

## From ToxPipe to FAIRkit

NIH-Built AI Chatbots Are Helping Scientists Sift Through the Data

BY PAIGE JARREAU, NIA; AND THE NIH CATALYST STAFF

**ARTIFICIAL INTELLIGENCE (AI)** tools are taking root across NIH, reshaping how researchers access information, analyze data, and advance biomedical discovery. From generative chatbots that streamline scientific queries to machine learning models that help harmonize massive datasets, AI is proving to be a powerful partner in tackling complex hypotheses in research topics spanning from toxicology to dementia and beyond. There are many, so let's chat about 'em!

### Chatbot creation for NIH research

Speakers at a June 11 NIH Library event that featured members from the NIH Generative AI Community of Practice showcased a range of AI-driven chatbot initiatives under development across the agency. Speakers and topics at a roundtable discussion, archived on the NIH Library YouTube channel, included:

- “Generative AI Chatbots in the NIH Landscape: Foundations, Opportunities, and Considerations” by Alicia Lillich, NIH Library
- “Chatbot for the Intramural Research Program, or ChIRP,” by Steevenson Nelson, OD
- “ToxPipe: Chatbots and Retrieval-Augmented Generation on Toxicological Data Streams” by Trey Saddler, NIEHS

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## Calling All Creators and Innovators to the BETA Center Makerspace

BY THE NIH CATALYST STAFF



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Let us drill this into your head: the BETA Center's Makerspace is now open for business in Building 31. These 3D-printed skulls demonstrate the scaling capability at the Makerspace. The life-size skull is used as an example of encephalocele, a defect where the skull does not fully close during development. The Makerspace team additionally printed a life-size infant skull model with a defect from a medical scan to illustrate how it can support the workflow of solving a surgical problem.

**LOOKING TO BUILD A CAMERA MOUNT, A MOUSE MAZE, OR A CUSTOM** polymerase chain reaction rack—or just want an excuse to use a laser cutter? The NIH has you covered. NIBIB opened a new fabrication facility on the Bethesda campus housed in Building 13 and part of its Biomedical Engineering and Technology Acceleration (BETA) Center. The facility is called, simply enough, the BETA Center Makerspace,

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