

AI News Digest

09/07/2026 - 09/13/2026

WEEKLY DIGEST: BIOLOGICAL & BIOMEDICAL SCIENCES

AI Accelerates Biomedical Discovery and Research

Recent advancements in AI are transforming the field of biological and biomedical sciences. Researchers are leveraging AI to accelerate the discovery of new therapeutics, antimicrobials, and understanding of the human genome. AI-powered tools are being developed to improve the efficiency and accuracy of biomedical research, from predicting DNA letter changes to regulating information flow in neural networks. These innovations have the potential to drive significant breakthroughs in healthcare and medicine.

KEY FINDINGS

- ✓ Researchers introduced TxBench-Oligonucleotide Discovery, a benchmark evaluating AI agents' ability to recover realistic program decisions from experimental data in oligonucleotide discovery.
- ✓ AlphaGenome Atlas, a predictive map of every possible DNA letter change in the human genome, has been developed to prioritize genetic variants for unsolved rare disease research.
- ✓ An AI start-up, Anthropic, blocked a research project due to uncertainty about its legitimacy or potential malicious intent, highlighting the need for responsible AI development.

IMPLICATIONS

- The integration of AI in biomedical research is expected to lead to significant breakthroughs in the discovery of new therapeutics and antimicrobials.
- AI-powered tools will continue to improve the efficiency and accuracy of biomedical research, enabling researchers to tackle complex challenges in healthcare and medicine.
- The development of AI-powered tools also raises concerns about biosecurity and the need for responsible AI development and regulation.

Key Metrics: 113 evaluations testing 21 model-harness systems in TxBench-Oligonucleotide Discovery benchmark; AlphaGenome Atlas provides high-resolution, global views of the genome; Anthropic shut down a research project due to uncertainty about its legitimacy or potential malicious intent

1. An Agent Benchmark for Therapeutic Oligonucleotide Discovery

Category: Research

Departments: Pharmaceutical Sciences, Computer Science, Biological Sciences, Chemistry & Biochemistry, Nursing

Topics: Healthcare AI, Therapeutic Oligonucleotide Discovery, AI Agent Benchmarking, Multimodal Agent

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

Researchers introduced TxBench-Oligonucleotide Discovery, a benchmark evaluating AI agents' ability to recover realistic program decisions from experimental data in oligonucleotide discovery. The benchmark consists of 113 evaluations testing 21 model-harness systems, with the strongest configuration, GPT-6 Astra on OpenAI Codex, passing 55.5% of endpoint attempts. The evaluations span diverse data sources and are organized into three tiers of the discovery-to-translation arc, revealing variability in model performance across task categories. No single model dominates uniformly across all task types, suggesting aggregate accuracy is an insufficient metric for model selection.

<https://blog.latch.bio/p/an-agent-benchmark-for-therapeutic>

2. How a researcher uses Codex and ChatGPT to search for new antimicrobial molecules

Category: Research

Departments: Pharmaceutical Sciences, Biological Sciences, Computer Science, Public Health Sciences, Chemistry & Biochemistry

Topics: Healthcare AI, Antimicrobial Discovery, Biological Sequence Analysis, Genomic Data Mining, Protein Function Prediction

Impact Score: 24.0

Rubric Scores

Research Relevance: 4

Educational Value: 4

Innovation / Novelty: 3

Practical Impact: 5

Interdisciplinary Potential: 5

Ethical / Policy Implications: 3

Researchers are using AI to accelerate the discovery of antimicrobials, which are crucial in combating the growing global threat of drug-resistant microbes. César de la Fuente's lab trains deep-learning models to recognize patterns in biological sequences, allowing them to search vast genome and protein datasets for potential antimicrobials and reducing the initial search for candidate molecules from years to hours. The lab's approach involves exploring biology's "unread spaces" by analyzing vast amounts of genomic and protein data to identify patterns that make a molecule functional and potentially effective against infectious microbes. AI is used to scan huge datasets, identify promising signals, and prioritize candidates for experimental testing, which are then validated through ground-truth experiments.

<https://openai.com/index/using-codex-chatgpt-to-search-for-new-antimicrobials>

3. AlphaGenome Atlas: A predictive map of every possible DNA letter change in the human genome

Category: Research

Departments: Biological Sciences, Computer Science

Topics: Healthcare AI, Genomic Variant Analysis, Predictive Modeling, Rare Disease Research, Protein Structure Prediction

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

Researchers have developed AlphaGenome Atlas, a tool providing high-resolution, global views of the genome, which can be applied to targeted research questions. The Atlas was used to prioritize genetic variants for unsolved rare disease research, leading to the discovery of a variant affecting a gene linked to epileptic encephalopathy. AlphaGenome Atlas also helped uncover genetic associations with protein levels and complex traits by identifying non-coding variants associated with specific traits or diseases. The tool enabled the identification of regulatory variants driving protein abundance and may aid in the discovery of genetic regions linked to traits such as body mass index.

<https://deepmind.google/blog/alphagenome-atlas-a-predictive-map-of-every-possible-dna-letter-change-in-the-human-genome/>

4. Brain-inspired computing: Using noise to regulate information flow in neural networks

Category: Research

Departments: Computer Science, Electrical & Computer Engineering, Biological Sciences, Mathematical Sciences

Topics: AI Ethics & Safety, Spiking Neural Networks, Noise-tolerant Learning

Impact Score: 20.0

Rubric Scores

Research Relevance: 4

Educational Value: 3

Innovation / Novelty: 4

Practical Impact: 3

Interdisciplinary Potential: 4

Ethical / Policy Implications: 2

Researchers developed a learning mechanism that utilizes natural variability in neural activity to improve learning capabilities of brain networks and brain-inspired devices. This mechanism leverages variability often considered random "noise" to adapt synapses deep within these networks. The approach aims to enhance learning capabilities of brain networks and brain-inspired devices.

<https://techxplore.com/news/2026-09-brain-noise-neural-networks.html>

5. Anthropic Says It Blocked Possible Efforts to Build Biological Weapons

Category: Research

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

Topics: AI Ethics & Safety, Biological Weapon Detection, Malicious Intent Identification

Impact Score: 10.0

Rubric Scores

Research Relevance: 1

Educational Value: 1

Innovation / Novelty: 0

Practical Impact: 2

Interdisciplinary Potential: 2

Ethical / Policy Implications: 4

An AI start-up shut down a research project after being unable to determine its legitimacy or potential malicious intent. The start-up issued a report on the project. The project's goals and outcomes are not specified. The company took action due to uncertainty surrounding the research.

<https://www.nytimes.com/2026/09/10/us/politics/anthropic-ai-biological-weapons.html>