

# Practical Applications of AI/ML in Medical Affairs



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***Medical affairs leaders are ready to cut through the buzz and finally get a clear answer to “what can AI actually do for us?”***

I’m Alex Reinthal, and as Vice President of Product at BP Logix, I have a unique vantage point on how AI and machine learning technologies will develop in life sciences software.

In this article, I will share my insights into the future of generative AI and machine learning. I’ll also delve into practical examples of these technologies through demonstrations of an upcoming prototype that is currently in the works for our publication management solution, [PubPro](#).



## What I'm hearing from life science leaders

Medical affairs leaders are eager to “be the change” in their organization alongside the R&D and commercial pillars of their organizations. Part of that means being ready to embrace new technologies that can take their work to the next level.

That's why, with the recent flurry of excitement surrounding the potential of AI to transform the life sciences industry, it's not surprising to see many medical affairs leaders keeping their ear to the ground to determine their next steps.

***"I want AI to do the work so my team can focus on strategy."***  
- Life sciences leader at MAPS 2024

Discussions about how best to harness this technology, however, tend to lean theoretical. With so many buzzwords and vague aspirations floating around, conceptualizing practical applications of AI and quantifying their impact is proving to be a real challenge for medical affairs leaders.

There is clearly enthusiasm for adopting AI-powered solutions, but medical affairs leaders need more to go on than just buzzy jargon. They need a clear answer from software vendors on how artificial intelligence will:

1. **Make their day-to-day lives easier**
2. **Accelerate processes and time-to-market**

# Practical applications of machine learning and generative AI

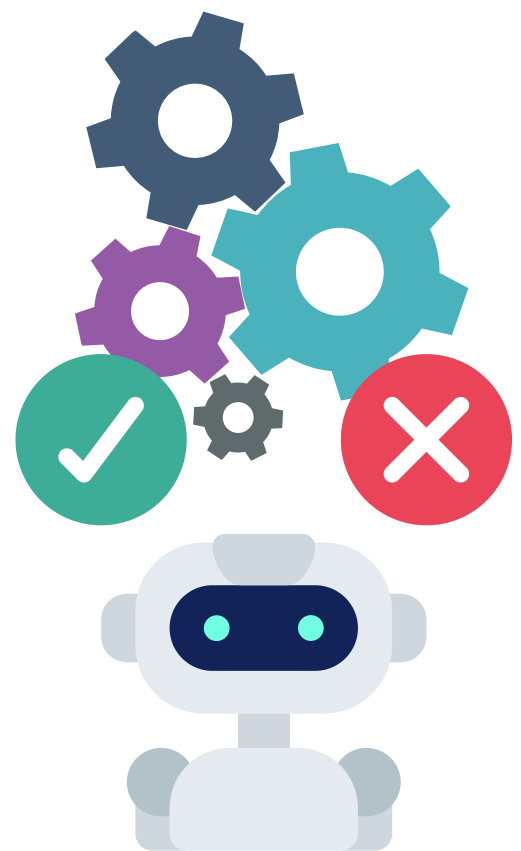
At BP Logix, we view investing in AI/ML as the logical next step for workflow automation technology. As we plan out the product roadmap for PubPro, we're making sure that medical affairs teams can fully leverage AI/ML capabilities.

And what exactly do these capabilities entail? I will lay out exactly what we're working on and explain how it's going to simplify and speed up your publication management processes.

## Machine learning

First up, let's talk machine learning. Machine learning is a subset of AI that enables systems to learn and improve from experience without being explicitly programmed.

With its ability to analyze patterns and predict outcomes, machine learning is an incredibly powerful component of process automation that helps you continuously improve efficiency and accuracy in your day-to-day work.



Advanced machine learning already exists in PubPro — it's an integral component and administrative feature of Process Director for Life Sciences, the scientific communication platform that PubPro is built on.

To build upon the product's AI/ML features already available to administrators, we're in the process of making these analytic tools and insights more accessible and usable to everyday users of PubPro.

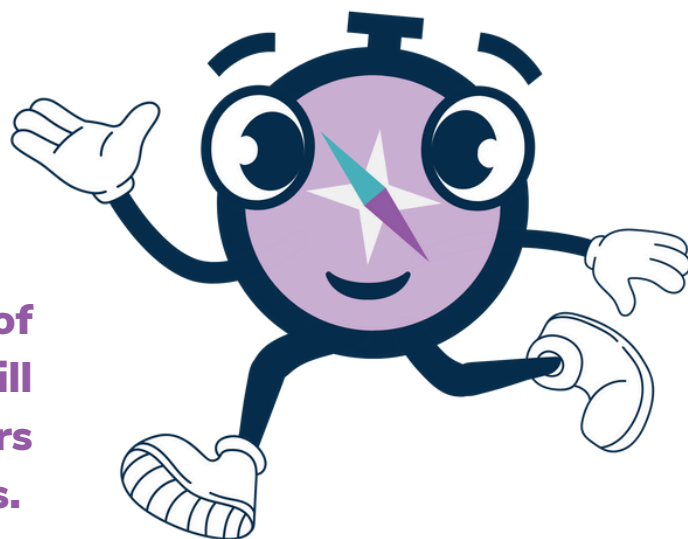
## Generative AI

Generative AI, distinct from machine learning, refers to AI that can generate new content, from text to images, based on the data it has been trained on.

At BP Logix, we want to use generative AI to help PubPro users find the information they need more easily — and with fewer clicks.

We're starting with Pathfinder, a LLM-powered AI assistant designed to help users with all things PubPro.

**Here are three examples of Pathfinder capabilities that will make life easier for PubPro users and speed up publication processes.**



# 1. Analytical capabilities

With Pathfinder, PubPro users will be able to perform conversational searches to quickly generate summaries or detailed analyses of specific publications.

If a user requests an executive summary for a publication, Pathfinder will provide concise, relevant insights instantly that aid the user in strategic decision-making.

The screenshot displays the PubPro PUBLICATION REVIEW SYSTEM interface. The top navigation bar includes 'Create Publication', 'Publication Search', and 'External Authors' buttons, along with a 'Demo Submitter' user indicator. The left sidebar shows submission statistics: 6 Submitter Tasks, 11 My Publications In Review, 6 My Approved Publications, and 43 My Completed Publications. The main content area, titled 'Submitter Tasks', lists 6 items in a table with columns for Publication ID, Task Name, Publication Title, Publication Type, Product, and Assignee. A 'Pathfinder' chat window is open on the right, showing a conversation where a user requests an executive summary for publication ID 48936, and the system provides a concise summary of the publication's content.

Publication ID	Task Name	Publication Title	Publication Type	Product	Assignee
23-A-BLX-C-GBL-035-V01	New Draft Publication	RAPS Convergence takeaways	Abstract	Biologix (All)	10/2/2023
23-A-BLX-C-GBL-036-V01	New Draft Publication	MASS West Takeaways	Abstract	Biologix (All)	10/5/2023
23-A-TFZ-C-GBL-002-V01	New Draft Publication	Triflozimb Safety in Children	Abstract	Triflozimb (Dermatology)	10/13/2023
23-A-BLX-C-GBL-040-V01	New Draft Publication	Biologix for COVID Treatment	Abstract	Biologix (All)	10/16/2023
24-A-BLX-C-GBL-017-V01	New Draft Publication		Abstract	Biologix (All)	2/26/2024
24-A-BLX-C-GBL-018-V01	New Draft Publication	Biologix in Peds	Abstract	Biologix (All)	2/26/2024

**Pathfinder**

How can I help you today?

Give me an executive summary of pub ID 48936.

**Executive Summary:**  
Biologix in Immunotherapy  
Biologix, a humanized anti-PD1 antibody, effectively treats advanced melanoma and NSCLC, showing

## 2. Competitive research capabilities

Pathfinder will enhance competitive research in PubPro by enabling users to efficiently query and gather specific market intelligence.

For example, if a user asks for a list of drugs in phase 3 trials for a particular condition, Pathfinder will deliver up-to-date, comprehensive data via an integration with clinicaltrials.gov.

This functionality will not only save time — it will provide a strategic advantage for medical affairs teams that want to maintain their understanding of the competitive landscape.

The screenshot displays the PubPro PUBLICATION REVIEW SYSTEM interface. On the left, a sidebar shows four metrics: 'Submitter Tasks' (6), 'My Publications In Review' (11), 'My Approved Publications' (6), and 'My Completed Publications' (43). The main area features a 'Submitter Tasks' table with 6 items. A 'Pathfinder' chat window is open on the right, showing a query about drugs for ulcerative colitis and a response listing Zentroxin and Lunacor.

Publication ID	Task Name	Publication Title	Publication Type	Product	Assignee
23-A-BLX-C-GBL-035-V01	New Draft Publication	RAPS Convergence takeaways	Abstract	Biologix (All)	10/2/2023
23-A-BLX-C-GBL-036-V01	New Draft Publication	MASS West Takeaways	Abstract	Biologix (All)	10/5/2023
23-A-TFZ-C-GBL-002-V01	New Draft Publication	Trifozimab Safety in Children	Abstract	Trifozimab (Dermatology)	10/13/2023
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**Pathfinder**

Please list all drugs treating ulcerative colitis currently in Phase 3 trials with their sponsor and study completion date.

Here are 4 drugs that treat ulcerative colitis currently in Phase 3 trials:

- Zentroxin** is sponsored by Pharmestra and are estimated to be complete September 10, 2024.
- Lunacor** is

Yes No

### 3. System documentation capabilities

With Pathfinder's ability to reference software documentation, users can ask questions about how to accomplish certain tasks within PubPro and get immediate answers.

To make this feature even more useful, our product roadmap includes plans to eventually equip Pathfinder with the power to navigate users, at their request, to key screens related to their query.

For example, if a PubPro user asks how to adjust due dates for expedited reviews, Pathfinder could not only explain how to make these changes — it could redirect the user to the appropriate configuration menu screen to begin carrying out that task.

The screenshot displays the PubPro PUBLICATION REVIEW SYSTEM interface. On the left, a sidebar shows summary statistics: 6 Submitter Tasks, 11 My Publications In Review, 6 My Approved Publications, and 43 My Completed Publications. The main area features a 'Submitter Tasks' table with 6 items. A chat window titled 'Pathfinder' is open on the right, showing a conversation about changing due dates for expedited reviews.

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**Pathfinder Chat Log:**

- Pathfinder: How can I help you today?
- User: How do I change due dates for expedited reviews?
- Pathfinder: The setting for expedited review due dates are on the System Configuration page. Would you like to go there now?
- User: Yes



## Looking to the future: Our long-term plans for generative AI

While we already have some exciting AI tools in the works for PubPro, we're also thinking ahead to what's next.

One use of generative AI that we're envisioning for later down the road involves PubPro's collaborative document editor. We want Pathfinder to help users catch errors and make suggestions for improvement. And we're not just talking about spell check here. Eventually, we could have Pathfinder checking for accuracy on a content substance level. Essentially, AI will provide you with an additional layer of review beyond manual reviewers.

For example, users could have Pathfinder review studies that they're pulling into PubPro and provide feedback. For example, Pathfinder might provide feedback like "When you look at what publications get cited the most, they have ABC characteristics in common. So, you should consider doing XYZ to your publication to make it more effective."

Over time, this functionality will only get better and better at making sure that your publications are accurate and align with your study information.

**Learn more about PubPro**

Visit [BPLogix.com/PubPro](https://BPLogix.com/PubPro) to witness our powerful publication management software in action.