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Bio 303

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Summary of “The Secret of Life”

“The Secret of Life” was a PBS special detailing the search for what gave cells their instructions. Set in the 1950’s, it is reenactment of the scientist accords of what happen along the journey to this discovery with interviews and details from the scientist themselves. As I watched the hour documentary, I was shocked to learn how it was done without the modern marvels of todays science and how genetics has been affected by this discovery.

In a time where god was the answer for most things’ scientist stood to question that very notion. Scientist believed that there was a script that instructed cells what to do. Among these scientists were Watson and Crick two colleagues at Cambridge University who eventually made the discovery in 1953. Considered “lazy jokers” Watson and Crick had their ups and downs before making the discovery. It was them who considered the possibility that this “script” would be on DNA. At the time, not much was known about cells but what they could see in the microscope. Watson and Crick used models with limited data to try and figure out this mystery, but they were not the only scientist at the time who were trying to answer the same question. Two scientists out of Kings College in London, Wilkens and Franklin were studying DNA but in a different manner. Their idea was to take pictures of DNA while in a light refraction to discover the size based on the shapes made in its reflection. Although their studies were often halted by their ego and the fact that they didn’t get along very well. In another part of the world Leslie Pawling was also working on the essence of DNA. The most favored in this race because he had already won two noble bell prizes was also using models. In this documentary it was stated that Watson went to a lecture at Kings College and the speaker was non-other than Roseland Franklin. Without taking any notes he rushed back to Cambridge convinced that he knew what the DNA looked like. He built a model and invited those form Kings College as well as some other highly respected scientist to show them the work that he had done. Happily, Franklin told them that they had their model wrong and that in fact the model was “inside out.” Due to this event Watson and Cricks boss barred them from working on their DNA models. During this time Wilkens and Franklin continued their research while Watson and Crick desperately tried to figure out what they did wrong. During their time off Watson and Crick met with Chargaff and all though he did not like these men he gave them information that was crucial to their discovery. Chargaff told them he discovered that on DNA the A, T, C, and G occur in the same amounts. It wasn’t until Watson met with Wilkens who showed him a picture of a DNA reflection that the discovery really took place. In the picture the shape was an “X” and Crick knew that meant it was a helix shape. Based on both scientist’s information, they were able to discover and build a double helix model in 1953. It is amazing that so much of the research that they used was not their own in making this discovery, I was unaware of this before I watched this documentary.

In broadcasting this documentary, PBS gave us a good look at the what can be considered a very big breakthrough in genetics. Although a lot more detailed that I summarized I truly enjoyed the documentary especially the interviews with the leading scientist.