

Z311 Cemed6, a Transcriptional Mediator in the Nematode *Caenorhabditis elegans*

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Mediators are the transcriptional cofactors originally isolated from the yeast. Med6 is one of the components of the mediator complex. In yeast, Med6 is required for activated transcription of subset of inducible genes. However, its biological significance or involvement in transcriptional activation has not been pursued in any metazoan system. In the hope of elucidating the functions of mediators in metazoa, we started examination of *med-6* functions in the nematode *Caenorhabditis elegans*. We cloned a *med-6* homolog in *C. elegans* by database search and RT-PCR. We then investigated the expression patterns of Cemed-6 by antibody staining. Cemed-6 is expressed in the peripheral region of the nuclei of all cells at all developmental stages, where actively transcribed portions of the genome are usually localized. For the functional analysis of Cemed-6, we performed RNA interference experiments. The phenotypes of the progeny from the wild-type animals injected with antisense RNA were embryonic lethality, arrested larvae, and sterility, indicating that Cemed-6 is required for many aspects of development including embryogenesis and germ cell development. It is crucial to test whether the transcription of any tissue- or stage-specific genes is affected by Cemed-6 malfunction *in vivo*. To this end, we are looking into the effect of RNA interference on the transcription level of *ceh-13* whose expression is initiated at 26 cell-stage. We are also trying to identify mutations in Cemed-6. We are also examining whether Cemed-6 is physically associated with RNA polymerase II by biochemical methods. The results of these experiments will be presented.

Z312 Host Preference of *Aphidius colemani*(Hym.: Aphidiidae) for Two Different Aphids; *Aphis gossypii*, *Rhopalosiphum padi*, and Host Plants; Cucumber, Wheat

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Host preference of aphid parasitoid; *Aphidius colemani* Viereck(Hym.: Aphidiidae) reared on wheat aphid, *Rhopalosiphum padi*, was investigated for two host plants; cucumber, wheat and two host insects; *Aphis gossypii* and *Rhopalosiphum padi*.

For the two different host plants, behavioral responses were not different significantly each other in three different conditions of female parasitoids; females from separated host mummies, females kept on cucumber and wheat, and females kept on wheat only.

The rates of preference of the parasitoid, females from separated host mummies were 53.3%, 46.2% for cucumber(with *A. gossypii*) and wheat(with *R. padi*) respectively on using four arms olfactometer. And parasitoid, kept on cucumber and wheat shown 47.8%, 52.2%, for same above host plants respectively. Also parasitoid, kept on wheat only shown 50.3%, 49.6% respectively.

In petri-dish(φ 13cm), the host acceptance response of parasitoids for *R. padi* on wheat were 25.4% - 29.9%(min. - max.) and for *A. gossypii* on cucumber were 14%-43%(min. - max.) respectively for 70 minutes.