

**ISOLATION OF TOTAL RNA FROM
EMBRYOGENIC AND NON-EMBRYOGENIC
COTTON CALLUS FOR GENE
EXPRESSION STUDIES**

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Abstract

Although protocols for inducing cotton somatic embryos in culture are well established, little is known about molecular events occurring during various stages of embryo developments in most higher plants. To investigate the molecular basis for somatic embryo formation in cotton, we devised a protocol to isolate total RNA from cotton callus at various developmental stages. Coker 312-17 (a selection out of Coker 312) was found more embryogenic than Coker 312 and TM-1, and was used to extract total RNA from globular stage embryogenic calli, non embryogenic calli and calli with heart staged embryos. We will use these RNA preps to study gene expression during plant embryogenesis to identify molecular markers from cotton somatic embryogenesis and to characterize the expression and regulation of these genes throughout embryo development.