# ScienceMachine secures $3.5 million to scale autonomous AI transforming biotech research



ScienceMachine, a London-based AI startup, has secured $3.5 million in pre-seed funding to advance its autonomous AI agent, Sam, designed to revolutionise data analysis in biotech and pharmaceutical research. Unlike many large corporations still striving to implement seamless AI automation, ScienceMachine claims to have developed a fully autonomous system that functions as a 24/7 bioinformatician, automating the entire data pipeline and significantly accelerating scientific discovery.

The core challenge ScienceMachine addresses is the overwhelming flood of complex biological data generated by modern labs and clinics, which often exceeds the capacity of existing research teams. Many life sciences organisations struggle to recruit enough skilled data scientists, and domain experts may lack the time or technical training to conduct advanced analyses themselves. This bottleneck delays breakthroughs and increases costs. Sam integrates directly with existing databases and workflows, autonomously processing experimental data to identify critical patterns and insights without manual input, effectively providing the analytical output of an entire team of data scientists. Early clients report that Sam delivers results in a fraction of the time and cost, with higher quality outcomes.

CEO and Co-founder Lorenzo Sani emphasised the transformational potential of AI in research, saying, “Our AI agent works around the clock, analysing research data from lab to clinic, turning raw data into breakthroughs in hours, instead of months.” The company has rapidly secured multiple contracts since launching, driven entirely by inbound interest, and plans to expand its market reach from biotech startups to larger pharmaceutical companies, where scalability and flexible data automation are in high demand.

The funding round was led by Revent and Nucleus Capital, with strategic angel investors also participating. Rebecca Brill, Principal at Revent, praised ScienceMachine’s technical excellence and execution, noting the impressive progress made by the small team. Maximilian Schwarz from Nucleus Capital highlighted the growing importance of agent-based AI architectures in scientific software, expressing confidence that these systems will transform bioinformatics and accelerate R&D timelines by expanding access to complex analyses for wet-lab scientists.

ScienceMachine’s autonomous approach aligns with broader trends in AI-driven scientific research, exemplified by advanced frameworks like CellAgent, which uses multiple AI roles to orchestrate single-cell RNA sequencing analyses, and Robin, a multi-agent system integrating literature search, hypothesis generation, and experimentation to accelerate discovery. Similarly, BioDiscoveryAgent autonomously designs and reasons about genetic perturbation experiments, and AutoSciLab simulates the scientific method through machine learning-driven experiment cycles. These complementary innovations highlight a rapidly evolving field where AI agents not only automate data crunching but actively engage in experimental design and hypothesis testing.

Despite the promising advances, these autonomous AI agents are still in early stages of real-world adoption. ScienceMachine’s early customer success stories indicate practical viability and commercial interest, but wider industry uptake will depend on further proof of consistent accuracy, reliability, and integration within diverse lab environments. The company intends to use its new funding to enhance product development and expand its sales and partnership teams, particularly targeting pharmaceutical firms, to capitalise on the growing demand for scalable AI solutions in life sciences.

If successful, ScienceMachine could significantly reduce the time and cost to develop new therapies, marking a critical step towards fully autonomous scientific discovery. As AI agents continue to evolve from data processors to sophisticated scientific collaborators, they promise to reshape the landscape of biomedical research and accelerate the journey from data to breakthrough treatments.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://tech.eu/2025/07/09/sciencemachine-raises-35m-for-leading-autonomous-ai-in-biotech-research/), [[2]](https://www.sciencemachine.ai/)
* Paragraph 2 – [[1]](https://tech.eu/2025/07/09/sciencemachine-raises-35m-for-leading-autonomous-ai-in-biotech-research/), [[2]](https://www.sciencemachine.ai/)
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* Paragraph 6 – [[3]](https://arxiv.org/abs/2407.09811), [[4]](https://arxiv.org/abs/2505.13400), [[5]](https://arxiv.org/abs/2405.17631), [[6]](https://arxiv.org/abs/2412.12347)
* Paragraph 7 – [[1]](https://tech.eu/2025/07/09/sciencemachine-raises-35m-for-leading-autonomous-ai-in-biotech-research/), [[2]](https://www.sciencemachine.ai/)

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## Bibliography

1. <https://tech.eu/2025/07/09/sciencemachine-raises-35m-for-leading-autonomous-ai-in-biotech-research/> - Please view link - unable to able to access data
2. <https://www.sciencemachine.ai/> - ScienceMachine is a London-based AI startup that has developed Sam, an autonomous AI bioinformatician designed to automate the entire data analysis pipeline for biotech and pharmaceutical companies. By integrating directly with existing databases and lab workflows, Sam continuously processes experimental data to identify patterns and insights, significantly accelerating scientific discovery. The company has already secured multiple contracts and is expanding its reach from biotech startups to larger companies, aiming to transform research and discovery in the coming years.
3. <https://arxiv.org/abs/2407.09811> - CellAgent is an LLM-driven multi-agent framework designed for the automatic processing and execution of single-cell RNA sequencing (scRNA-seq) data analysis tasks. By constructing biological expert roles such as planner, executor, and evaluator, CellAgent effectively drives the planning and execution of complex data analysis tasks. The framework has been evaluated on a comprehensive benchmark dataset, demonstrating its ability to identify suitable tools and hyperparameters for single-cell analysis tasks, thereby reducing the workload for scientific data analyses.
4. <https://arxiv.org/abs/2505.13400> - Robin is a multi-agent system capable of fully automating the key intellectual steps of the scientific process, including literature search, hypothesis generation, experimentation, and data analysis. By integrating literature search agents with data analysis agents, Robin can generate hypotheses, propose experiments, interpret experimental results, and generate updated hypotheses, achieving a semi-autonomous approach to scientific discovery. The system has been applied to identify a novel treatment for dry age-related macular degeneration, demonstrating its potential in accelerating scientific research.
5. <https://arxiv.org/abs/2405.17631> - BioDiscoveryAgent is an AI agent designed to autonomously design genetic perturbation experiments, reason about their outcomes, and efficiently navigate the hypothesis space to reach desired solutions. Utilizing its biological knowledge, BioDiscoveryAgent can uniquely design new experiments without the need to train a machine learning model or explicitly design an acquisition function as in Bayesian optimization. The agent has demonstrated improvements in predicting relevant genetic perturbations across multiple datasets, representing an accessible new paradigm in the computational design of biological experiments.
6. <https://arxiv.org/abs/2412.12347> - AutoSciLab is a machine learning framework for driving autonomous scientific experiments, forming a surrogate researcher purposed for scientific discovery in high-dimensional spaces. The framework autonomously follows the scientific method in four steps: generating high-dimensional experiments, selecting optimal experiments using active learning, distilling the experimental results to discover relevant low-dimensional latent variables, and learning a human interpretable equation connecting the discovered latent variables with a quantity of interest. AutoSciLab has been validated by rediscovering principles of projectile motion and phase transitions within the spin-states of the Ising model.
7. <https://www.screendaily.com/news/uk-ai-creative-studio-wonder-secures-3m-in-pre-seed-funding/5203949.article> - Wonder, a UK-based AI creative studio, has secured $3 million in pre-seed funding from UK venture capital company LocalGlobe and Australian venture capital firm Blackbird, along with individual investors including executives from Google DeepMind and OpenAI. The studio aims to build an AI filmmaking ecosystem and produce films across entertainment and advertising, incubate emerging talent, and produce original IP using generative AI. The funding will support the development of AI-powered video experiences and the growth of the studio's operations.