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Biology 102-01

April 1, 2009

Professor Carmona

Seminar Write-Up #2

The topic for this seminar was “Coding Region Regulatory RNA Elements: Deciphering the Dengue virus life cycle.” The speaker for this seminar was Anna M. Carmona. In this seminar I learned more of what Dengue is and how one is infected. First of all dengue is considered to be an RNA virus, and a RNA virus is able to regulate by genome. She talked about how mosquitoes are able to remain with the dengue virus for the rest of their lives. She also mentioned that RNA viruses can be single strand or double strand and they are either positive or negative. A positive strand the host cell can generate viruses which are enveloped. A negative strand cannot do what a positive strand does and is non-enveloped.

Dengue is a member of the family flaviviridae. These mosquitoes are borne arboviruses and there primary host are us. This virus is primarily located in parts of Central America and this disease is rarely seen in the United States because of climate. The climates from these two areas differ quite significantly. She mentioned that there are 4 types of the dengue virus. And they are named using this syntax (DENVI 1-4). The main species that passes the dengue virus is the Ae. Aegypli, this species is found in rural areas. And the other species is Ae. Albopictus, this particular species is implicated in viral spread to temperature zone. The dengue virus is seen in the form of a fever and the symptoms are quite similar to those of the flu and the go away. Another type of fever called the Dengue Hemorrhagic Fever (DHF)/ Dengue Shock Syndrome (DSS) causes many bruises in the skin. There are about 50 million cases of the dengue fever each year only about 10 percent are reported annually. She also went to on to mentioning that an estimate of 3.5 billion are at risk of dengue fever 50-90 percent of the infections are asymptomatic. The last thing she goes on to mentioning is that in the upcoming years there is a possibility that the dengue fever will be seen quite more in the United States due to the worldwide changes in the climate.