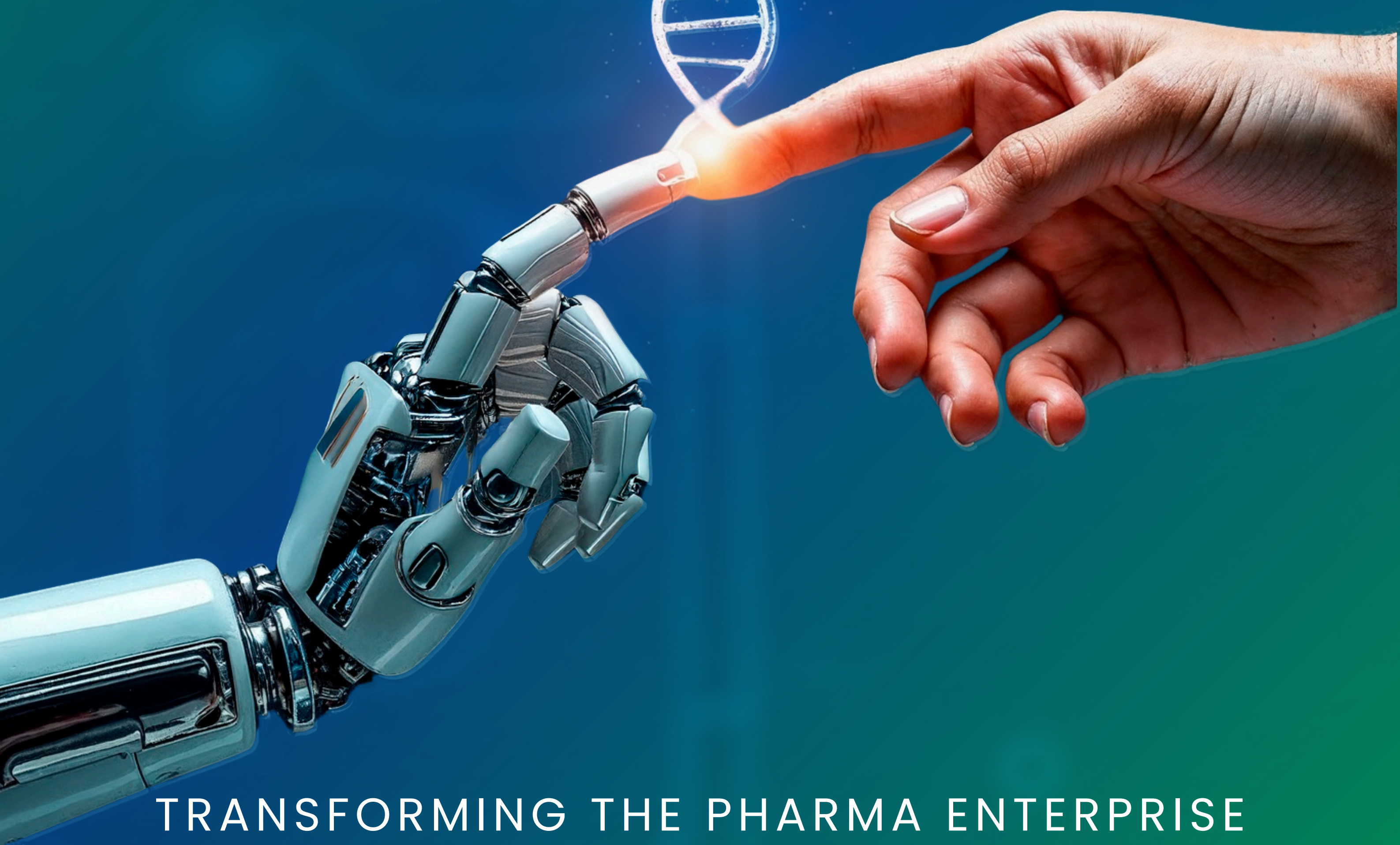


GEN AI FOR PHARMA 2.0



TRANSFORMING THE PHARMA ENTERPRISE
THROUGH GENERATIVE INTELLIGENCE

Program Philosophy

The next leap in Pharma AI isn't just data analytics — it's Generative AI (GenAI) that creates, summarizes, and reasons across scientific, operational, and regulatory knowledge.

This workshop helps professionals build domain-specific GenAI literacy — teaching them to interact with LLMs like co-researchers, automate writing and reporting tasks, and create trustworthy AI-assisted workflows across R&D, manufacturing, medical affairs, regulatory, and marketing.

1-Day Program (6.5 Hours)

Applied Generative AI in Pharma: From Knowledge to Innovation

Learning Objectives

- Understand how LLMs and GenAI transform knowledge-heavy pharma functions.
- Apply prompt engineering & RAG to accelerate insight generation, documentation, and compliance.
- Experience no-code AI tools that integrate GenAI into daily pharma tasks.
- Design AI-powered co-pilots for regulatory, medical, and marketing use cases.

Program Outline

Module 1: The GenAI Revolution in Pharma (45 mins)

Why: Generative AI is redefining how knowledge is created, shared, and validated.

- Evolution: From data-driven analytics → reasoning-driven GenAI.
- Global case studies: Pfizer AI co-pilots, Novartis Chat R&D, Sanofi AI Lab.
- Activity: Map how GenAI can disrupt your own function — R&D, QA, Regulatory, or Commercial, Marketing etc.

Tool Spotlight: Perplexity, ChatGPT, Gemini

Module 2: Prompt Engineering for Pharma Professionals (1 hr)

Why: Prompt design determines the quality of GenAI outputs.

- Writing “smart prompts” for pharma contexts (clinical summaries, SOPs, literature synthesis).
- Chain-of-thought and persona-based prompting (e.g., “You are a clinical regulatory associate...”).
- Exercise: Generate a mock clinical summary report from sample text.

Tools: ChatGPT, Claude, PromptPerfect

Module 3: RAG for Knowledge-Intensive Pharma Workflows (1 hr 15 min)

Why: GenAI is only as good as the data it references.

- Introduction to Retrieval-Augmented Generation (RAG) — bringing company documents into AI answers.
- Demo: Upload anonymized SOPs / regulatory docs into Dify or ChatGPT Custom GPT.
- Hands-on: Ask domain queries like: “What’s the sampling frequency in stability testing?”
- Compliance safeguards and data privacy in RAG.

Tools: Dify | ChatGPT Custom GPTs | NotebookLM

Module 4: GenAI for Regulatory and Documentation Automation (1 hr 15 min)

Why: Pharma spends 60–70% of time on documentation.

- Generate SOPs, validation summaries, and audit responses using Claude + ChatGPT Advanced Data Analysis.
- Create dynamic, version-controlled documentation using Notion AI.
- Live Demo: From raw study text → AI-generated “Clinical Study Synopsis.”

Tools: Claude | Notion AI | ChatGPT

Module 5: GenAI in Medical Affairs & Marketing (1 hr 15 min)

Why: Precision engagement at scale through AI personalization.

- Use Canva AI / Gamma AI for compliant, science-backed campaign content.
- Generate HCP educational material, patient awareness infographics, and localized product explainers.
- Hands-on: Create a compliant “Patient Education Leaflet” using ChatGPT + Canva AI.

Tools: ChatGPT | Canva AI | Gamma | Dify

Module 6: Responsible GenAI for Regulated Industries (30 mins)

Why: Ensure ethical, auditable, explainable AI.

- GxP, HIPAA, GDPR and audit-readiness for AI outputs.
- AI-generated content validation workflow.
- Designing “Human-in-the-loop” for regulated content.

Capstone Activity: Design Your GenAI Copilot (45 mins)

Teams design a prompt or workflow:

- Examples: “Regulatory Response Generator”, “Pharmacovigilance Report Assistant”, “Medical Affairs Slide Generator” Deliverable: Workflow map + sample prompt outputs

GenAI Tools & Platforms

Category	Tools Introduced
Generative AI	ChatGPT, Claude, Gemini
Prompting & Design	PromptPerfect, Dify, Custom GPTs
Knowledge Retrieval	NotebookLM, Dify (RAG)
Visualization	Canva AI, Gamma
Documentation	Notion AI, Julius.ai
Validation	Perplexity, Consensus.app

2-Day Program (13 Hours)

Generative AI for Pharma Innovation, Compliance & Commercial Transformation

Day 1: R&D, Quality & Regulatory GenAI

Module 1: GenAI in Pharma Innovation (1 hr)

- Drug discovery ideation using GenAI for literature reviews and hypothesis generation (no chemical synthesis).
- AI for formulation brief generation — conceptual only (safe).
- Demo: Perplexity + NotebookLM summarizing 10 PDFs into a “competitive insight digest.”

Tools: Perplexity | NotebookLM | ChatGPT

Module 2: RAG-Powered Clinical & Regulatory Intelligence (1.5 hr)

- Build a mini RAG system using Dify / LangChain / NotebookLM to query company documents.
- Demo: “Ask AI about CTD Module 3 – Quality Guidelines.”
- Hands-on: Each team builds a simple RAG bot with 3–5 uploaded docs.

Output: “Ask My SOP” assistant prototype.

Module 3: Manufacturing & Quality Co-pilots (1 hr 15 min)

- Predictive deviation summaries, CAPA note generation with ChatGPT.
- Build a GenAI agent that drafts QA summaries from logs or QC remarks.
- Activity: Prompt ChatGPT to “Summarize deviations from a batch report.”

Tools: ChatGPT | Claude | Notion AI

Module 4: AI for Regulatory Documentation (1 hr 15 min)

- Auto-generate submission-ready content (cover letters, summaries, justifications).
- Demo: “Regulatory Response Copilot” — generate reply drafts from sample deficiency letters.

Tools: Claude | ChatGPT Advanced Data Analysis | Dify

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Module 5: GenAI for Pharmacovigilance & Medical Writing (1 hr 15 min)

- Automate MedDRA classification & summarization of Adverse Event (AE) data using Julius.ai or ChatGPT.
- Generate periodic safety update reports (PSURs) and literature summaries.

Tools: Julius.ai | ChatGPT | Excel Copilot

Day 2: Commercial Excellence, Knowledge Ops & Workforce GenAI

Module 6: GenAI for Sales & Market Intelligence (1 hr 15 min)

- Build a real-time “Competitive Intelligence Copilot.”
- Use Perplexity + Gemini for dynamic Q&A on competitor launches, pricing, and trends.
- Automate brand analysis dashboards (via Excel Copilot).

Module 7: AI-Powered Marketing & Visual Generation (1.5 hr)

- Multimodal GenAI for campaign generation (text + image + video).
- Create HCP campaigns, patient stories, and product visuals using Canva AI / Midjourney / HeyGen.
- Hands-on: Generate 30-sec “Product Story Video” using HeyGen or Pica Labs.

Module 8: Building GenAI Agents & Workflows (1 hr)

- Use Make / N8N / Zapier to connect ChatGPT + Google Sheets + Email → “AI Regulatory Assistant.”
- Design a workflow where an AI agent summarizes reports, drafts responses, and routes for approval.

Module 9: Responsible GenAI & Explainability (45 min)

- How to audit, trace, and justify AI outputs.
- GenAI Governance Framework for Alkem.

Module 10: Capstone – “Pharma’s GenAI Playbook” (2 hrs)

Teams develop a **department-specific** AI roadmap.

Each presentation includes:

- Problem statement
- GenAI workflow (prompt + data + validation)
- Compliance steps
- Business impact metrics

Function	Example Capstone Project
R&D	GenAI for Literature Review Summaries
Regulatory	Ask the SOP” RAG Assistant
Manufacturing	CAPA Deviation Co-Pilot
Marketing	AI-Generated Campaign Engine
PV	Adverse Event Summary Bot

Enhanced GenAI Toolkit

Category	Toolset
GenAI Platforms	ChatGPT, Claude, Gemini, Perplexity
RAG & Document QnA	Dify, NotebookLM, LangChain
Prompt Design	PromptPerfect, FlowGPT
Visualization & Video	Canva AI, Gamma, Pica Labs, HeyGen
Workflow Automation	Make, N8N, Zapier
Collaboration	Notion AI, Otter.ai, Loom
Compliance	AI Governance Templates (GxP, HIPAA checklists)

Expected Outcomes

- Build and deploy departmental GenAI prototypes (RAG bots, copilots, dashboards).
- Design compliant GenAI workflows aligned with Alkem’s GxP environment.

- Gain practical mastery over AI prompting, validation, and governance.
- Create 90-day GenAI pilot roadmap for internal approval.

Deliverables

- Branded “ThinkMates – GenAI in Pharma” participant Resources handbook
- Custom prompt templates for regulatory, R&D, and marketing
- Ready-to-deploy RAG prototype in Dify
- 3 mini-projects (clinical summarizer, regulatory copilot, campaign generator)
- ThinkMates Certification upon Successful completion of Workshop

