AI Maturity in Literature Workflows: Insights from a Medical Affairs Roundtable

On March 23, 2025, Digital Science invited a number of leaders in Medical Affairs roles to share their thoughts on opportunities and challenges in AI in Medical Affairs. In particular, the focus of the session was how AI might improve literature workflows.

Attendees:

Suzana Giffin (VP, Value & Implementation GMVC, Merck)
Amita Joshi (Global Head, Strategy & Execution Oncology, Johnson & Johnson),
Dina Merchasin (Director, Commercial IT Business Analysis, AstraZeneca)
Shehla Sheikh (Head of Medical Communication & Publications, GMAE, Kyowa Kirin)
Christina Brooks (Global Compliance Excellence, AbbVie)
Jeanne Rhea-McManus (Senior Director, Medical Science Information and Communication, Siemens Diagnostics),
Myra Cocker (Global Director of Clinical Science, Cardiovascular, Siemens Healthineers),
Matthew Krzywosz (Lead, Global Scientific Communications & Content, Astellas)
Poonam Fredeman (Associate Director, Global MI&E),
David Tworek (Associate Director, Jazz Pharmaceuticals)

Introduction

AI has rapidly shifted from being an experimental tool to a daily ‘collaborator’ in many professional workflows. Just one year ago, some of us had never used AI but today, it has become a frequently used tool in drafting emails, writing proposals, and even exploring new ideas. This shift was a central theme in our recent roundtable, which brought together senior leaders in Medical Affairs to explore the current and future role of AI in literature workflows. The session highlighted real-world use cases, challenges, and emerging best practices across pharmaceutical and biotech organizations.

Key Themes from the Roundtable

1. AI as a Supporting Tool – Not a Replacement

Across the group, there was consensus that AI tools, including Large Language Models (LLMs), are increasingly being used for everyday tasks like summarization, proposal support, and internal communication. As **Suzana Giffin**, VP, Value & Implementation GMVC at Merck, noted:

> “AI is in a different stage of maturity depending on what you're looking for - and we’re at different stages of mastering the application of AI solutions that are fit for purpose and are applied to the right use cases.”

Giffin added that while AI is showing strong performance in tasks like Medical Information letter drafting, it's far from autonomous when it comes to strategic applications such as literature reviews. She shared:

> “You can't expect AI to do 100%. I tell my team that even if it saves 10% of your time, that’s the time you can reinvest into more strategic work.”

2. AI for Literature Review: Promising, but Caution Required

There was strong interest in how AI could support literature review workflows, especially as teams face information overload. However, trust and transparency remain critical concerns.

Dina Merchasin, Director of Commercial IT Business Analysis at AstraZeneca, remarked:

> “We’re seeing pilot programs emerge from multiple business units—many of which are similar. But vendors often promise full automation, and that’s rarely the case. Only parts of the workflow can be automated reliably.”

David Tworek of Jazz Pharmaceuticals echoed the need for rigor:

> “Our Medical Science Liaisons (MSLs) need to understand the methods and statistics behind a paper. A summary alone is too superficial to enable them to have meaningful discussions with their Key Opinion Leaders (KOLs). AI can help narrow the noise and guide us to the right content, but it can't replace human analysis yet.”

Tworek shared that his team had piloted AI for abstract identification at ASCO, testing its capabilities against human-selected data—highlighting both the potential and the limitations.

3. Piloting AI Internally: Many Starts, Few Finishes

Several organizations reported internal pilots focused on AI adoption in literature workflows, but few had reached full-scale implementation. Teams are still determining which tasks can be reliably supported by AI, and this requires careful testing and adaptation alongside existing responsibilities. Progress is further shaped by the need to uphold scientific integrity and apply appropriate caution around AI's current limitations, particularly in high-stakes, evidence-driven environments. The rapidly evolving nature of AI tools also means continuous reassessment is necessary before committing to broader deployment.

Shehla Sheikh, Head of Communications & Publications at Kyowa Kirin, shared:

> “We’re testing and exploring with pilots, which include some literature workflows but we’re still far from full adoption for this purpose. There’s a lot of discussion, a lot of learning”

Poonam Fredeman, Director of Global Medical Information & Education, Oncology at Daiichi Sankyo, added:

> “The dream is for AI to lift the workload, but right now it’s actually adding to it - through pilots, alignment conversations, and figuring out where and how it fits.”

4. Barriers to Adoption: Trust, Transparency, and Training

Concerns around transparency and scientific rigor were widely voiced. One participant, for example, described how an AI tool struggled to interpret complex graphs and statistical data—highlighting a key limitation when it comes to supporting literature workflows that demand precision and contextual understanding. While this may improve as LLMs and AI technologies evolve, the current reality underscores the importance of using AI as a supportive tool rather than a standalone solution. Automation can ease the burden of repetitive tasks, but human oversight remains essential to ensure accuracy, relevance, and scientific integrity.

The need for internal education was a repeated theme.

> "Starting from scratch is the hardest part," said Fredeman. "Whether an agency or AI gives you a draft, it helps. Managing expectations internally around what AI can and can't do is critical."

5. A Human-in-the-Loop Approach is Essential

Participants widely agreed that AI is most effective when paired with expert human oversight. While AI tools offer substantial efficiency gains, particularly in tasks such as literature review, summarization, and internal content generation, there remains a clear need for human expertise, especially when outputs are intended for external or field-facing audiences.

Matthew Krzywosz, Lead, Global Scientific Communications & Content at Astellas, underscored this point:

> "AI is great for internal content and updates. But when it comes to field-facing materials that need to be scientifically rigorous, we're not there yet."

This view reflects a broader consensus that while AI can accelerate workflows, reduce manual effort, and help teams manage information overload, it still lacks the nuanced judgment, contextual understanding, and accountability required for high-stakes scientific communication. In fields like Medical Affair where credibility, precision, and trust are paramount, the risks of inaccuracies, overgeneralizations, or tone misalignment from AI-generated content are unacceptable.

Human-in-the-loop oversight ensures that AI-enhanced outputs can align with scientific integrity, and can be tailored appropriately for their intended audience. Rather than replacing expertise, AI can be seen as a valuable co-pilot that can boost the productivity of skilled professionals but it is imperative that final judgment and accountability are firmly in human hands, particularly in Medical Affairs.

6. AI and Internal Workflows: The Most Mature Use Cases

Merck appears to have made a lot of progress with integrating AI into their workflows, Giffin noted:

> "For systematic literature reviews (SLR), you can do certain elements of it, but it doesn't do all of it, but even if it can save you a portion of time and money it's a great benefit,"

> “They regularly use AI through their in-house tools for targeted literature reviews (TLRs).”

Merck regularly applies AI through in-house tools for TLRs. Kyowa Kirin has also adopted internal AI tools for TLRs but noted limitations due to access only to open data (e.g., Medline, PubMed). These gaps highlight opportunities for advanced AI-enabled platforms that access broader scientific databases.

Another use case from Merck involved content monitoring:

> “One thing I find useful, as I subscribe to certain tumour types to stay on top of the literature. I ask my team to create bulletins where they collect abstracts. Then, if I want to understand the medical narrative or overall landscape, I can pull that out and have internal AI digest it and identify trends.”

This kind of practical application is likely to become more common as AI adoption deepens within Medical Affairs teams.

Conclusion & Key Takeaways

AI is evolving as a solution for scientific workflows, and it's already proving valuable for specific, well-scoped tasks. The consensus across the roundtable is clear:

AI won’t replace human expertise, but it can augment it: Participants consistently emphasized that AI should be seen as an enabler rather than a substitute for human judgment. While automation can streamline tasks like summarization, content tagging, and literature triage, it’s still developing the nuanced understanding required for scientific interpretation and decision-making. The real opportunity lies in using AI to offload routine work so that Medical Affairs professionals can focus on high-value strategic contributions.

Tools must be transparent, especially for scientific rigor: Transparency is a foundational requirement for building trust in AI-generated outputs. Roundtable participants voiced concerns about “black box” models that deliver results without clear explanations of how they were produced. In scientific and medical settings, where accuracy, reproducibility, and data integrity are non-negotiable, it is essential that teams understand how AI arrives at its conclusions and have visibility into the data sources it uses. Without this level of clarity, the usability of AI generated outputs is very limited. True transparency enables informed use of AI and supports the credibility of its insights.

Internal training and expectation-setting are key to successful adoption: A common theme throughout the discussion was the importance of preparing teams to work with AI effectively. This means not only technical training but also cultural change including shaping mindsets to see AI as a collaborative tool and setting realistic expectations about what it can and cannot do. Early-stage frustrations often stem from misaligned assumptions or insufficient onboarding. Equipping Medical Affairs professionals with the knowledge to

evaluate AI outputs critically and to use them judiciously will be essential for long-term adoption and trust.

Pilots are essential—but must be purposeful and value-driven: In a fast-evolving technological landscape, ongoing experimentation has its place; however, it's crucial to quickly recognize when a pilot isn't delivering meaningful outcomes and to course-correct accordingly. Participants stressed the need for structured, goal-oriented pilots that are aligned with actual business needs and not just technology for technology's sake. Efforts should stay focused on developing solutions that offer real, practical benefits to teams, rather than creating distractions or adding unnecessary complexity.

To wrap up, as Suzana Giffin aptly put it: "We are learning how to apply AI with the right materials. The maturity of the tool and our own maturity in using it both matter." As AI capabilities continue to evolve, so too will our understanding of how best to apply them. We're excited to see how far the field has already advanced in a short time and look forward to what new conversations will emerge in the year to come.

Optional Further Reading

For those interested in AI tools purpose-built for literature workflows with transparent data sourcing, **ReadCube** offers an AI Assistant powered by **Retrieval-Augmented Generation (RAG)**. This technique ensures that summaries are grounded in traceable sources—an essential step in building trust for scientific and Medical Affairs use.

Unlike tools that rely solely on open-access databases, ReadCube integrates with the **Dimensions database**, enabling users to access a broader, more comprehensive body of scientific literature. This makes it especially well-suited for more thorough **Targeted Literature Reviews (TLRs)**, where depth, accuracy, and source transparency are critical.

Visit **ReadCube's AI literature workflows (link:https://www.readcube.com/en/)** to learn more.