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GSK to advance genomic research and improve drug discovery

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New 'Laboratory for Genomics Research' unites CRISPR pioneers with industry expertise to help unravel mysteries of the human genome

GlaxoSmithKline plc has announced a five-year collaboration with the University of California to establish a state-of-the-art laboratory for CRISPR technologies, the Laboratory for Genomics Research (LGR).

The new laboratory will explore how gene mutations cause disease and develop new technologies using CRISPR to rapidly accelerate the discovery of new medicines.

The LGR is the brainchild of Professor Jennifer Doudna, University of California Berkeley (UCB), a co-inventor of CRISPR technology and Howard Hughes Medical Institute (HHMI) Investigator; Professor Jonathan Weissman, University of California San Francisco (UCSF), a pioneer of CRISPR screening technology and HHMI Investigator; and Dr Hal Barron, Chief Scientific Officer and President, R&D, GSK.

The LGR represents a novel hybrid model that brings together industrial and academic researchers under a single roof working on projects both together and independently. The outputs of those research projects will be focused on technologies, new drug targets and biological mechanisms that will foster both academic and industrial advances.

The LGR will receive up to $67 million in funding over a five-year period which will include facilities for 24 full-time university employees funded by GSK, plus up to 14 full-time GSK employees. With a focus on immunology, oncology and neuroscience, the laboratory will be based near the UCSF Mission Bay campus in San Francisco. GSK's artificial intelligence and machine learning group will also be involved in building the necessary computational pipelines to analyze all the data. The LGR aims to automate existing CRISPR approaches so that this work can be done at scale. Ultimately the goal is to deepen our understanding of genetics and discover new targets, and to create next generation technologies that will become future standard practice for the pharmaceutical industry.