

Combining Genomics And AI To Mine New Drug Ideas From Fungi

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Boston-based LifeMine Therapeutics, a fresh new drug discovery startup, just announced a \$55 million Series A financing from a number of life sciences investors, including WuXi Healthcare Ventures, Foresite Capital, GV (formerly Google Ventures), Arch Ventures, Boyu Capital, Blue Pool Capital, Merck Ventures, and Alexandria Venture Investments.

Led by Gregory Verdine, a serial biotech entrepreneur and Erving Professor at Harvard University and Harvard Medical School, the new startup is the first company to combine genomics with artificial intelligence (AI) and synthetic biology for discovering new drugs -- through the knowledge about biologic function hidden in biosynthetic genes of fungi.

In the interview with John Carrol (Endpoints News), Professor Verdine explains that fungi are a promising source of new ideas for drug discovery as through billions of years in evolution, they have developed a rich diversity of small molecules as competitive substances. According to Professor Verdine, fungi can provide grounds for developing new breakthrough therapeutics which will be working in humans.

Secured with financial resources and a first-of-its-kind genomically-enabled drug discovery platform, LifeMine Therapeutics will try to find success in the area of cancer. As a starting point, the team has to grow up fungi, isolate and sequence the DNA, and analyze it for biosynthetic gene clusters to derive an instruction sets for obtaining new natural products.

According to the company statement, they will use artificial intelligence as an analytics power behind the drug discovery project.

Thus, LifeMine Therapeutics joins a wave of other AI-driven drug discovery startups betting on novel data science technologies to derive unique new insights from the life sciences practical knowledge.