main papers: Avery et al. (1944), Wilkins et al. (1953) and Watson & Crick (1953a and 1953b). All papers are openly accessible on the Nature “Double Helix” Web page: <http://www.nature.com/nature/dna50/archive.html>

Assignment

1. Download and read three mentioned papers, also download Koltsov (1936) paper from course Web page (http://ashipunov.info/shipunov/school/biol_250/koltsov1936_7.pdf) and read there about his “template” hypothesis.
2. Join one if three presenting teams and participate in making Power Point presentation about particular paper. There are multiple resources in Internet with a title like “How to read a scientific/research paper” (like <http://www.google.com/search?q=how+to+read+scientific+research+paper>) which could be of some help.
3. Prepare questions for two other presenting teams. Since we all know that these papers are really great, the most important will be to understand weaknesses of each paper—in other word, directions of further research. The other important question (I will ask it myself if nobody will ask it) is “How Koltsov hypothesis will influence DNA discovery if authors of these three papers will be aware of it?”