

Improving Drugs and Development by Technology Advancements

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Technology innovations offer the opportunity for improving the speed and safety of new therapeutics. There are particular steps in this process which I have targeted for discussion of the emerging technologies. These include: 1) target selection and validation, 2) preclinical safety and therapeutic specificity, 3) first in man and Phase I efficacy safety, and 4) post-launch surveillance.

For subject 1 the emphasis will be on the use of human and mouse genetic origin of disease. For subject 2 the emphasis will be on the use of *in vitro* pathway high content cell screening and mass spectroscopy. For subject 3 the emphasis will be on genetic stratification, biomarker screening via mass spectroscopy, and combinatorial protein screening. For subject 4 the emphasis will be on sample storage for retrospective analytical capacity by multiple technologies (as used in newborn screening).