

Proposal Acronym	RegSat
Proposal Title:	Gene expression mediated by satellite DNA
Surname:	Feliciello
First name(s):	Isidoro
Research area:	Life sciences LIF
Sub-discipline of research area:	Life Sciences (LIF) - Genetics, Genomics, Bioinformatics and Systems Biology- Epigenetics and gene regulation
Category of research:	basic
[REDACTED]	[REDACTED]
Abstract:	<p>Satellite DNAs are major building elements of pericentromeric and centromeric heterochromatin in many eukaryotic species, and in certain species they account for the majority of genomic DNA. Wide evolutionary distribution, presence of functional elements such as promoters and transcription factor binding sites within some satellite DNA sequences as well as transcriptional activity of many satellites has led to the assumption that they might also act as regulatory elements of gene expression. The aim of the proposed project is to investigate the gene-regulatory role of TCAST satellite DNA in insect <i>T. castaneum</i>. Short stretches of TCAST have been mapped in the close vicinity of numerous genes within euchromatin and environmentally susceptible transcription of TCAST satellite DNA was shown. The results will for the first time demonstrate role of satellite DNAs in the modulation of protein-gene expression and reveal the molecular mechanism of their gene-regulatory activity.</p>
Does this proposal possess any of the sensitive ethical issues detailed in ethical issues table?:	No