

***C. elegans* - a powerful model system for drug development**

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SUMMARY :

The nematode *C. elegans* shares a high number of genes and regulatory pathways with humans which are relevant in the context of diseases and health disorders. It is easy to keep hundred and thousands of these nematodes which only live 2-3 weeks. Therefore, they are ideal systems to study aging and the effect of drugs on this process. Furthermore, a large number of mutants have been developed, which are adapted to disease conditions, such as nematodes, which express the Alzheimer protein a-beta or elements of oxidative stress. In many of these mutants, relevant key enzymes or proteins are tagged with GFP, which facilitates the analysis of drug activities. We have studied the effects of several medicinal plants, nutraceuticals and isolated plant secondary metabolites in *C. elegans*. Our focus was to find compounds, which exhibit antioxidant and antiaging properties. Another emphasis is on neurodegenerative diseases.

ILLUSTRATION :

