

AI News Digest

05/11/2026 - 05/17/2026

WEEKLY DIGEST: BIOLOGICAL & BIOMEDICAL SCIENCES

AI Revolutionizes Research in Biological Sciences

Recent advancements in AI tools, particularly Co-Scientist, are transforming research in biological and biomedical sciences. Researchers from institutions like the University of Cambridge and Stanford University are leveraging this multi-agent AI system to uncover molecular switches in infectious diseases, synthesize findings in aging research, and identify repurposed medicines for liver fibrosis. The tool's ability to analyze vast amounts of literature and generate hypotheses is accelerating discoveries across various fields. This trend highlights the growing integration of AI in scientific research, promising to enhance our understanding of complex biological processes.

KEY FINDINGS

- ✓ Co-Scientist is being used to identify molecular switches linked to severe diseases like sepsis.
- ✓ The AI tool has proven effective in synthesizing findings related to aging and liver disease mechanisms.
- ✓ Collaborative efforts in ALS research are utilizing Co-Scientist to merge expertise in tissue engineering and RNA biology.

IMPLICATIONS

- The integration of AI in biomedical research could lead to faster identification of disease mechanisms.
- AI-driven hypothesis generation may enhance the efficiency of drug repurposing efforts.
- Collaborative research models leveraging AI tools could foster innovation in tackling complex diseases.

Key Metrics: Co-Scientist has been utilized in multiple research projects across leading institutions.; Gemini 3.1 AI model has doubled its accuracy in recent updates.; The funding landscape for AI-driven research tools continues to grow, as seen with significant investments in related technologies.

1. Finding the molecular switches behind new infectious diseases

Category: Research

Departments: Biological Sciences, Computer Science, Public Health Sciences

Topics: Healthcare AI, Molecular Switch Identification, Protein Target Discovery, Pathogen-Induced Disease Research

Impact Score: 26.0

Rubric Scores

Research Relevance: 5

Educational Value: 4

Innovation / Novelty: 5

Practical Impact: 5

Interdisciplinary Potential: 4

Ethical / Policy Implications: 3

Professor Clare Bryant at the University of Cambridge is utilizing the AI tool Co-Scientist to identify molecular switches responsible for severe diseases, such as sepsis, that arise when pathogens transfer from animals to humans. By inputting her grant proposal into Co-Scientist, she received a ranked list of hypotheses, including novel protein targets that had not previously been considered. This iterative process has allowed her team to refine their focus down to specific amino acids for experimental testing, significantly accelerating their research timeline from two to three years to potentially six months. The project aims to enhance understanding of pathogen-induced diseases and develop preventive strategies.

<https://deepmind.google/blog/finding-the-molecular-switches-behind-new-infectious-diseases/>

2. Opening new paths in aging research

Category: Research

Departments: Biological Sciences, Public Health Sciences, Computer Science

Topics: Healthcare AI, Aging Research, Hypothesis Generation, Integrated Stress Response, Literature Synthesis Tool

Impact Score: 26.0

Rubric Scores

Research Relevance: 5

Educational Value: 4

Innovation / Novelty: 5

Practical Impact: 4

Interdisciplinary Potential: 5

Ethical / Policy Implications: 3

At Calico Life Sciences, researchers are utilizing the AI tool Co-Scientist to synthesize disparate findings in the biology of aging, aiming to generate testable hypotheses. The tool has demonstrated effectiveness in filtering through the complexities of existing literature, leading to the formulation of a novel hypothesis regarding the regulation of the integrated stress response (ISR) by metabolism, which varies with age and disease. This hypothesis was further refined through interactions with Co-Scientist, resulting in experimental designs that yielded new findings about ISR's implications for health and disease. The team intends to publish these results, contributing to the understanding of aging-related biological processes.

<https://deepmind.google/blog/opening-new-paths-in-aging-research/>

3. Accelerating discovery of liver disease mechanisms

Category: Research
Departments: Biological Sciences, Nursing, Public Health Sciences, Computer Science
Topics: Healthcare AI, Combination Therapies, NLRP3 Inflammasome, Metabolic Dysfunction, Hypothesis Generation

Impact Score: 26.0

Rubric Scores

Research Relevance: 5	Educational Value: 4	Innovation / Novelty: 5
Practical Impact: 4	Interdisciplinary Potential: 5	Ethical / Policy Implications: 3

At the University of Edinburgh, bioengineer Filippo Menolascina utilized the AI tool Co-Scientist to analyze biomedical literature and generate new hypotheses related to metabolic dysfunction-associated steatohepatitis (MASH). The research addressed the complexity of MASH, which involves multiple biological processes, making single-target drug development inadequate. Co-Scientist synthesized relevant evidence and identified potential combination therapies, including a hypothesis linking the NLRP3 inflammasome to the interplay between inflammation and metabolism in MASH. This hypothesis was experimentally verified and may inform the development of targeted dual-therapies for affected patients.

<https://deepmind.google/blog/accelerating-discovery-of-liver-disease-mechanisms/>

4. Co-Scientist: A multi-agent AI partner to accelerate research

Category: Research
Departments: Biological Sciences, Computer Science, Public Health Sciences, Pharmaceutical Sciences
Topics: Generative AI, Multi-Agent Systems, Hypothesis Generation, Antimicrobial Resistance, Plant Immunity

Impact Score: 26.0

Rubric Scores

Research Relevance: 5	Educational Value: 4	Innovation / Novelty: 5
Practical Impact: 4	Interdisciplinary Potential: 5	Ethical / Policy Implications: 3

A new multi-agent AI system called Co-Scientist has been introduced to assist researchers in generating and refining scientific hypotheses, as detailed in a recent publication in Nature. Developed collaboratively by Google DeepMind, Google Research, Google Cloud, and Google Labs, this system aims to address the challenges of hypothesis generation in the life sciences and other fields. The Co-Scientist tool is designed to iteratively create, debate, and evolve hypotheses for complex scientific problems and will be made available to individual researchers through an experimental tool called Hypothesis Generation. Initial applications of the system have focused on issues such as antimicrobial resistance, plant immunity, and liver fibrosis.

<https://deepmind.google/blog/co-scientist-a-multi-agent-ai-partner-to-accelerate-research/>

5. Uniting biological toolkits for a new approach to ALS

Category: Research
Departments: Biological Sciences, Nursing, Electrical & Computer Engineering, Public Health Sciences
Topics: Healthcare AI, RNA-targeted Therapies, Tissue Engineering, Literature Review Automation

Impact Score: 22.0

Rubric Scores

Research Relevance: 4	Educational Value: 3	Innovation / Novelty: 4
Practical Impact: 4	Interdisciplinary Potential: 5	Ethical / Policy Implications: 2

Ritu Raman from MIT and Ryan Flynn from Boston Children's Hospital have initiated a collaborative research effort to investigate ALS, leveraging their distinct expertise in tissue engineering and RNA biology, respectively. Utilizing a tool called Co-Scientist, they streamlined the process of reviewing existing literature, generating testable hypotheses, and identifying feasible research directions. This collaboration aims to explore novel RNA-based mechanisms and potential RNA-targeted therapies for ALS, bridging the gap between their disciplines to enhance understanding and treatment of the disease.

<https://deepmind.google/blog/uniting-biological-toolkits-for-a-new-approach-to-als/>

6. Uncovering repurposed medicines to fight liver fibrosis

Category: Research
Departments: Pharmaceutical Sciences, Nursing, Public Health Sciences
Topics: Healthcare AI, Drug Repurposing, Fibrosis Treatment, Gene Activity Modulation

Impact Score: 22.0

Rubric Scores

Research Relevance: 4	Educational Value: 3	Innovation / Novelty: 4
Practical Impact: 5	Interdisciplinary Potential: 4	Ethical / Policy Implications: 2

Research led by Gary Peltz at Stanford University School of Medicine, published in **Advanced Science**, investigates the use of Co-Scientist to identify existing drugs that could be repurposed for treating liver fibrosis. Peltz's team tested five drug candidates-three proposed by Co-Scientist and two selected by Peltz-using a fibrosis testbed with live human liver cells. While Peltz's selections showed no efficacy, two of Co-Scientist's candidates effectively blocked fibrosis and promoted liver cell regeneration, with vorinostat demonstrating a 91% reduction in a damage response associated with liver scarring. The findings suggest that drugs targeting gene activity may be promising candidates for developing new anti-fibrotic therapies.

<https://deepmind.google/blog/uncovering-repurposed-medicines-to-fight-liver-fibrosis/>

7. scBench Updates: Opus 4.7, GPT 5.5, Gemini 3.1

Category: Research
Departments: Computer Science, Biological Sciences, Electrical & Computer Engineering
Topics: Generative AI, Biology-Specific Analysis, Latency Optimization, Model Accuracy Improvement

Impact Score: 19.0

Rubric Scores

Research Relevance: 4	Educational Value: 3	Innovation / Novelty: 3
Practical Impact: 4	Interdisciplinary Potential: 3	Ethical / Policy Implications: 2

The article discusses updates to scBench, which now includes additional scientist reviews and data for new AI models: Opus 4.7, GPT 5.5, and Gemini 3.1. Findings indicate that Gemini 3.1 has doubled its accuracy, Opus 4.7 shows modest improvement, while GPT 5.5 exhibits no significant accuracy enhancement. In terms of latency, GPT 5.5 demonstrates substantial improvement, while Gemini 3.1's latency worsens by approximately five times. Despite advancements in generic data analysis capabilities, the models continue to face challenges with biology-specific analysis details, highlighting the need for knowledge of experimental design and specific analysis protocols.

<https://blog.latch.bio/p/scbench-updates-opus-47-gpt-55-gemini>

8. Wear and Tear Changes Measurable PFAS Levels in Firefighter Hoods, Gloves and Wildland Gear

Category: Research
Departments: Public Health Sciences, Nursing, Biological Sciences
Topics: Healthcare AI, PFAS Exposure Assessment, Protective Clothing Analysis, Toxicology Data Standardization

Impact Score: 19.0

Rubric Scores

Research Relevance: 3	Educational Value: 2	Innovation / Novelty: 3
Practical Impact: 4	Interdisciplinary Potential: 3	Ethical / Policy Implications: 4

Researchers at the National Institute of Standards and Technology (NIST) conducted a study to assess the impact of wear and tear on per- and polyfluoroalkyl substances (PFAS) levels in firefighter protective clothing, specifically focusing on hoods and gloves used in structural fires and wildland gear. The findings revealed that wear and tear significantly increased PFAS concentrations in hoods and gloves, while levels decreased in wildland gear. This research provides critical baseline data for toxicologists and health experts to evaluate potential health risks associated with PFAS exposure in firefighting equipment, addressing a gap in knowledge highlighted by Congress in the 2021 National Defense Authorization Act.

<https://www.nist.gov/news-events/news/2026/05/wear-and-tear-changes-measurable-pfas-levels-firefighter-hoods-gloves-and-wildland-gear>

9. 3Q: Why science is curiosity on a mission

Category: Research

Departments: Political Science & Public Administration, Educational Leadership, Biological Sciences, Computer Science

Topics: Science & Research, Curiosity-Driven Research, Public Investment in Science, Innovation in Technology

Impact Score: 15.0

Rubric Scores

Research Relevance: 1

Educational Value: 2

Innovation / Novelty: 2

Practical Impact: 3

Interdisciplinary Potential: 4

Ethical / Policy Implications: 3

MIT has launched the initiative "Science Is Curiosity on a Mission" to advocate for the importance of curiosity-driven research in the U.S., emphasizing its role in fostering innovation across various fields, including medicine and technology. The initiative aims to highlight the stories of scientists engaged in long-term, open-ended inquiries that have led to significant breakthroughs. This effort comes in response to declining public investment in basic science, which threatens the sustainability of the U.S. research enterprise and its global leadership in scientific innovation. By focusing on the human aspect of scientific inquiry, the initiative seeks to rekindle appreciation for the foundational role of curiosity in driving discovery.

<https://news.mit.edu/2026/3-questions-science-curiosity-mission-0514>

10. The Week's 10 Biggest Funding Rounds: Anduril Leads Varied Lineup Of Large Deals

Category: Business

Departments: Industrial, Manufacturing & Systems Engineering, Electrical & Computer Engineering, Aerospace & Mechanical Engineering, Biological Sciences, Political Science & Public Administration

Topics: Robotics, Defense Technology, Biotechnology Applications, Space Technology

Impact Score: 13.0

Rubric Scores

Research Relevance: 1

Educational Value: 2

Innovation / Novelty: 2

Practical Impact: 4

Interdisciplinary Potential: 3

Ethical / Policy Implications: 1

Anduril Industries, a defense technology company, secured \$5 billion in funding, marking the largest financing round of the week. This funding round is part of a broader trend, as several companies specializing in various applications, including data power, robotics, space technology, and biotechnology, also raised significant capital. The investments reflect a growing interest in technologies that have practical applications in the physical world.

<https://news.crunchbase.com/venture/biggest-funding-rounds-anduril-volta-grid-mind-robotics/>