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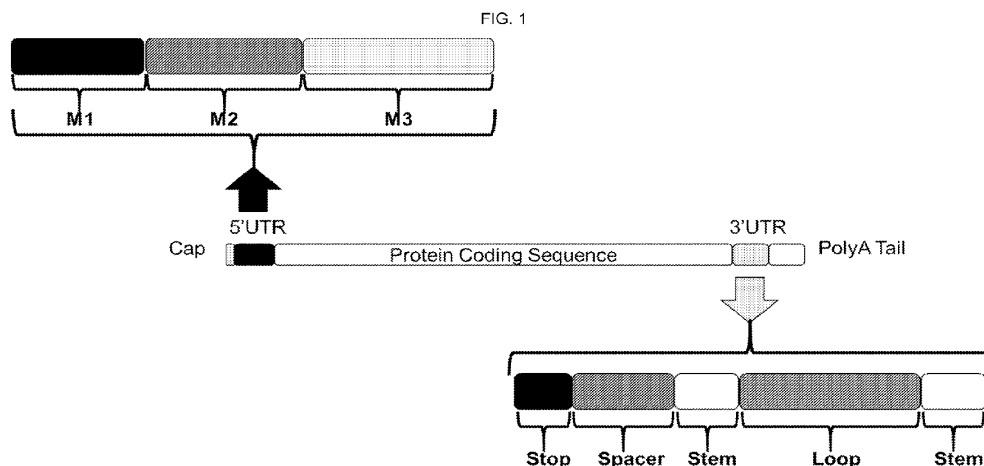
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Declarations under Rule 4.17:

- 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))

(54) **Title:** ENGINEERED EXPRESSION CONSTRUCTS TO INCREASE PROTEIN EXPRESSION FROM SYNTHETIC RIBONUCLEIC ACID (RNA)



(57) **Abstract:** The present disclosure relates to enhancing protein expression in a cell by utilizing translational enhancing elements in the 5' and/or 3' untranslated region (UTR) of synthetic mRNA. The 5' UTRs include a promoter, mini-enhancer sequence, and a Kozak sequence whereas the 3' UTR includes a spacer, a stem loop structure, and optionally, a polyadenine tail. The artificial 5' and 3' UTRs increase protein expression, and in certain examples, do not include modified nucleosides, microRNA sites, or immune-evading factors.

[Continued on next page]

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