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Protein protein and dna protein transactions during gene activation activator sigma n contacts and the dna melting activity of the sigma n activator complex



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Fact Sheet

Project Information **Funded under** Grant agreement ID: FMBI960650 Specific research and technological development programme in the field of the training and mobility Project closed of researchers, 1994-1998 Start date End date Total cost 1 June 1996 31 May 1998 No data **EU** contribution No data Coordinated by IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND **MEDICINE** Kingdom

Objective

Determination of the critical protein-protein interactions in transcription systems and in particular between sigma-N and its activator, and the contribution of the sigma-N holoenzyme-activator complex to the DNA strand separation (melting) process are essential for the understanding of the mechanism of transcriptional activation of the RNA polymerase holoenzyme. The sigma-N protein is well suited to analysis as biochemically active domains have been isolated. The overall aims of the proposed work are to: (a) Locate the putative protein-protein interactions between activator and the sigma-N protein, that appear to be critical for activation of RNA polymerase holoenzyme.

(b) Identify promoter DNA-contact regions of the sigma-N

holoenzyme-activator complex during catalysis of open complex formation. (c) Mutate candidate DNA and activator contact regions of sigma-N identified as described above. Screen mutants defective in either a DNA contact during DNA melting and/or activation interaction.

(d) Analyse the DNA-melting process, dependent of the formation of the sigma-N holoenzyme-activator complex.

Fields of science (EuroSciVoc) (

natural sciences > biological sciences > biochemistry > biomolecules > proteins > proteomics

natural sciences > biological sciences > genetics > DNA

natural sciences > chemical sciences > catalysis

natural sciences > biological sciences > genetics > RNA

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Programme(s)

<u>FP4-TMR - Specific research and technological development programme in the field of the training and</u> <u>mobility of researchers, 1994-1998</u>

Topic(s)

0302 - Post-doctoral research training grants

TL02 - Molecular Biology and Biochemistry

Call for proposal

Data not available

Funding Scheme

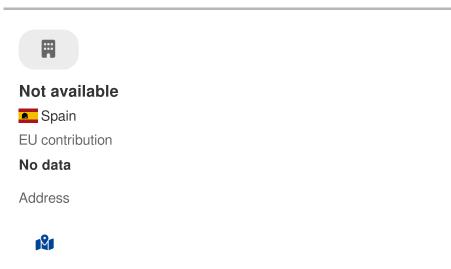
RGI - Research grants (individual fellowships)

Coordinator

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Participants (1)



Total cost

No data

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