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## JOURNAL ARTICLE

# Ultrastructural observations of spermatogenesis following transplantation of rat testis cells into mouse seminiferous tubules

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The testes of busulfan-treated immunodeficient mice receiving seminiferous tubule injections of testis cells from rats were examined by light and electron microscopy. The presence of active rat spermatogenesis was verified by criteria that are known to characterize spermatogenic cells of this species. In addition, spermatogenesis from the mouse was identified as taking place in some seminiferous tubules as the result of reinitiation of spermatogenesis after busulfan treatment. Rat spermatogenesis in mouse seminiferous tubules showed the generally recognized associations of cells known to characterize stages of spermatogenesis of the rat. The Sertoli cells associated with rat spermatogenesis were identified ultrastructurally as being of mouse origin. Thus, rat spermatogenesis, which has a cycle length that is 50% longer than mouse spermatogenesis, can proceed among mouse Sertoli cells, which supposedly exert much shorter cyclic influences in concert with mouse germ cell development. Studies are needed to determine if the timing of rat spermatogenesis is controlled by the germ cells or the Sertoli cells. These observations are considered preliminary since a thorough study of somatic-germ cell relationships was not undertaken. It is concluded that a mouse Sertoli cell in the environment provided by the mouse testis can produce both mouse and rat gametes.

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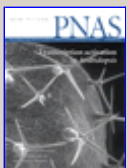
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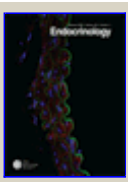
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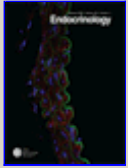
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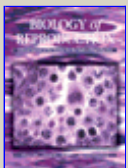
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