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# AI-Discovered Drugs in Clinical Trials 2026: Full Pipeline

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## In this article

1. [AI-Discovered Drugs in Clinical Trials 2026: Full Pipeline](#)
2. [Executive Summary](#)
3. [Introduction and Background](#)
4. [Defining the Field: What Counts as an "AI-Discovered" Drug](#)
5. [The AI-Native Leaders: Insilico Medicine, Recursion Pharmaceuticals and Exscientia](#)
6. [Isomorphic Labs and the Platform-Partnership Model](#)
7. [The Broader Pipeline: Nine More AI-Native Biotechs in the Clinic](#)
8. [Analysis of Key Segments](#)
9. [Data Analysis and Evidence](#)
10. [Case Studies and Real-World Examples](#)
11. [Rentosertib: From a Phase 2a Signal to a Registered Phase III Study](#)
12. [DSP-1181: The First AI-Designed Drug in the Clinic, and Its End](#)
13. [BEN-2293: When the Target Hypothesis Fails in Humans](#)
14. [Safety-Driven Discontinuations: SGR-2921 and Bemcentinib](#)
15. [ISM6331: A Regulatory Milestone Days Before Publication](#)
16. [Implications and Future Directions](#)
17. [Frequently Asked Questions \(FAQs\)](#)
18. [Conclusion](#)

# AI-Discovered Drugs in Clinical Trials 2026: Full Pipeline

## Executive Summary

As of July 2026, the field of artificial intelligence (AI) driven drug discovery has moved from a speculative narrative to a measurable clinical pipeline. FDA approval records do not classify products by whether AI was used in discovery, so claims about a field-wide first approval depend on the methodology of the tracker making them. A conference abstract presented at the [American Society of Clinical Oncology \(ASCO\) in 2026](#) counted **117 AI-enabled therapeutic assets across 63 companies** that had entered interventional human trials, of which 60 (51.3 percent) had completed Phase 1 and only 8 (6.8 percent) had completed Phase 2 ([doi.org](#)). Two third-party publications estimate a broader universe of more than **173 AI-designed programs** in clinical development in early 2026 and roughly **\$60 billion** invested in AI drug discovery since 2019, respectively ([medspark.ai](#)) ([ai2.work](#)). These estimates use their publishers' own classifications and are not reconciled to the ASCO/JCO asset-level analysis, so they should not be treated as authoritative pipeline totals.

Among the named late-stage candidates, Insilico Medicine's **rentosertib** (formerly ISM001-055/INS018-055) is a TNIK inhibitor for idiopathic pulmonary fibrosis (IPF) that reported Phase 2a results in Nature Medicine showing a mean forced vital capacity (FVC) improvement of +98.4 mL versus a -20.3 mL decline on placebo over 12 weeks ([nature.com](#)). Insilico announced and registered its 320-patient Phase III study (NCT07687459)

on July 7, 2026. As of the registry record at publication, the study was not yet recruiting and had an estimated start date of August 30, 2026. Update (October 2026): Insilico dosed the first patient in the trial, named GENESIS-IPF-3, on September 9, 2026, and the registry now lists it as recruiting ([prnewswire.com](https://www.prnewswire.com)) ([clinicaltrials.gov](https://clinicaltrials.gov)). Generate:Biomedicines' AI-engineered antibody GB-0895 had already started the Phase 3 SOLAIRIA-1 study on December 3, 2025 ([insilico.com](https://insilico.com)) ([clinicaltrials.gov](https://clinicaltrials.gov)). Just three weeks after that milestone, on July 29, 2026, the U.S. Food and Drug Administration (FDA) granted Insilico's ISM6331, a pan-TEAD inhibitor for advanced mesothelioma, Fast Track Designation, the company's first such designation ([prnewswire.com](https://prnewswire.com)).

Behind Insilico, **Recursion Pharmaceuticals** (which absorbed Exscientia in a \$688 million all-stock merger that closed November 20, 2024) ([reuters.com](https://reuters.com)) runs a pipeline including REC-4881 (Phase 2, a 43 to 53 percent reduction in polyp burden in familial adenomatous polyposis, detailed below), REC-617 (a confirmed partial response in platinum-resistant ovarian cancer) ([ir.recursion.com](https://ir.recursion.com)), and other clinical-stage candidates, alongside a May 2025 pipeline cull that discontinued three programs including REC-994 despite an earlier positive Phase 2 signal ([fiercebitech.com](https://fiercebitech.com)). **Isomorphic Labs**, the Alphabet/DeepMind spinout built on **AlphaFold** and backed by a \$2.1 billion Series B round in May 2026 ([biospace.com](https://biospace.com)), had **not yet disclosed a clinical candidate or dosed a patient** as of mid-2026. CEO Demis Hassabis said he expected clinical trials by the end of 2026, compared with earlier guidance for the end of 2025 ([reuters.com](https://reuters.com)).

Beyond these three, a wider field of AI-native biotechs has clinical-stage assets, including Schrödinger (SGR-1505, a 22 percent overall response rate in lymphoma) ([ir.schrodinger.com](https://ir.schrodinger.com)), Absci (ABS-101, its first AI-designed biologic for inflammatory bowel disease to enter a Phase 1 trial) ([investors.absci.com](https://investors.absci.com)), Generate:Biomedicines (GB-0895, moving to Phase 3 for severe asthma) ([prnewswire.com](https://prnewswire.com)), and Iambic Therapeutics (IAM1363, a 28 percent response rate in heavily pretreated HER2 cancer) ([iambic.ai](https://iambic.ai)). The field has also absorbed high-profile failures: BenevolentAI's BEN-2293 missed its efficacy endpoints in April 2023, triggering 180 layoffs and a \$56 million cost reduction ([fiercebitech.com](https://fiercebitech.com)); Exscientia's DSP-1181, the very first AI-designed drug to enter human trials in January 2020, was quietly abandoned in January 2022 ([endpoints.news](https://endpoints.news)); and Schrödinger halted SGR-2921 in August 2025 after two treatment-related deaths ([businesswire.com](https://businesswire.com)). A frequently cited 2024 BCG analysis found AI-discovered molecules had an 80 to 90 percent Phase 1 success rate, but only roughly 40 percent in Phase 2, comparable to historic industry averages ([pubmed.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov)), and the 2025 Nature Medicine rentosertib paper explicitly cautioned that "AI-discovered drugs have experienced similar levels of phase 2 trial failure as non-AI-discovered drugs" and that none had yet progressed through Phase 3 at the time of writing ([nature.com](https://nature.com)). The global AI-in-drug-discovery market itself is estimated at roughly \$2.3 to \$2.6 billion in 2025, rising to \$2.9 to \$3.3 billion in 2026, with several research firms projecting a compound annual growth rate (CAGR) near 25 percent through the early 2030s ([grandviewresearch.com](https://grandviewresearch.com)). This report examines selected companies across that pipeline and details the clinical events, positive and negative, that define where AI drug discovery stands in 2026.

## Introduction and Background

Artificial intelligence has been promoted as a way to compress the traditionally slow, expensive process of drug discovery, which the Tufts Center for the Study of Drug Development estimated in a landmark 2014 analysis costs roughly \$2,558 million per approved compound (the origin of the commonly cited "\$2.6 billion"

figure) ([globenewswire.com](https://www.globenewswire.com)). A 2025 Nature Medicine paper puts the current industry benchmark at roughly \$2 to \$3 billion spent over 10 to 15 years to bring a single new drug to market ([nature.com](https://www.nature.com)). Against that backdrop, a wave of "AI-native" biotechs, spinouts, and pharma-AI partnerships emerged over the past decade promising to shrink target discovery, molecule design, and preclinical timelines using machine learning, generative chemistry, and structure-prediction models such as AlphaFold.

The symbolic starting point most often cited is January 2020, when Sumitomo Dainippon Pharma (now Sumitomo Pharma) and Exscientia announced that **DSP-1181**, a serotonin 5-HT1A receptor agonist for obsessive-compulsive disorder (OCD), had entered Phase I trials in Japan after "requiring less than 12 months to complete the exploratory research phase," versus an industry average closer to 4.5 years ([sumitomo-pharma.com](https://www.sumitomo-pharma.com)). The BBC covered the milestone as, "in a world first for machine learning in medicine" ([bbc.co.uk](https://www.bbc.co.uk)). By this report's Publish Date of July 31, 2026, the field has both matured and been humbled. Insilico Medicine announced and registered a Phase III study of rentosertib, its first Phase III program, on July 7, 2026; the registry listed the study as not yet recruiting, with an estimated start date of August 30, 2026. Insilico separately secured its first FDA Fast Track Designation on July 29, 2026, just two days before this report's cutoff, a milestone detailed in the case studies section below. At the same time, DSP-1181 itself was discontinued in 2022 ([endpoints.news](https://www.endpoints.news)), and no AI-discovered drug has yet received full FDA marketing approval, per industry tracking sources ([medspark.ai](https://www.medspark.ai)). The pace of change within this narrow window is itself notable: between rentosertib's Phase III announcement and registration and this report's cutoff, a span of just over three weeks, Insilico separately secured its first-ever FDA Fast Track Designation, illustrating how quickly the field's most active companies are now generating verifiable regulatory and clinical milestones rather than platform promises alone.

This report is a data-driven, selected survey of the AI-discovered drug clinical pipeline as of mid-2026, covering companies with named candidates in the clinic, their reported trial stages and data, funding evidence, and comparisons of sector success and failure rates with traditional drug development. Life-sciences organizations evaluating whether and how to adopt AI in research and development increasingly need this kind of grounded, source-verified picture rather than vendor narrative; specialist advisories such as [intuitionlabs.ai](https://www.intuitionlabs.ai), an AI and life-sciences consultancy, frame the opportunity in similar terms, noting that "AI-enhanced drug discovery and development can accelerate timelines by up to 60%, according to recent research by Deloitte" ([intuitionlabs.ai](https://www.intuitionlabs.ai)), a claim this report tests against the actual, verifiable trial record rather than taking it at face value.

## Defining the Field: What Counts as an "AI-Discovered" Drug

"AI-discovered" is not a regulatory term, and the industry uses it loosely to cover several distinct levels of AI involvement. At one end are candidates for which AI systems proposed the novel biological target and generated the specific molecular structure, such as Insilico Medicine's rentosertib, discovered using the company's Pharma.AI platform, which the company states discovered both a novel target and a novel molecule "in under 18 months," versus a typical multi-year, \$430 million-plus preclinical program ([insilico.com](https://www.insilico.com)). At the other end are programs where AI accelerated an existing discovery process, for example structure prediction, virtual screening, or clinical trial design, without AI generating the core molecule from scratch. The

distinction matters for interpreting success-rate statistics, since studies that aggregate all "AI-enabled" assets, such as the 2026 ASCO/JCO conference abstract that identified 117 such assets across 63 companies with a median founding-to-Phase-1 time of 6.5 years ([doi.org](#)), necessarily mix these categories.

Multiple trackers now attempt to quantify the field's size. Medspark, an industry tracking outlet, reported that the number of AI-designed drug programs in clinical development "surged to over 173 in early 2026, up from roughly two dozen in late 2023" ([medspark.ai](#)). A separate 2026 industry analysis estimates that approximately \$60 billion has flowed into AI drug discovery since 2019, producing about 175 clinical-stage programs, explicitly framing the moment as a "Phase III reckoning" given the absence of approvals to date ([ai2.work](#)). A January 2026 review in Pharmacological Reviews lists the positive Phase IIa results for Insilico Medicine's TNIK inhibitor, then still designated ISM001-055, in idiopathic pulmonary fibrosis, alongside the Recursion-Exscientia merger, among the field's defining developments since 2024 ([sciencedirect.com](#)), underscoring that peer-reviewed literature has begun treating individual AI-discovered clinical results, rather than platform capabilities alone, as the field's primary evidence base. No single authoritative, government-maintained registry of "AI-discovered drugs" exists; ClinicalTrials.gov records individual trials but does not tag AI-driven discovery, meaning every figure in this space, including the ones cited above, ultimately depends on a private company's or research group's own classification criteria. This report treats a candidate as AI-discovered when the sponsoring company itself, in a Tier 1 disclosure (press release, SEC/regulatory filing, or peer-reviewed paper), attributes target identification or molecular design substantially to an AI or machine-learning platform, and notes where that framing is contested.

## The AI-Native Leaders: Insilico Medicine, Recursion Pharmaceuticals and Exscientia

**Insilico Medicine**, a Hong Kong-listed biotech that completed the largest Hong Kong biotech initial public offering (IPO) of 2025, raising HKD 2.277 billion and reaching a market capitalization of roughly HKD 20.7 billion (about \$2.7 billion USD) after its December 2025 listing ([insilico.com](#)) ([pharmaphorum.com](#)), is the clearest current leader by clinical-stage volume. As of an April 2026 company disclosure, Insilico had nominated 30 preclinical candidate compounds and achieved Investigational New Drug (IND) clearance for 13 programs spanning fibrosis, oncology, immunology, and central nervous system (CNS) disorders, with three Phase II trials initiated ([insilico.com](#)). CEO Alex Zhavoronkov stated in mid-2025 that the company had nominated 22 developmental candidates, 10 of which had reached the clinical stage ([drugdiscoverytrends.com](#)). Its lead program, **rentosertib**, targets TNIK to block TGF-beta-dependent fibrogenesis and inflammation in IPF ([insilico.com](#)), received FDA Orphan Drug Designation in February 2023 ([eurekalert.org](#)), and announced and registered a Phase III study (NCT07687459) on July 7, 2026, led by Professor Zuojun Xu of Peking Union Medical College Hospital and designed to enroll approximately 320 patients over 52 weeks of dosing. The registry listed the study as not yet recruiting, with an estimated start date of August 30, 2026 ([insilico.com](#)) ([clinicaltrials.gov](#)). The first patient was dosed on September 9, 2026, at Peking Union Medical College Hospital; the trial plans to enroll 320 participants across 47 centers in China, with the annual rate of decline in FVC over 52 weeks as its primary endpoint ([prnewswire.com](#)). Beyond rentosertib, Insilico's **ISM6331**, a pan-TEAD inhibitor for advanced malignant mesothelioma nominated in June 2023 using the company's Chemistry42 structure-based design tool, received Orphan Drug Designation in June 2024 and, as of July 29, 2026, Fast Track Designation ([prnewswire.com](#)) ([prnewswire.com](#)), with first-in-

human Phase 1 data slated for a Rapid Oral presentation at the European Society for Medical Oncology (ESMO) Congress in October 2026 ([insilico.com](https://www.insilico.com)). A separate NLRP3 inflammasome inhibitor, **ISM8969**, partnered with Hygtia Therapeutics for up to \$66 million in upfront and milestone payments, completed first-in-human dosing in June 2026 ([hkexnews.hk](https://www.hkexnews.hk)). Insilico projected H1 2026 revenue of approximately \$102.5 million to \$106.5 million, up roughly 273 to 287 percent year on year ([insilico.com](https://www.insilico.com)). Its interim results, released August 26, 2026, reported H1 2026 revenue of \$106.3 million, up 287.2 percent, and a net profit of \$35.54 million ([prnewswire.com](https://www.prnewswire.com)).

**Recursion Pharmaceuticals** (Nasdaq: RXXR) took a different route to scale: acquisition. On August 8, 2024, Recursion agreed to buy Exscientia, its closest AI-drug-discovery rival, for \$688 million in an all-stock deal ([reuters.com](https://www.reuters.com)), a combination that closed November 20, 2024, delisting Exscientia's Nasdaq shares (Nasdaq: EXAI) and creating a combined pipeline the companies described as "more than 10 clinical and preclinical programs," with over \$450 million in upfront and realized milestone payments received to date against more than \$20 billion in potential deal value ([ir.recursion.com](https://www.ir.recursion.com)). The combined company's active clinical pipeline includes **REC-4881**, a MEK1/2 inhibitor in Phase 2 for familial adenomatous polyposis (FAP) that reported "a median 43% reduction in polyp burden at Week 13, deepening to 53% at Week 25" in its Q1 2026 update ([ir.recursion.com](https://www.ir.recursion.com)); **REC-617**, a CDK7 inhibitor for advanced solid tumors that produced a confirmed durable partial response in a platinum-resistant ovarian cancer patient in December 2024 interim data ([ir.recursion.com](https://www.ir.recursion.com)); **REC-1245**, an RBM39 degrader in Phase 1/2 that advanced from biological discovery to development candidate in 18 months, "more than twice as fast as the industry average," per the company ([ir.recursion.com](https://www.ir.recursion.com)); and **REC-3565**, a MALT1 inhibitor cleared for Phase 1 by the UK's Medicines and Healthcare products Regulatory Agency (MHRA) in January 2025 ([ir.recursion.com](https://www.ir.recursion.com)). Legacy Exscientia asset **EXS74539/REC-4539**, an LSD1 inhibitor, began a new Phase 1 dose-determining ENLYGHT trial (NCT07517198) on April 13, 2026, sponsored by Exscientia AI Ltd. as a wholly owned Recursion subsidiary ([clinicaltrials.gov](https://www.clinicaltrials.gov)). Not every program survived the merger: in May 2025, Recursion discontinued three clinical-stage programs, REC-2282 (NF2), REC-994 (cerebral cavernous malformation), and REC-3964 (C. difficile infection), and paused REC-4539, in a pipeline-streamlining move ([fiercebiotech.com](https://www.fiercebiotech.com)), even though REC-994's own Phase 2 SYCAMORE readout had shown 50 percent of high-dose patients with reduced lesion volume versus 28 percent on placebo ([fiercebiotech.com](https://www.fiercebiotech.com)). Recursion's Q1 2026 results reported a net loss of \$117.5 million (versus \$202.5 million a year earlier) and \$665.2 million in cash ([ir.recursion.com](https://www.ir.recursion.com)), underpinned by partnerships including a 2021 Roche/Genentech collaboration (\$150 million upfront, up to \$12 billion in aggregate potential across 40 programs) ([ir.recursion.com](https://www.ir.recursion.com)) and a 2023 Bayer oncology deal (up to \$1.5 billion in milestones) ([ir.recursion.com](https://www.ir.recursion.com)). Nvidia had earlier invested \$50 million in Recursion in July 2023 via a private investment in public equity (PIPE), pairing capital with cloud-computing access for AI foundation-model development ([fiercebiotech.com](https://www.fiercebiotech.com)), yet Recursion's shares still fell nearly 17 percent, to \$4.76 from \$5.70, the trading day after the May 2025 pipeline cuts were announced ([genengnews.com](https://www.genengnews.com)), a reminder that public markets continue to price AI drug discovery stocks on individual clinical readouts rather than platform narratives alone.

**Exscientia**, before the merger, earned its own place in the field's history. Its DSP-1181 partnership with Sumitomo Dainippon Pharma is generally credited as the first AI-designed drug into human trials, and the company later signed a Merck KGaA (Darmstadt) collaboration worth \$20 million upfront and up to \$674 million in milestones for three programs ([ir.recursion.com](https://www.ir.recursion.com)), and a Bristol Myers Squibb (BMS) collaboration, a roughly

\$1.2 billion "biobucks" discovery deal through which BMS obtained the EXS4318 PKC-theta inhibitor in 2021, before BMS discontinued that asset in October 2025 as part of a \$1.5 billion cost-cutting initiative ([fiercebitech.com](https://fiercebitech.com)). Exscientia had also discontinued its own EXS21546 (A2A receptor antagonist) combination trial with BMS's Opdivo in October 2023, concluding "it will be challenging for '546 to reach a suitable therapeutic index" ([endpoints.news](https://endpoints.news)).

## Isomorphic Labs and the Platform-Partnership Model

**Isomorphic Labs**, launched out of Alphabet's DeepMind in 2021 to commercialize AlphaFold protein-structure-prediction technology ([prnewswire.com](https://prnewswire.com)), uses a platform-partnership model backed by external funding. In January 2024 Isomorphic Labs signed same-day collaborations with **Eli Lilly** (\$45 million upfront, up to \$1.7 billion in milestones) ([prnewswire.com](https://prnewswire.com)) and **Novartis** (\$37.5 million upfront, up to \$1.2 billion in milestones) ([prnewswire.com](https://prnewswire.com)), a combination the company itself described as worth "nearly \$3 billion" excluding royalties ([isomorphiclabs.com](https://isomorphiclabs.com)); the Novartis scope was expanded by up to three additional research programs in February 2025 on the same financial terms ([isomorphiclabs.com](https://isomorphiclabs.com)). Isomorphic Labs then raised \$600 million in its first external funding round in March 2025, led by Thrive Capital ([isomorphiclabs.com](https://isomorphiclabs.com)), with Hassabis stating the capital would "help us advance our own programs into clinical development" ([prnewswire.com](https://prnewswire.com)), and then a **\$2.1 billion Series B** in May 2026, characterized by BioSpace as "the second largest biotech round of all time," trailing only Altos Labs' \$3 billion 2022 raise ([biospace.com](https://biospace.com)). Isomorphic Labs president Max Jaderberg said in the Series B announcement that "our drug design engine works, and it's giving us a repeatable way" to advance programs ([storage.googleapis.com](https://storage.googleapis.com)).

As of mid-2026, Isomorphic Labs had **not put a molecule into human trials**. BioSpace reported in May 2026 that the company "hasn't yet disclosed a molecule or reached the clinic" ([biospace.com](https://biospace.com)). Hassabis told the World Economic Forum in Davos in January 2026 that the company "expects to have its first clinical trials by the end of 2026" ([reuters.com](https://reuters.com)); Reuters also cited his earlier guidance that the company "would have AI-designed drugs in clinical trials by the end of 2025" ([reuters.com](https://reuters.com)). In July 2025, Isomorphic Labs president Colin Murdoch told Fortune the company "is getting ready to start testing its AI-designed drugs in humans" ([fortune.com](https://fortune.com)), and the company describes its wholly owned internal pipeline as concentrated in oncology and immunology ([biospace.com](https://biospace.com)), but as of this report's July 31, 2026 cutoff, no Tier 1 or Tier 2 source confirms a named clinical candidate or an FDA IND clearance for the company. Isomorphic Labs is therefore included in this report as a platform-partnership company with an internal pipeline focused on oncology and immunology; as of the July 31, 2026 cutoff, the article's cited sources did not identify a named clinical candidate or FDA IND clearance.

## The Broader Pipeline: Nine More AI-Native Biotechs in the Clinic

Beyond the three leaders, a wider set of AI-native biotechs has reached the clinic with varying degrees of success. **Schrödinger** (Nasdaq: SDGR), which uses a physics-based computational chemistry platform, reported in June 2025 that its MALT1 inhibitor **SGR-1505** achieved a 22 percent overall response rate across dose levels in relapsed/refractory B-cell lymphoma, with dose escalation complete ([ir.schrodinger.com](https://ir.schrodinger.com)). A second Schrödinger program, the CDC7 inhibitor **SGR-2921**, was discontinued in August 2025 after "two treatment-related deaths in the Phase 1 dose-escalation study" ([businesswire.com](https://businesswire.com)).

**XtalPi**, whose platform combines quantum physics, AI, and robotics, has enabled several clinical-stage molecules through partnerships. Its **PEP08** program with PharmaEngine received clinical clearance in June 2025 and entered Phase I for solid tumors in Australia and Taiwan ([en.xtalpi.com](https://en.xtalpi.com)); its incubated ReviR Therapeutics program **RTX-117**, for Charcot-Marie-Tooth disease, secured dual IND approvals from both China's National Medical Products Administration (NMPA) and the U.S. FDA ([en.xtalpi.com](https://en.xtalpi.com)); and its Signet Therapeutics partnership yielded **SIGX1094**, described as the world's first targeted therapy for diffuse gastric cancer, which holds both FDA Orphan Drug and Fast Track designations while in Phase I ([en.xtalpi.com](https://en.xtalpi.com)).

**BenevolentAI**'s lead candidate, **BEN-2293**, a topical pan-Trk inhibitor for atopic dermatitis, enrolled 91 adults in a 28-day Phase IIa trial that met its safety endpoint ([fiercebitech.com](https://fiercebitech.com)) but missed both secondary efficacy endpoints for itch and inflammation in April 2023 ([benevolent.com](https://benevolent.com)).

**Absci Corporation** became a clinical-stage company in May 2025 when it dosed the first patient in a Phase 1 trial of **ABS-101**, which it described as its "first AI-designed biologic" for inflammatory bowel disease, with attributes including "high affinity, low immunogenicity, and extended dosing interval" that were "intentional attributes achieved through AI" ([investors.absci.com](https://investors.absci.com)). By November 2025, interim Phase 1 data showed an extended half-life versus first-generation anti-TL1A competitors, but Absci decided not to fund further internal development itself, instead seeking an out-licensing partner ([sec.gov](https://sec.gov)).

**Generate:Biomedicines** is advancing **GB-0895**, a long-acting anti-TSLP antibody for severe asthma, into two global Phase 3 trials (SOLAIRIA-1 and SOLAIRIA-2) enrolling approximately 1,600 patients, announced in December 2025 ([prnewswire.com](https://prnewswire.com)), after Phase 1 data in 96 patients showed an approximately 89-day half-life ([prnewswire.com](https://prnewswire.com)); the company's CEO said reaching Phase 3 within four years demonstrated that "an antibody engineered with AI can achieve a potentially best-in-class profile" ([prnewswire.com](https://prnewswire.com)). An earlier Generate program, **GB-0669**, an AI-generated antibody against SARS-CoV-2, moved "from computer to clinic in just 17 months" ([generatebiomedicines.com](https://generatebiomedicines.com)), though the company later paused prophylactic development given shifting market conditions.

**Iambic Therapeutics'** HER2 inhibitor **IAM1363** showed partial responses in 28 percent of evaluable patients with measurable disease, including patients previously treated with trastuzumab deruxtecan (T-DXd) and tucatinib, per October 2025 ESMO data ([iambic.ai](https://iambic.ai)); the company's CEO called it "one of the first clear demonstrations of a drug candidate with compelling clinical activity and safety from a TechBio company" ([iambic.ai](https://iambic.ai)), noting the program moved from start to clinical trial initiation in two years ([iambic.ai](https://iambic.ai)). The Phase 1/1b trial (NCT06253871) remained active and recruiting as of early 2026 ([centerwatch.com](https://centerwatch.com)).

Not every program in the broader field advanced. **Verge Genomics'** ALS candidate **VRG50635**, discovered via its CONVERGE AI platform, "missed its primary efficacy endpoint" in a completed Phase 1b trial, with the company stating plasma neurofilament light chain, its efficacy biomarker, unexpectedly rose rather than fell on drug ([vergelabs.blog](https://vergelabs.blog)); Verge subsequently shifted from internal drug development toward a partnership model built around its AI platform ([endpoints.news](https://endpoints.news)). **Relay Therapeutics'** RLY-2608 (zovegalisib), designed with the company's Dynamo motion-based drug design platform, reported an 11.0-month median progression-free survival in PI3K-alpha-mutated breast cancer as of June 2025 updated data ([ir.relaytx.com](https://ir.relaytx.com)). A Phase 3 trial, ReDiscover-2, comparing zovegalisib plus fulvestrant with capivasertib plus fulvestrant, has been recruiting since August 2025 ([clinicaltrials.gov](https://clinicaltrials.gov)). And **BergenBio's** AXL inhibitor **bemcentinib**, associated with

computationally driven target discovery, was fully discontinued in June 2025 after a strategic review found no financial justification to continue, following a Phase 1/2 readout in which "no responses" were seen among 10 evaluable STK11-mutant non-small-cell lung cancer subjects ([oncologypipeline.com](https://oncologypipeline.com)).

## Analysis of Key Segments

The pipeline that emerges from these company-level surveys is heavily weighted toward early-phase, oncology-focused, small-molecule programs, with a long tail of high-profile discontinuations. *Table 1* below summarizes the clinical-stage status of the AI-discovered and AI-enabled drug candidates covered in this report as of July 2026.

**Table 1: Selected Clinical-Stage AI-Discovered and AI-Enabled Drug Candidates, 2026 Snapshot**

| Company           | Lead Candidate           | Indication                    | Phase (mid-2026) | Status Note                                                                                                                                                                       |
|-------------------|--------------------------|-------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insilico Medicine | Rentosertib (ISM001-055) | Idiopathic pulmonary fibrosis | Phase III        | Initiated July 7, 2026 ( <a href="https://www.insilico.com">insilico.com</a> ); first patient dosed September 9, 2026 ( <a href="https://www.prnewswire.com">prnewswire.com</a> ) |

| Company                       | Lead Candidate         | Indication                          | Phase (mid-2026) | Status Note                                                                                                                                                                    |
|-------------------------------|------------------------|-------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insilico Medicine             | ISM6331                | Advanced mesothelioma               | Phase I          | FDA Fast Track, July 29, 2026 ( <a href="https://www.prnewswire.com">prnewswire.com</a> )                                                                                      |
| Recursion Pharmaceuticals     | REC-4881               | Familial adenomatous polyposis      | Phase 2          | 43 to 53% polyp reduction reported ( <a href="https://ir.recursion.com">ir.recursion.com</a> )                                                                                 |
| Recursion Pharmaceuticals     | REC-617                | Advanced solid tumors               | Phase 1/2        | Confirmed partial response, ovarian cancer ( <a href="https://ir.recursion.com">ir.recursion.com</a> )                                                                         |
| Recursion (Exscientia legacy) | EXS74539/RE C-4539     | Select solid tumors, including SCLC | Phase 1          | New trial started April 13, 2026 ( <a href="https://clinicaltrials.gov">clinicaltrials.gov</a> )                                                                               |
| Isomorphic Labs               | Undisclosed            | Oncology, immunology                | Preclinical      | No molecule disclosed as of May 2026 ( <a href="https://biospace.com">biospace.com</a> )                                                                                       |
| Schrödinger                   | SGR-1505               | B-cell lymphoma                     | Phase 1          | 22% overall response rate ( <a href="https://ir.schrodinger.com">ir.schrodinger.com</a> )                                                                                      |
| XtalPi / Signet Therapeutics  | SIGX1094               | Diffuse gastric cancer              | Phase I          | FDA Orphan Drug and Fast Track ( <a href="https://en.xtalpi.com">en.xtalpi.com</a> )                                                                                           |
| Absci                         | ABS-101                | Inflammatory bowel disease          | Phase 1          | Absci's first AI-designed biologic for IBD to enter a Phase 1 trial ( <a href="https://investors.abs-ci.com">investors.abs-ci.com</a> )                                        |
| Generate:Biomedicines         | GB-0895                | Severe asthma                       | Phase 3          | ~1,600-patient SOLAIRIA-1/2 trials ( <a href="https://www.prnewswire.com">prnewswire.com</a> )                                                                                 |
| Iambic Therapeutics           | IAM1363                | HER2-altered cancers                | Phase 1/1b       | Preliminary sponsor-reported partial responses in 28% of 18 evaluable participants ( <a href="https://iambic.ai">iambic.ai</a> )                                               |
| Relay Therapeutics            | RLY-2608 (zovegalisib) | PI3K-alpha-mutated breast cancer    | Phase 3          | 11.0-month median PFS ( <a href="https://ir.relaytx.com">ir.relaytx.com</a> ); Phase 3 ReDiscover-2 recruiting ( <a href="https://clinicaltrials.gov">clinicaltrials.gov</a> ) |

The table shows a bifurcated pipeline: a small number of programs, principally rentosertib and GB-0895, are in or planned for late-stage Phase 3 development, while most remaining candidates cluster in Phase 1 or Phase 1/2. Oncology and immuno-oncology dominate by indication count, reflecting both the availability of well-characterized molecular targets for generative design and the field's origins in computational structural biology; fibrosis (rentosertib), immunology (GB-0895, EXS4318 before discontinuation), and rare neurological disease (VRG50635, before its Phase 1b failure) are secondary clusters. Modality is also split: while small-molecule inhibitors dominate (rentosertib, REC-617, REC-4881, SGR-1505, ISM6331), a growing share are AI-designed biologics, notably Absci's ABS-101 and Generate:Biomedicines' antibody programs, indicating that generative AI design techniques originally proven on small molecules are extending into protein and antibody engineering.

Program-level pace also varies widely within the sector: the JCO conference abstract found a median of 6.5 years from company founding to Phase 1 entry across the 63 companies it tracked ([doi.org](https://doi.org)), a timeline several multiples longer than the sub-30-month, target-to-Phase-1 pace Insilico reports for individual programs such as rentosertib ([insilico.com](https://insilico.com)), a reminder that company-level infrastructure buildout, not just per-molecule AI design speed, determines how quickly a young AI-native biotech reaches its first clinical trial. Insilico's own pipeline

also illustrates the field's therapeutic diversification beyond oncology and fibrosis: alongside rentosertib and ISM6331, the company lists a USP1 inhibitor for BRCA-mutant cancer ([insilico.com](#)), and its most recently nominated preclinical candidate, as of April 2026, originated from a research collaboration in the United Arab Emirates ([insilico.com](#)), pointing to an increasingly international discovery footprint rather than one confined to the United States, Western Europe, and China. The discontinuation record implicit in this analysis, DSP-1181, BEN-2293, bemcentinib, REC-994/REC-2282/REC-3964, SGR-2921, EXS21546, EXS4318, and VRG50635, is nearly as long as the list of advancing programs, underscoring that AI-assisted discovery has compressed preclinical timelines more reliably than it has changed underlying clinical attrition, a pattern examined quantitatively in the next section.

## Data Analysis and Evidence

The clearest quantitative test of AI drug discovery's clinical performance comes from a peer-reviewed 2024 analysis, authored by Boston Consulting Group (BCG) researchers and published in Drug Discovery Today, which found that "AI-discovered molecules have an 80-90% success rate," substantially higher than historic industry averages, in Phase 1 trials, but that "in Phase II the success rate is approximately 40%, albeit on a limited sample size," comparable to historic industry averages ([pubmed.ncbi.nlm.nih.gov](#)) ([pubmed.ncbi.nlm.nih.gov](#)). A subsequent 2025 Nature Medicine paper, reporting Insilico Medicine's own rentosertib Phase 2a results, offered a more cautious update: "AI-discovered drugs have experienced similar levels of phase 2 trial failure as non-AI-discovered drugs," and, as of that publication, "none has so far progressed through phase 3 trials" ([nature.com](#)) ([nature.com](#)). Rentosertib's Phase III study was announced and registered weeks before this report's cutoff ([HKEX announcement](#)), but the registry listed it as not yet recruiting with an estimated August 30, 2026 start (the first patient was dosed on September 9, 2026); in any event, registration or initiation is not the same as progressing through or completing Phase III. The Nature Medicine statement therefore remains accurate for the status at the time of publication; the underlying caution about Phase 2 attrition is also corroborated by the discontinuations catalogued in the previous section. *Table 2* summarizes the wider clinical-asset counts and market-size estimates behind these dynamics.

**Table 2: AI Drug Discovery, Selected Quantitative Benchmarks (2024 to 2026)**

| Metric                                             | Figure                                          | Source and As-Of Date                                                                  |
|----------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------|
| AI-enabled clinical assets (interventional trials) | 117 assets, 63 companies                        | JCO/ASCO 2026 conference abstract, data as of Dec. 1, 2025 ( <a href="#">doi.org</a> ) |
| Share of those assets completing Phase 1           | 51.3% (60 of 117)                               | Same source ( <a href="#">doi.org</a> )                                                |
| Share completing Phase 2                           | 6.8% (8 of 117)                                 | Same source ( <a href="#">doi.org</a> )                                                |
| Median founding-to-Phase-1 time                    | 6.5 years                                       | Same source ( <a href="#">doi.org</a> )                                                |
| AI-designed drug programs in clinical development  | Over 173 (early 2026), up from ~24 in late 2023 | Medspark, July 19, 2026 ( <a href="#">medspark.ai</a> )                                |
| AI-in-drug-discovery global market, 2025           | \$2.3 billion (est.)                            | Grand View Research ( <a href="#">grandviewresearch.com</a> )                          |

| Metric                                                    | Figure                                                       | Source and As-Of Date                                                                           |
|-----------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Same market, 2026 to 2033 forecast                        | \$2.9 billion to \$13.8 billion, 24.8% CAGR                  | Grand View Research ( <a href="https://www.grandviewresearch.com">grandviewresearch.com</a> )   |
| Alternate market estimate, 2026 to 2031                   | \$3.25 billion to \$10.29 billion, 25.94% CAGR               | Mordor Intelligence ( <a href="https://www.mordorintelligence.com">mordorintelligence.com</a> ) |
| VC funding for AI drug development, first 3 quarters 2025 | \$2.7 billion                                                | PitchBook, Nov. 12, 2025 ( <a href="https://pitchbook.com">pitchbook.com</a> )                  |
| AI-ML drug discovery partnership deals, 2025              | 114 deals, \$43.4 billion potential value                    | DealForma, Jan. 13, 2026 ( <a href="https://dealforma.com">dealforma.com</a> )                  |
| AI-ML drug discovery M&A, 2025                            | 99 deals, \$12.3 billion                                     | DealForma ( <a href="https://dealforma.com">dealforma.com</a> )                                 |
| Cumulative AI drug discovery investment since 2019        | ~\$60 billion into ~175 clinical-stage programs, 0 approvals | ai2.work, July 24, 2026 ( <a href="https://ai2.work">ai2.work</a> )                             |

These figures paint a market that is small in absolute revenue terms (a \$2 to \$3 billion software and platform market as of 2025-2026) relative to the tens of billions of dollars committed as venture capital and pharma-partnership deal value, and relative to the roughly \$60 billion cumulative investment tracked since 2019. That gap is a structural feature of the industry: AI drug discovery companies mostly monetize through milestone-laden partnerships and platform licensing rather than product sales. FDA approval records do not classify products by whether AI was used in discovery, so they cannot independently establish a field-wide approved-product-revenue total. On timelines, Insilico's own claims are illustrative of the field's central efficiency argument: the company's target-discovery-to-Phase-I timeline for rentosertib was "under 30 months," versus a typical multi-year, \$430-million-plus preclinical program ([insilico.com](https://www.insilico.com)), and in a July 2026 interview, Insilico's CEO told a wire-service reporter that traditional drug discovery "takes about 4.5 years to get to a drug developmental candidate," versus the company's typical 13-month and record 9-month AI-driven timelines in China ([979weve.com](https://www.979weve.com)) ([979weve.com](https://www.979weve.com)). Insilico separately claimed its rentosertib preclinical program cost roughly one-tenth of, and took a fraction of the time of, a traditional program it estimated "would have taken years and cost over \$400 million" ([techstrong.ai](https://www.techstrong.ai)). Recursion's REC-1245 program, discussed above, moved from biological discovery to development candidate more than twice as fast as the industry average by the company's own account. These vendor-reported acceleration figures should be read as company claims rather than independently audited benchmarks; no peer-reviewed, cross-company study in this report's fact base independently verified a specific multiple of time or cost savings, though the directional finding, materially faster preclinical timelines with clinical-stage attrition broadly similar to the traditional industry, is consistent across the BCG, Nature Medicine, and JCO sources cited above.

Funding concentration is a further, and underappreciated, feature of the data. One funding tracker estimated that Isomorphic Labs' \$2.1 billion Series B alone accounted for approximately 87 percent of all disclosed AI-drug-discovery venture capital raised in the first half of 2026 ([newmarketpitch.com](https://www.newmarketpitch.com)). This concentration means sector-level funding totals reflect an uneven distribution of capital across companies. Recursion's own SEC filing on the Exscientia combination documents the transaction's structure as a UK court-sanctioned Scheme of Arrangement that took legal effect through "the delivery of such order to the Registrar of Companies in

England and Wales" ([sec.gov](#)), an unusually cross-border legal structure for a Nasdaq-listed AI drug discovery merger, and upon closing, Exscientia's American Depositary Shares (ADSs) "ceased trading and will be delisted from Nasdaq" ([nasdaq.com](#)).

## Case Studies and Real-World Examples

### Rentosertib: From a Phase 2a Signal to a Registered Phase III Study

Insilico Medicine's rentosertib is the field's central proof-of-concept case. The GENESIS-IPF Phase 2a trial randomized 71 idiopathic pulmonary fibrosis patients across 22 sites in China to 12 weeks of 30 mg once daily, 30 mg twice daily, or 60 mg once daily rentosertib, or placebo ([insilico.com](#)). The primary endpoint was safety: the percentage of participants with at least one treatment-emergent adverse event. A secondary lung-function endpoint, change in forced vital capacity, favored the high-dose arm: a mean improvement of +98.4 mL (95 percent confidence interval, 10.9 to 185.9) versus a mean decline of -20.3 mL on placebo ([nature.com](#)), with an even larger 187.8 mL improvement in the subgroup not on standard background antifibrotic therapy ([drugdiscoverytrends.com](#)). Safety data were more mixed: seven patients discontinued due to liver-related adverse events, four of whom were concurrently taking the approved antifibrotic nintedanib ([drugdiscoverytrends.com](#)), and only 67 percent of the high-dose group completed treatment versus 88 percent on placebo ([drugdiscoverytrends.com](#)). The study's authors nonetheless concluded that "these results suggest that targeting TNIK with rentosertib is safe and well tolerated" and merited larger, longer trials ([nature.com](#)). Insilico acted on that conclusion by announcing and registering a 320-patient Phase III study (NCT07687459) on July 7, 2026, its first Phase III program. The registry listed the study as not yet recruiting, with an estimated start date of August 30, 2026. The trial, GENESIS-IPF-3, dosed its first patient on September 9, 2026 ([prnewswire.com](#)).

### DSP-1181: The First AI-Designed Drug in the Clinic, and Its End

DSP-1181, a serotonin 5-HT<sub>1A</sub> receptor agonist for OCD codeveloped by Sumitomo Dainippon Pharma and Exscientia, entered Phase I trials in Japan in January 2020 after "requiring less than 12 months to complete the exploratory research phase," versus the roughly 4.5-year industry norm ([sumitomo-pharma.com](#)). Exscientia CEO Andrew Hopkins called the trial's start "a key milestone" for AI in drug discovery at the time ([sumitomo-pharma.com](#)). Two years later, in January 2022, Sumitomo quietly disclosed it had abandoned the drug after it "failed to meet the study's criteria" ([endpoints.news](#)). Hopkins later clarified publicly that "Exscientia's job was to just design the molecule, with Sumitomo making the clinical decisions" on the trial ([endpoints.news](#)), a distinction that foreshadows a recurring theme in the field: attribution of both credit and blame for AI-discovered drug outcomes is often contested between the AI platform company and its clinical development partner. Professional pipeline-tracking databases now record the outcome as a formal status change: AdisInsight's own entry for DSP-1181 lists it simply as "Discontinued - Phase-I for Obsessive-compulsive disorders in Japan (PO)" ([adisinsight.springer.com](#)), a reminder that, from a portfolio-tracking standpoint, AI-discovered candidates are audited by the same standards as any other clinical asset.

## BEN-2293: When the Target Hypothesis Fails in Humans

BenevolentAI's BEN-2293, a topical pan-Trk inhibitor for mild-to-moderate atopic dermatitis whose target was proposed by the company's AI-driven knowledge graph, enrolled 91 adults in a 28-day Phase IIa trial that met its safety endpoint ([fiercebiotech.com](https://www.fiercebiotech.com)) but missed both secondary efficacy endpoints for itch and inflammation in April 2023 ([benevolent.com](https://www.benevolent.com)). The clinical failure had immediate organizational consequences: within weeks, BenevolentAI announced layoffs of up to 180 staff and a strategic reduction of roughly \$56 million (£45 million) to extend its cash runway ([fiercebiotech.com](https://www.fiercebiotech.com)), which the company itself confirmed would extend its cash runway "to at least July 2025" ([benevolent.com](https://www.benevolent.com)). The episode remains one of the field's clearest illustrations that an AI system's target hypothesis, however novel, still faces the same human clinical-trial validation as any traditionally discovered target.

## Safety-Driven Discontinuations: SGR-2921 and Bemcentinib

Two 2025 events show that AI-discovered candidates are also subject to the same safety-driven attrition as conventional drugs. Schrödinger halted its CDC7 inhibitor SGR-2921 in August 2025, stating that "two treatment-related deaths in the Phase 1 dose-escalation study" had led it to discontinue the program entirely ([businesswire.com](https://www.businesswire.com)). Separately, BergenBio discontinued all remaining development of bemcentinib, its AXL inhibitor, in June 2025 after a strategic review found "no responses among 10 evaluable subjects" in the Phase 1/2 portion of its STK11-mutant non-small-cell lung cancer study, a result that sent the company's stock down roughly 75 percent ([oncologypipeline.com](https://www.oncologypipeline.com)). Neither company disputes that its underlying discovery process involved substantial computational or AI-driven target work; both cases demonstrate that AI involvement in discovery does not exempt a candidate from ordinary Phase 1 dose-limiting-toxicity or Phase 2 efficacy risk.

## ISM6331: A Regulatory Milestone Days Before Publication

On July 29, 2026, just two days before this report's Publish Date, the FDA granted Insilico Medicine's ISM6331 Fast Track Designation for advanced malignant pleural mesothelioma, which the company describes as "marking Insilico's first FTD, recognizing the clinical potential in advanced mesothelioma" ([prnewswire.com](https://www.prnewswire.com)), following the Orphan Drug Designation Insilico received for rentosertib in February 2023 ([eurekalert.org](https://www.eurekalert.org)). Fast Track Designation entitles a sponsor to more frequent FDA interactions and eligibility for rolling review, and ISM6331's designation within weeks of rentosertib's Phase III study announcement and registration illustrates a company, rather than merely an isolated molecule, accumulating a track record of regulatory engagement, a distinction from single-asset case studies like DSP-1181 or bemcentinib.

## Implications and Future Directions

Three trends should shape how life-sciences organizations interpret the AI drug discovery pipeline over the next several years. First, the sector is consolidating: Recursion's absorption of Exscientia for \$688 million ([reuters.com](https://www.reuters.com)) and Verge Genomics' pivot away from internal drug development toward a partnership model after its lead ALS candidate failed ([endpoints.news](https://www.endpoints.news)) both suggest that stand-alone AI-native biotechs face pressure to either scale through acquisition or convert into platform-licensing businesses rather than independent drug developers. Second, funding concentration, with a single company's \$2.1 billion raise

accounting for an estimated 87 percent of first-half-2026 sector venture capital ([newmarketpitch.com](https://newmarketpitch.com)), means aggregate investment figures reflect how capital is distributed across companies; company-level trial data provides separate context from sector-level funding headlines. Third, the reported Fast Track and Orphan Drug designations concern the individual candidate and indication. Fast Track is intended for drugs for serious conditions that may fill an unmet medical need; these designations do not establish a broader FDA policy on drugs discovered with AI.

For pharmaceutical and life-sciences organizations evaluating whether and how to build or buy AI drug discovery capability, the picture as of mid-2026 includes preliminary, sponsor-reported findings: REC-4881 produced a median 43% Week-13 reduction in polyp burden among 12 efficacy-evaluable participants in an ongoing open-label Phase 2 study, while IAM1363 showed partial responses in 28% of 18 evaluable participants in a Phase 1/1b study ([ir.recursion.com](https://ir.recursion.com)) ([iambic.ai](https://iambic.ai)), multiple Phase III programs, and a growing set of regulatory designations, set against industry trackers' reported zero-approval record, Phase 2 attrition that the Nature Medicine authors themselves describe as comparable to the traditional industry ([nature.com](https://nature.com)), and at least eight named clinical or preclinical discontinuations across the companies surveyed in this report. This is precisely the kind of nuanced, source-verified evidence base that specialist life-sciences and AI advisories are positioned to bring to enterprise decision-making; intuitionlabs.ai, an AI-focused life sciences consultancy founded by Adrien Laurent in 2023 ([intuitionlabs.ai](https://intuitionlabs.ai)), notes that McKinsey has estimated AI could generate over \$100 billion in annual value for the pharmaceutical industry ([intuitionlabs.ai](https://intuitionlabs.ai)), a figure that spans commercial, R&D, and operational use cases well beyond drug discovery itself, and underscores why pharma organizations increasingly need independent, compliance-aware guidance (spanning frameworks such as FDA 21 CFR Part 11 and EU Annex 11) to separate a vendor's platform narrative from its verified clinical track record before committing R&D budget or partnership capital to any single AI drug discovery approach.

Looking ahead, the next 12 to 18 months will help show whether recent Phase 3 announcements, registrations, and ongoing studies translate into successful pivotal-trial readouts and, eventually, regulatory approvals. Further clinical updates from rentosertib, GB-0895, REC-4881, REC-617, SGR-1505, and IAM1363 will help show whether Phase 1 efficiency gains translate into Phase 2 and Phase 3 approval rates that meaningfully beat, rather than merely match, the traditional industry baseline.

## Frequently Asked Questions (FAQs)

**How many AI-discovered drugs are in clinical trials as of 2026?** Industry trackers put the number of AI-designed drug programs in clinical development at over 173 as of early 2026 ([medspark.ai](https://medspark.ai)), while an ASCO/JCO conference abstract counted 117 AI-enabled therapeutic assets across 63 companies in interventional trials as of December 2025 ([doi.org](https://doi.org)). The discrepancy reflects differing definitions of what counts as "AI-discovered" or "AI-enabled," discussed above.

**What does "AI-enabled" versus "AI-discovered" mean in these pipeline counts?** "AI-enabled" is the broader term, covering any use of machine learning in target identification, molecular design, or trial optimization, while "AI-discovered" more narrowly implies AI generated the specific molecular structure or target hypothesis, as with Insilico Medicine's rentosertib ([insilico.com](https://insilico.com)). The JCO analysis of 117 assets across 63 companies used the broader "AI-enabled" framing, which is one reason its count differs from narrower trackers ([doi.org](https://doi.org)).

**Has an AI-discovered drug been approved by the FDA yet?** No. As of mid-2026, no AI-discovered drug has received full FDA marketing approval, per industry tracking sources ([medspark.ai](https://medspark.ai)). Insilico Medicine announced and registered a Phase III study of rentosertib on July 7, 2026; the registry listed it as not yet recruiting, with an estimated start date of August 30, 2026 ([insilico.com](https://insilico.com)), and Generate:Biomedicines' GB-0895 is in Phase 3 for severe asthma ([prnewswire.com](https://prnewswire.com)), but neither has yet completed pivotal testing. Rentosertib's Phase III trial, GENESIS-IPF-3, dosed its first patient on September 9, 2026 ([prnewswire.com](https://prnewswire.com)). One pending FDA decision involves a drug whose developer describes AI-assisted design: Takeda's zasocitinib (TAK-279), a TYK2 inhibitor for plaque psoriasis designed by Nimbus Therapeutics in collaboration with Schrödinger ([dermatologytimes.com](https://dermatologytimes.com)). The FDA accepted its application under Priority Review on September 14, 2026, with a target action date in the first quarter of 2027 ([takeda.com](https://takeda.com)). Whether it counts as AI-discovered depends on each tracker's definition.

**What is the success rate of AI-discovered drugs compared with traditional drug discovery?** A 2024 BCG-authored, peer-reviewed analysis found an 80 to 90 percent Phase 1 success rate for AI-discovered molecules, well above historic industry averages, but only about 40 percent in Phase 2, in line with historic industry averages ([pubmed.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov)). A 2025 Nature Medicine paper similarly found AI-discovered drugs experience Phase 2 failure rates "similar" to non-AI drugs ([nature.com](https://nature.com)).

**Which biotech companies currently have AI-discovered drugs in clinical trials?** Companies with named clinical-stage AI-discovered or AI-enabled candidates as of mid-2026 include Insilico Medicine, Recursion Pharmaceuticals (including former Exscientia programs), Schrödinger, XtalPi (and its partners PharmaEngine, ReviR Therapeutics, and Signet Therapeutics), Absci, Generate:Biomedicines, Iambic Therapeutics, Relay Therapeutics, and, historically, BenevolentAI and BergenBio, both of which discontinued their lead programs. Isomorphic Labs' disclosed work remained preclinical as of mid-2026 ([biospace.com](https://biospace.com)).

**Is there a single, authoritative tracker of AI drug discovery pipelines?** No government or single industry body maintains an authoritative AI-drug-discovery tracker. ClinicalTrials.gov records individual trials, but "AI-discovered" is not a standard registry classification, so counts depend on each research group's definitions and inclusion criteria.

## Conclusion

By July 2026, AI-discovered and AI-enabled drug candidates have moved decisively past the proof-of-concept stage that defined the field when DSP-1181 entered Phase I in January 2020. Industry trackers reported that the field had not yet delivered an FDA marketing approval, but that conclusion depends on their AI-discovery classifications because FDA approval records do not use such a category. Insilico Medicine announced and registered a Phase III rentosertib study following a Phase 2a study whose primary endpoint assessed treatment-emergent adverse events and whose secondary endpoints included FVC; the registry listed the Phase III study as not yet recruiting, with an estimated August 30, 2026 start, and the first patient was dosed on September 9, 2026. Recursion Pharmaceuticals, having absorbed Exscientia, is generating Phase 2 efficacy data in familial adenomatous polyposis and Phase 1 responses in ovarian cancer, while simultaneously discontinuing multiple programs as part of ordinary portfolio management. A broader field of at least nine additional AI-native biotechs, from Schrödinger and XtalPi to Absci, Generate:Biomedicines, Iambic

Therapeutics, and Relay Therapeutics, has produced credible early clinical data alongside a comparably long list of safety- and efficacy-driven discontinuations. Isomorphic Labs had raised substantial capital and remained in preclinical development as of the report's cutoff.

The quantitative evidence assembled in this report supports a measured conclusion: published analyses report 80 to 90 percent Phase 1 success and roughly 40 percent Phase 2 success for the studied AI-discovered molecules, with the Phase 2 estimate based on a limited sample and broadly comparable to historical industry performance. Company reports describe faster preclinical timelines and several candidates have produced clinical signals, but the evidence does not yet show that AI materially changes the probability of surviving Phase 2 and Phase 3 testing. Whether that changes will be determined largely by the data rentosertib, GB-0895, and the next cohort of Phase 2 assets generate over the following one to two years, and life-sciences organizations tracking this space should weigh individual, verified clinical results over platform-level funding and timeline claims when assessing where the technology genuinely stands.

## Source links

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## THE PUBLISHER

# About IntuitionLabs

IntuitionLabs is an AI consulting, custom software development and data engineering firm serving pharmaceutical, biotechnology, medical-device and other life-science organizations. We work with clinical, regulatory, medical-affairs, commercial, quality and IT teams to connect technology decisions with the work people need to accomplish.

## AI consulting and adoption

Our AI enablement services cover readiness assessments, use-case selection, governance and policies, team workshops, adoption measurement and ongoing advisory support. We help organizations structure the information layer behind AI: source material, context, permissions and maintained knowledge that make generated answers useful and reviewable. Private LLM inference and hosted AI options support teams evaluating how to operate AI with appropriate control over their data and infrastructure.

## Software, data and life-science workflows

IntuitionLabs develops custom software for pharma and biotech, integrates enterprise systems, and builds data engineering and business intelligence solutions. Areas of focus include AI agents, regulatory research, medical writing, medical affairs, CMC information, competitive intelligence and clinical-document workflows. Our eTMF intelligence work includes cross-system reconciliation and inspection-readiness support.

## Enterprise platforms and regulated delivery

We provide Veeva services, application support, managed services, integrations and custom applications, alongside enterprise content work involving platforms such as Egnyte. For regulated workflows, our services include GxP enablement, computer-system validation and software development addressing 21 CFR Part 11 requirements. The applicable controls, validation responsibilities and acceptance criteria are defined for each engagement.

## Work with IntuitionLabs

Explore [AI enablement](#), [pharma and biotech software development](#), [data engineering and BI](#), and [Veeva services](#). [Contact IntuitionLabs](#) to discuss your workflow, information sources and implementation needs.

IntuitionLabs publishes educational research to help life-science teams make informed technology decisions. Coverage of a product or organization does not imply a client relationship, endorsement or partnership.

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