EXECUTIVE SUMMARY [NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]:
State **in layman's terms** the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project relevant to California.

Reproductive failure resulting from male infertility affects many hopeful couples. Sperm formation is a key component of reproductive success and requires the coordination of a dramatic transformation in sperm DNA structure with rapid shifts in gene expression. In previous studies, we identified a key factors we call HTAS-1 that is important for regulating the expression of genes important for sperm formation. Because counterparts of this protein function in maintaining DNA structure required for correct gene expression, we are interested in defining the role of HTAS-1 in chromosome structure and gene expression using a model organisms called *Caenorhabditis elegans.* The simplicity of *C. elegans* and the well-developed molecular tools available with this organism provide experimental advantages to understand conserved aspects of fertility, which has often been hindered by the complexity of mammalian systems.