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(54) **Title**: REDUCED CODON MUTAGENESIS

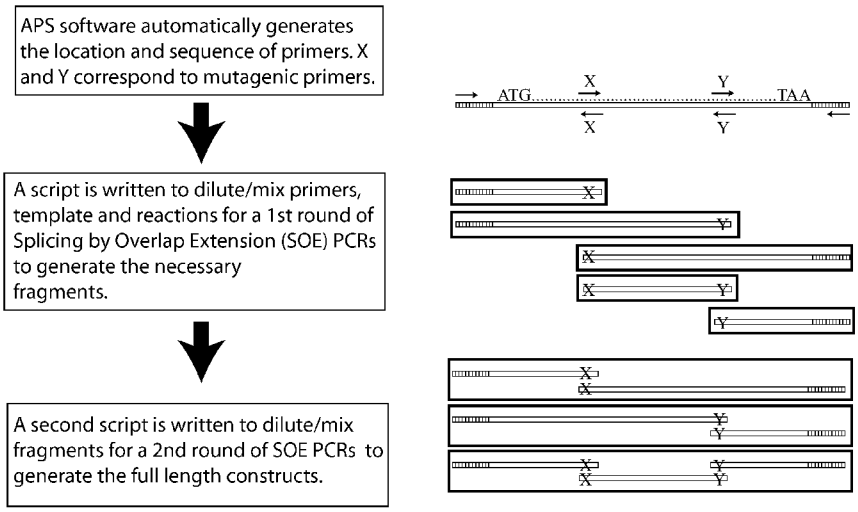


Fig. 1

(57) **Abstract**: Methods and compositions that reduce complexity of libraries of variant biological molecules, that reduce oversampling of these libraries during screening and that improve screening efficiency are provided. Sets of efficient degenerate codon sets are provided that efficiently encode all, or nearly all canonical amino acids. Degenerate oligonucleotides comprising these codons are provided, as are polynucleotide variants. Variant pooling strategies are used during library construction. Logical filtering is applied to select codon sites for mutagenesis, or to select amino acid sets to be incorporated at such sites. Methods for reducing non-optimal oversampling during screening are provided.

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