Interstitial collagen synthesis by somatic testicular cells in culture

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The synthesis, distribution and types of collagen produced by somatic testicular cells in culture was studied. To investigate whether changes in collagen synthesis correlate with the age of the animal, cultures derived from immature and pubertal rats were established. Immature rats synthesize 40 per cent more collagen than pubertal rats. Both groups of animals synthesize procollagen types I and III. Pro?collagen type I is present in the culture medium as well as in the cell fraction, while type III is only detected in the culture medium. In the transition from immature to pubertal rat, the ratio of procollagen type III to procollagen type I diminishes from 5·7 to 1·7. These results indicate that the synthesis, distribution and molecular characteristics of interstitial collagens changes with the age of the animal. Since, the content of other extracellular matrix components such as proteoglycans and collagen type IV also varies with age, we postulate that the composition of the extracell