

White House Report Identifies Precision Medicine for Future R & D Investment

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Precision medicine was identified by a recent White House Office of Science and Technology Policy Report ("[Report](#)") as a research and development priority for the United States over the next 20 years. The Report highlighted goals to advance precision medicine, including improvements in health monitoring, multi-omics, cell therapies, artificial intelligence-driven drug development, gene editing, microbial genome sequencing and synthetic biology.

Ten aspiration goals under five broad themes were selected to accelerate medical breakthroughs and advance human health in precision medicine. The five themes are:

Theme 1 - Accessible health monitoring to identify indicators of health and develop and distribute a simple-to-use home diagnostic assay kit to report health across the lifespan and meet the needs of diverse populations.

Theme 2 - Precision multi-omic medicine to collect multi-omic measures in large cohorts with diverse populations, as well as to develop molecular classifications for diagnosis and/or treatment and make these actionable with development of the \$1,000 multi-ome.

Theme 3 - Biomanufacturing of cell-based therapies to expand the toolset of technologies used to create cell-based therapies to achieve high viability and targeted delivery at the time of patient administration, as well as expand access to cell-based therapies to decrease health inequities.

Theme 4 - AI-driven bioproduction of therapeutics to increase the speed and diversity of therapeutic manufacturing, including manufacture of current therapeutics as well as design of novel ones.

Theme 5 - Advanced techniques in gene editing to assess current gene-editing systems and emerging technologies for therapeutic gene editing as well as to strengthen the biomanufacturing ecosystem to produce millions of doses of therapeutic gene-editing systems annually.

Report at page 38.

A development and implementation plan to address the research and development needs outlined in

the Report will be led by the Office of Science and Technology Policy.

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