

## **Evolutionary chromosome repositioning of orthologous satellite DNA in the related genomes *C. cricetus* and *P. eremicus* (Rodentia, Cricetidae)**

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A significant fraction of the eukaryotic genome is comprised of repetitive sequences, including satellite DNA (satDNA) which is organized into long and uninterrupted tandem arrays. Different satDNA families can coexist in the same genome, and the same family of satellite DNA can be found in the genomes of related species. *Cricetus cricetus* (2n = 22) and *Peromyscus eremicus* (2n = 48) belong to Cricetidae family (order Rodentia). Here we report the isolation of *C. cricetus* centromeric repetitive sequences from chromosome 4 (CCR4/10sat), using the laser microdissection and pressure catapulting procedure. The *in situ* hybridization of these sequences onto *C. cricetus* and *P. eremicus* chromosomes revealed its presence in both genomes, displaying very different chromosome location. With few exceptions, CCR4/10sat displays a co-localization with the constitutive heterochromatin, evidenced by classic C-banding or *in situ* RE + C-banding. The occurrence of these orthologous sequences in both species' genomes is revealing of a common ancestor; however, its different chromosomal location foresees different trails for these genomes' evolutionary history.

Supported by: project POCI/BIA-BMC/58541/2004, PhD and Pos-doc grants SFRH/BD / 25813 / 2005, SFRH / BD / 41942 / 2007, SFRH/BD / 41574 / 2007, SFRH/BPD / 32661 / 2006 of the Science and Technology Foundation (FCT) - Portugal. We thank Dr. V. Volobouev for Rodentia cell cultures.