

## **2 Detailed Description of Work Plan**

### **2.1 Introduction**

Mosquito densovirus (AeDNV) was found in Kiev National University. This virus was found to be highly infectious to mosquito larvae of several species from genera *Aedes*, *Culex* and *Culiseta*, but harmless to other insects, aquatic invertebrates and to vertebrates. Thus the virus is potentially quite attractive for mosquito control because of its high specificity toward mosquitoes and the lack of persistent organic pollutants associated with chemical insecticides. In addition to its pathogenicity to mosquito larvae preliminary data were obtained suggesting that AeDNV infected adult mosquitoes are less able to transmit arboviruses including West Nile and dengue virus.

#### **What is the problem?**

The ultimate goal of the research is to use the mosquito densovirus and virus transducing vectors in control strategies to combat mosquito-borne diseases like dengue. Ideally the densovirus will spread itself through mosquito populations by the infectious process and will result in modification of the age distribution of the mosquito population such that most of the infected female mosquitoes die before they are capable of transmitting dengue virus.

### **2.1 Literature Search**

It is new approach.

#### **How are their results being applied?**

Only result of our experiments will be applied.

### **2.3 Purpose and Objective**

#### **What are we going to do?**

We will produce Viroden from *Aedes aegypti* larvae.

#### **What is the objective?**

The ultimate goal of the research is to use Viroden and virus transducing vectors in control strategies to combat mosquito-borne diseases.

### **2.4 Expected Significance**

#### **What's new?**

It is new approach..

### **2.5 Organization, Qualification and Staffing**

#### **Who are we?**

The participants of our project are investigators from Kiev National University and will produce Viroden from *Aedes aegypti* larvae.

#### **How does this project relate to our other work?**

The Viroden preparation for control of mosquitoes at first was developed in Kiev National University. Patent of Ukraine on this preparation expired last year.

### **2.6 Expected results**

#### **What will be done in the framework of this project?**

We will produce Viroden from *Aedes aegypti* larvae.

#### **What's next?**

Developed preparation Viroden (1 kg) will be delivered to CSU to fulfil prime grant 316 from FNIH

### **2.7 Scope of activities**

#### **How will the investigation be organized?**

The overall scope of activities to the stages and sub-stages itemized in the Work Schedule page of the STCU Project Software.

### **2.8 Technical Methodology**

#### **How will the science be done?**

The scientific and technical approach, methods and methodologies to be in each phase of the project described in our monography (Buchatsky L., Lebedinets N., Kononko H. "Densovirus of bloodsucking mosquitoes", Kiev, 1977.

## **2.9 Sustainability Planning**

The specific market research objectives are not the goal of our project.

### **What will result?**

Developed preparation Viroden (1 kg) will be delivered to CSU to fulfil prime grant 316 from FNIH

### **3. Work schedule**

Definite stages of the project implementation are represented in matrix diagram in Table 1.

Table 2 graphically displays timing and duration of the stages involved, as well as interdependence of the stages.

### **4. Personnel commitments**

Table 3 displays personnel commitments for the project implementation.

### **5. Goods, Services, and Other Direct Costs**

Tables 4 , 5, and 6 display the equipment, materials, services, and other direct costs to be purchased for the project.

### **6. Travels**

Table 7 displays the costs necessary for travel outside and within country of residence.

### **7. Financial summary**

Tables 8 and 9 display aggregate financial information and define the first advanced payment.

### **8. List of personnel**

Table 10 contains detailed information about each individual person involved.

### **9 Allocation of the project budget among participating institutions *(for more than one participating institution only)***

Supplementary tables S8 and S9 display estimated expenditures by each participating institution separately.