

I] Responsible Screening Practices....

According to The SynBio Report, asserts that many although not all commercial gene synthesis firms screen sequences before actually-synthesizing DNA. This Such screening involvesing comparing a sequence to with known "dangerous" sequences i.e. sequences which that confer pathogennicitypathogenicity; or that which could increase enhance the stabilities stability and persistences of the engineered organism in the environment. Screening is routinely earried out performed by means of using commercially available softwares such as like the Craic —Blackwatch software. However, the system is not not however foolproof, and updates again and again must be always continually be made to the softwares to include recently uncovered identified "dangerous" sequences in a screening parameters.

Screening practices of this type have evolves evolved independently of regulatory intervention, and an somehow represent industry standards they represent somehow. The next next step logically are, step is to enforce and evolve these standards through meaning of appropriate regulation. This can be done on bitwo levels:

- The bBiosafety legislation of in various international nations could be corrected amended to require gene synthesis firms and research organisationsorganizations operating within their territories of jurisdiction to earry out conduct screening for dangerous sequences, to conform with the international industry standard (called the Best_Practice Procedures in the SynBio Report). An independent regulatory body may could be authorised authorized by legislation to determine the very large key aspects of the screening programme, thus allowing the standard to grow big as more information becomes available. This Such a regulatory body should would require need to be confer with research, ers, universities, and all other interested parties takeholders before a novel standard is evolved developed and being imposed on companies. Consequently, (The regulate regulatory body can thus be empowered to generate a "watching list?" of potentially dangerous sequences, which can then be incorporated into standard screening software.
- The Cartagena Protocol on Biosafety, a protocol of the Convention on Biological Diversity, may serve
 serve—as the best temp-late to-for the regulation of synthetic biology on at the international level.

Comment [A1]: In American English, place a comma after the Latin abbreviations *i.e.* and *e.g.*

Comment [A2]: In academic writing, information is presented with accuracy and conciseness. Formal language is a hallmark of academic English. One way to ensure conciseness in expression is converting phrasal verbs to formal words. For example, carried out can be replaced with performed/conducted or looked into can be replaced with investigated/examined.

Comment [A3]: In American English, z is used in words such as *organization* or *characterization*.

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