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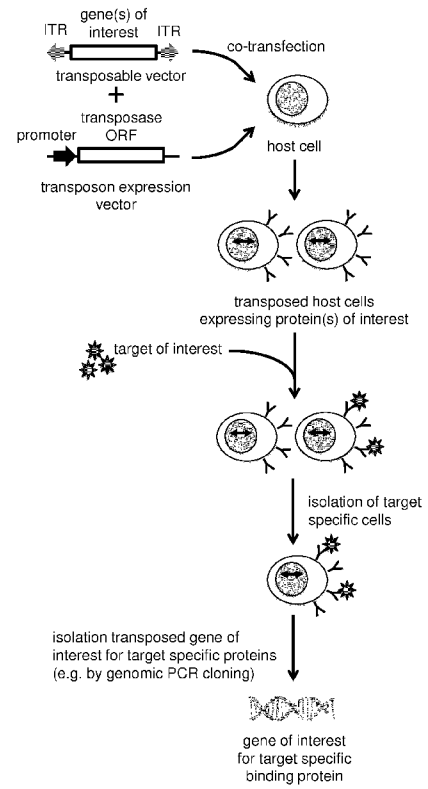
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[Continued on next page]

(54) Title: TRANSPOSITION-MEDIATED IDENTIFICATION OF SPECIFIC BINDING OR FUNCTIONAL PROTEINS

Fig. 4



(57) Abstract: The method disclosed herein describ es a novel technology offering unparalleled efficiency, flexibility, utility and speed for the discovery and optimization of polypeptides having desired binding specificity and/or functionality, including antigen-binding molecules such as antibodies and fragments thereof, for desired functional and/or binding phenotypes. The novel method is based on transposable constructs and diverse DNA libraries cloned into transposable vectors and their transfection into host cells by concomitant transient expression of a functional transposase enzyme. This ensures an efficient, stable introduction of the transposon-based expression vectors into vertebrate host cells in one step, which can then be screened for a desired functional or binding phenotype of the expressed proteins, after which the relevant coding sequences for the expressed proteins, including antibodies and fragments thereof, can be identified by standard cloning and DNA sequencing techniques.

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