

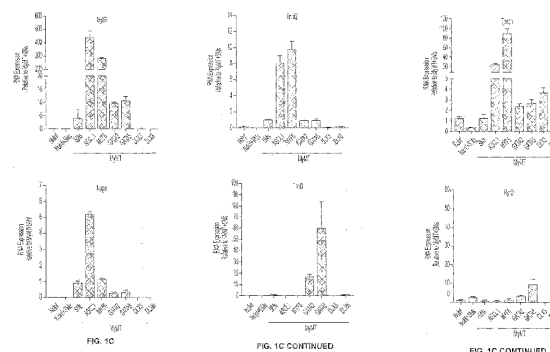
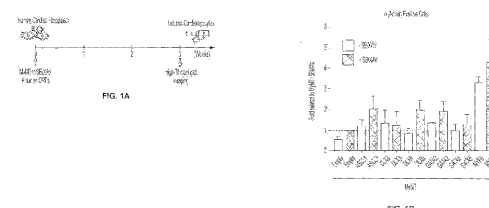
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(54) Title: CARDIAC CELL REPROGRAMMING WITH MYOCARDIN AND ASCL1



(57) Abstract: The present disclosure provides methods for generating induced cardiomyocytes and/or inducing a cardiomyocyte phenotype in cells in vivo or in vitro, such as by expression of ASCL1 or MYF6 and MYOCD. The present disclosure further provides gene-delivery vectors comprising one or more polynucleotides selected from ASCL1, MYF6, MYOCD, MEF2C, and TBX5. It further provides compositions comprising induced cardiomyocytes and provides methods of treating a heart condition, such as myocardial infarction. The disclosure also provides engineered myocardin proteins with an internal deletion, vectors encoding such engineered myocardins, and methods of use thereof.

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**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- *of inventorship (Rule 4.17(iv))*

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