

# Expression and behaviour of CENP-E at kinetochores during mouse spermatogenesis

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Centromere protein E (CENP-E) is a microtubule motor protein localised in the outer kinetochore plate and in the fibrous corona that relocates to the midzone in early anaphase. While its expression in somatic cells has been widely analysed, an accurate description of its behaviour during the two meiotic divisions has not yet been reported. We have carefully analysed by immunofluorescence the subcellular distribution of CENP-E during mouse spermatogenesis. CENP-E first appears during late diakinesis/early prometaphase I as very bright C-shaped or "crescent" signals at each homologous centromere. These crescent CENP-E signals are also observed in unaligned prometaphase I bivalents that are not attached to spindle microtubules, while in bi-oriented metaphase I bivalents two kinds of fainter signals are observed. Thus, some bivalents present a plate-like signal while others show a pair of spots representing sister kinetochores at each homologous centromere. Double labelling of CENP-E with