

Proposal Submission Forms



EUROPEAN COMMISSION
6th Framework Programme for
Research, Technological
Development and Demonstration

**Specific Targeted
Research or Innovation
Project**

A1

Proposal Number ¹		Proposal Acronym ²	NEMAGENETAG
------------------------------	--	-------------------------------	-------------

General Information on the Proposal

Proposal Title³ (max. 200 char.)	Nematode Gene-Tagging Tools and Resources		
Duration in months⁴	36	Call (part) identifier⁵	FP6-2002-LIFESCIHEALTH
Activity code(s) most relevant to your topic⁶	LSH-2002-1.1.0-1		
Keyword code 1⁷	03.02.03.12.00.00.00		
Keyword code 2⁷	03.02.03.12.10.00.00		
Keyword code 3⁷	03.02.03.18.00.00.00		
Free keywords⁸	Caenorhabditis elegans, Functional Genomics, Gene Knock-Out, Heterologous Transposition		

Abstract⁹ (max. 2000 char.)

The nematode *Caenorhabditis elegans* is a widely appreciated, powerful platform in which to study important biological mechanisms related to human health. More than 65% of human disease genes have homologues in the *C. elegans* genome, and essential aspects of mammalian cell biology, neurobiology and development are faithfully recapitulated in this organism. We propose to develop cutting-edge tools and resources that will facilitate modeling of human pathologies in *C. elegans*, and advance our understanding of animal development and physiology. Specifically, we will optimize and automate existing transposon-mediated mutagenesis methodologies based on the Mos1 transposable element, in addition to developing alternatives using the PiggyBac and Minos transposon systems. We will exploit these tools to generate and evaluate a collection of transposon-tagged mutants, aiming to cover the complete genome of approximately 20,000 genes. Further, we will establish the infrastructure necessary for managing and maintaining this resource. To achieve these goals, we have assembled a group of experts with pioneering contributions to transposon and genomics technologies in *C. elegans*, who are also exceptionally proficient in the biology of the nematode. Our partner, Union Biometrica NV, European Scientific Operations, is a company specializing on platform technology development and will provide solutions essential for the automation and streamlining of the processes involved in generating libraries of mutant strains. The final product of our focused project- a comprehensive collection of transposon-tagged alleles- together with the acquisition of efficient transposon-based tools for mutagenesis and transgenesis in *C. elegans*, should be of great value to the European and international scientific community. Our efforts will strengthen European research in the strategic area of functional genomics and yield a wealth of information on gene function, immediately relevant to pharmaceutical R&D.

For a proposal to be considered as complete, all questions must be answered. If a field is not applicable to you, please enter -.