23Sr RNA Purpose In Elizabethkingia anophelis Genome

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ABSTRACT
Elizabethkingia anophelis is an organism that is gram-negative and has a red shape. We were interested in 23Sr RNA proteins in E. anophelis. What we wanted to find was if the seven 23Sr RNA were transcribed in the presence of two antibiotics. We used the RAST data base, BLAST data base, and an Excel spreadsheet to find this out. Also we used RAST to see what surrounded each of the seven proteins. Although all the proteins were transcribed only three pegs were significant. Also, only one peg for each of the antibiotics was up significantly.

INTRODUCTION
Elizabethkingia anophelis is a red-shaped, single-celled, gram-negative organism (7,8). It is originally found in the gut of a mosquito; it causes meningitis in people who are immunocompromised, and is also dangerous to infants and elderly people (7,8). However, one of the important characteristics is that it is antibiotic resistant (8). We were interested in these genes due to the fact that they are an important part of making any protein, required for the organism to function. For peg 797, it was produced more in Cefotax, and therefore had a greater affect in Cefotax than the control. This is because if the production of the bonds stopped, then it would stop the other necessary functions of the proteins in the organism. In peg 490, it was produced less in Cefotax and more in Imipenem. This means that although in Cefotax it was not needed like it was in Imipenem. In peg 797 it was needed less in Imipenem than in the control.

MATERIALS AND METHODS
First thing needed was to access the RAST database (4) (8). This is what shows all the proteins that exist in E. anophelis. To see the seven proteins we were focused on, we used 23Sr RNA in the function part of the data base, this resulted in seven proteins.

We were interested in these genes due to the fact that they are an important part of making any organism be able to function.

Then, to get a closer view of each of the proteins, we clicked on each of the seven proteins.

After clicking on the protein, we clicked the sequence which would display the DNA sequence for the protein.

With the DNA sequence, we accessed the BLAST database that expressed whether the sequence is transcribed in Cefotaxime and Imipenem. Elizabethkingia anophelis is a rod shaped, single celled, gram negative organism (7,8). It is originally found in the gut of a mosquito; it causes meningitis in people who are immunocompromised, and is also dangerous to infants and elderly people (7,8). However, one of the important characteristics is that it is antibiotic resistant (8).

RESULTS
Our results show that the seven genes of 23Sr RNA are expressed in the presence of both antibiotics. In other words, in the presence of the antibiotics, the proteins were expressed, meaning they are needed for the cells to survive, and are unaffected by the antibiotics. Although all of the genes were expressed, only peg 424 in Cefotaxime, peg 490 in both Cefotaxime and Imipenem, and peg 797 in Imipenem had significant changes. Also, through our research we found that each of the seven genes, although they had the same functions, were transcribed at different places. They were also surrounded by different proteins that ranged significantly different (in function) from one of the seven proteins to another of the proteins.

DISCUSSION
23Sr RNA is necessary to make an organism function, due to the fact that it is in charge of making polypeptide bonds (1). If the proteins that we researched were not being made, the organism would not be surviving. This is because if the production of the bonds stopped, then it would stop the other necessary functions of the proteins in the organism. In conclusion, the proteins of 23Sr RNA are being produced and therefore the E. anophelis in the presence of the antibiotics is growing. In Cefotaxime, only peg 424 is up significantly therefore that is the only 23Sr RNA needed for it to survive. In Imipenem, only peg 490 is up significantly therefore that is the only 23Sr RNA needed for it to survive.

REFERENCES