National Institute of Allergy and Infectious Diseases

# Data Science Research & Training Opportunities: A Vignette from the NIAID Office of Data Science

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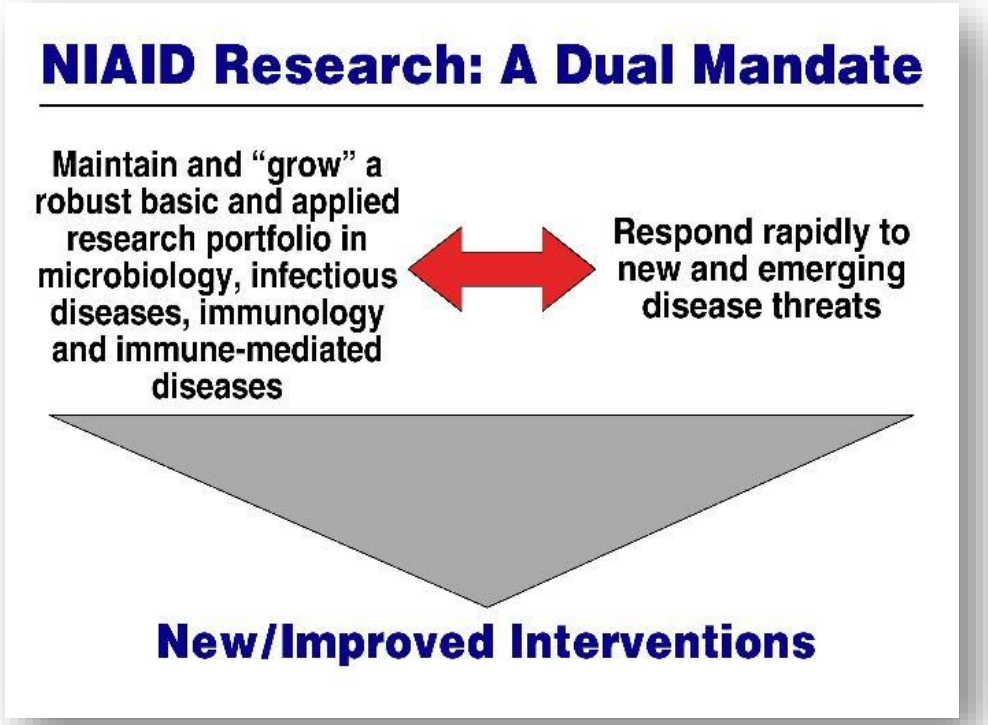
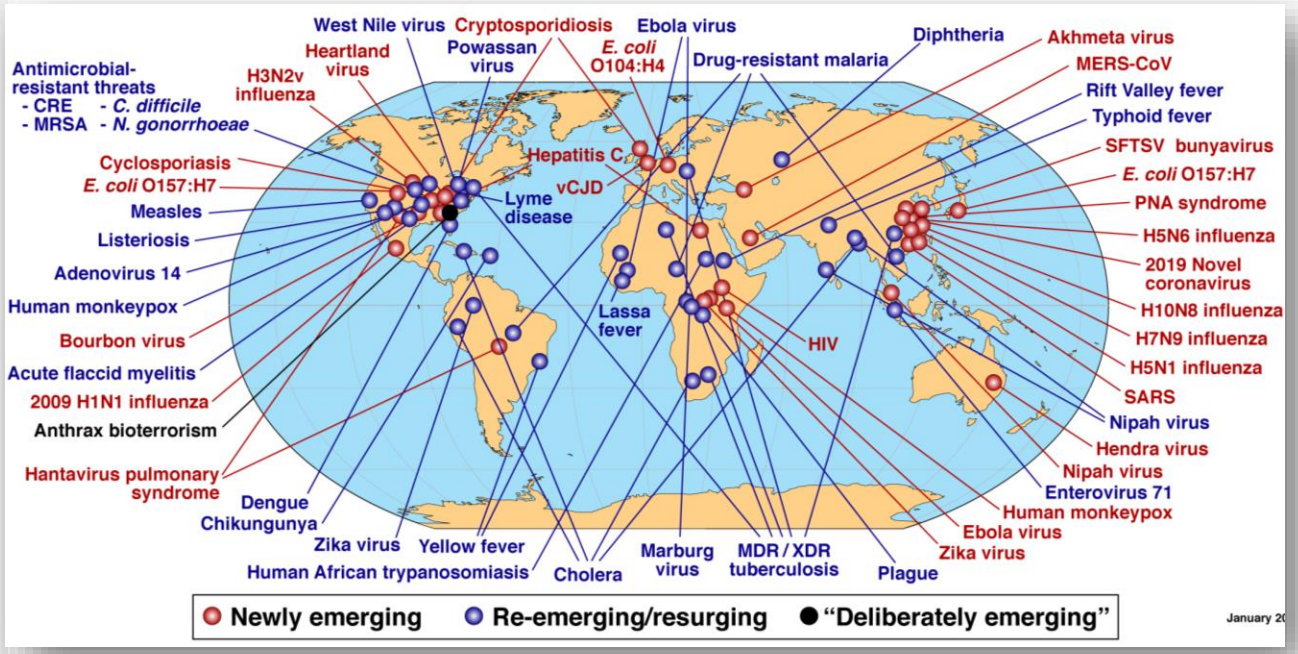
**Reed Shabman Ph.D. Deputy Director**
Office of Data Science and Emerging Technologies

# The NIAID Office of Data Science works across NIAID, NIH, and the scientific community




**The goal of ODSET is to enable the efficient use of data and computational methods to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases.**

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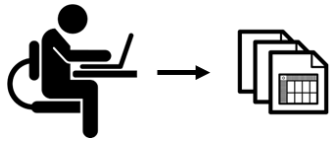
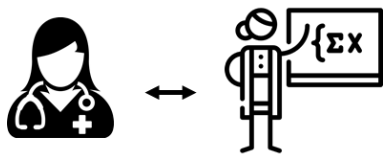
# ODSET approach: Coordinate, Consult, Connect



Improve data access and use (FAIR Principles)

$$\int_a^b f'(x)\,dx = f(b) - f(a)$$
$$\frac{d}{dx}\int_a^x f(t)\,dt = f(x)$$

Develop and improve the use of computational methods



Foster a multidisciplinary community of biomedical and computational scientists

Develop a governance framework for ethical and equitable use of data and computational tools

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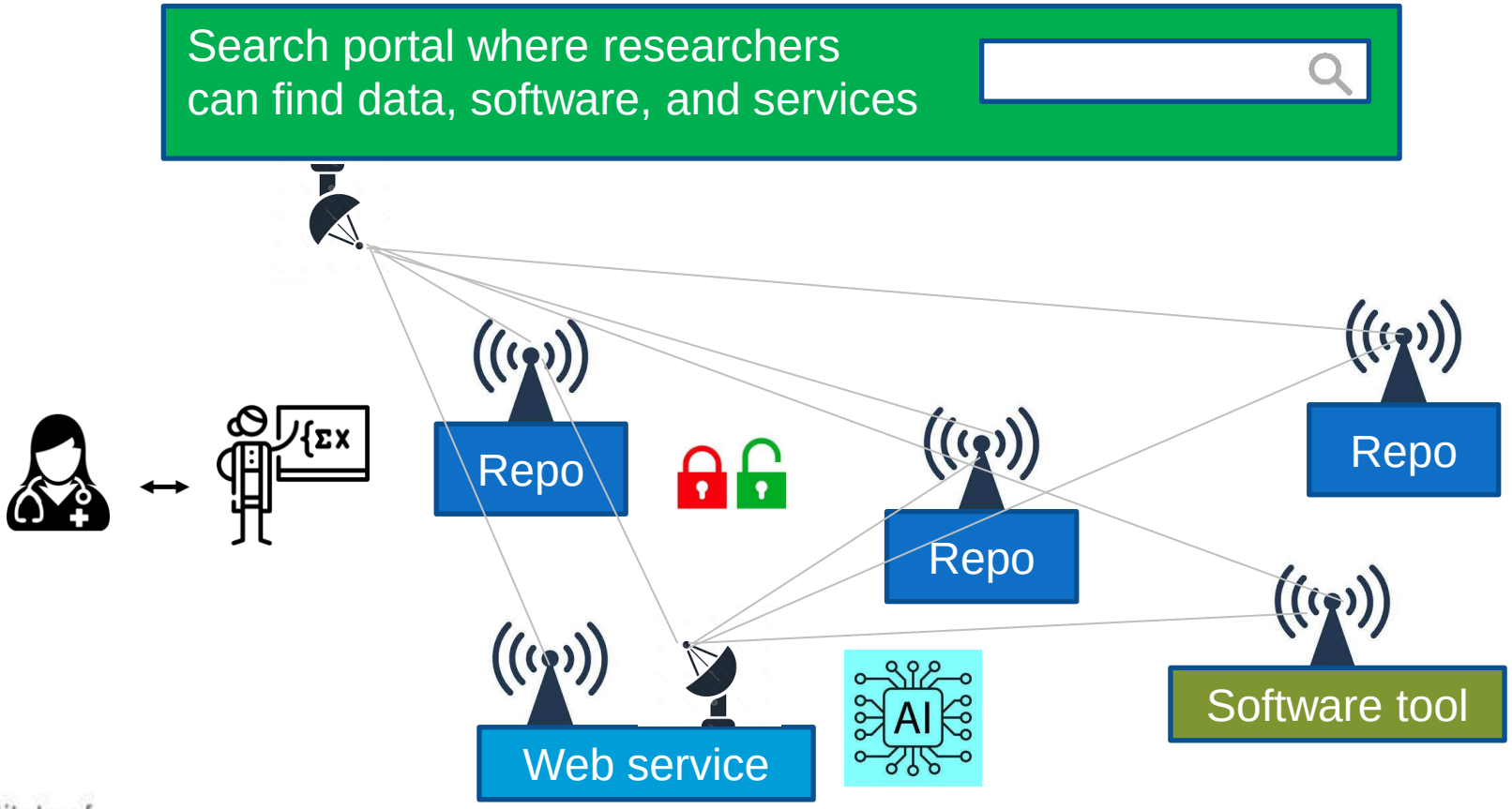
# One example: to establish an ecosystem of interoperable data to accelerate research and discovery in support of the NIAID mission

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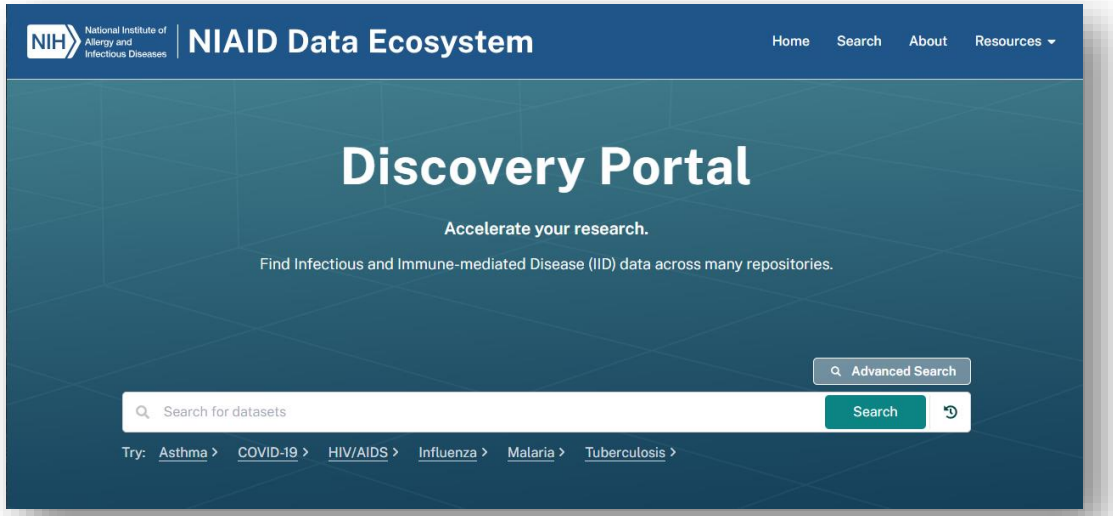
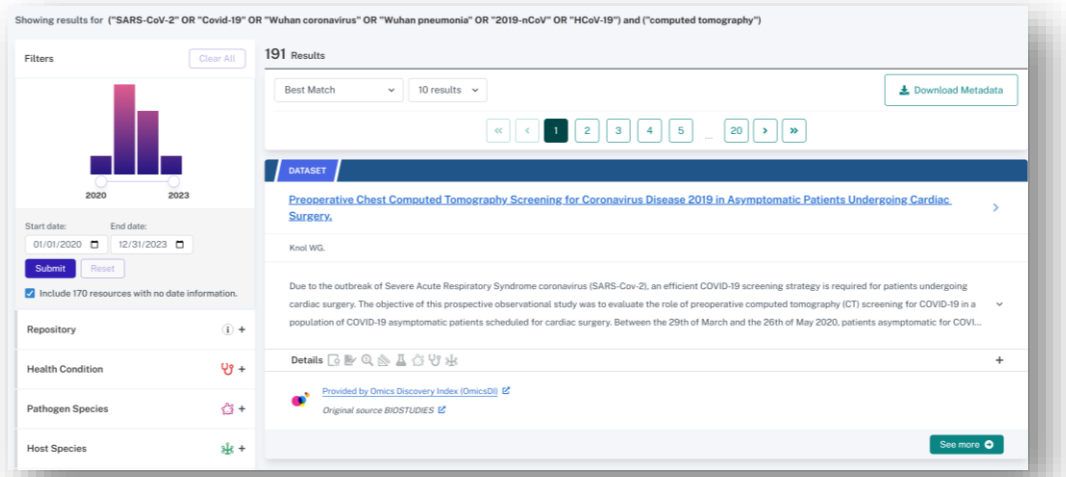
# NIAID Data Ecosystem Discovery Portal

- Find datasets on infectious and immune-mediated (IID) diseases from 15+ domain-specific and generalist repositories
- Incentivizes IID repositories and data generators to provide FAIR metadata




https://data.niaid.nih.gov/

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# ODSET extramural & training activities advance data science to support the NIAID mission

## Data science research

- **NOT-AI-23-073:** Center of Excellence for Systems Modeling of Infection and Immunity across Biological Scales (U54)
- **NOT-AI-23-009:** Supplements to Prepare Data for Inclusion into the NIAID Data Ecosystem
- **AI-21-020 and AI-23-035:** U01 & R21 for Software Development
- NIAID liaison for the 2023 NIH Data Management and Sharing Policy

## Data science training

- **T32 revisions:** additional data science training slots in existing T32 grants
- **Emerging Leaders in Data Science Fellowship:** Graduate degree ORISE fellows rotate at NIAID focused on data science in IID; 18 Fellows since 2018.
- **NOT-AI-23-010:** Supplements to enhance R25 awards with data science training relevant to NIAID

**Flyers for investigator-initiated NIAID training grants (F & K) in Whova!**

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# Thank you!

**Office of Data Science and Emerging Technologies**

Sydney Foote

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- Maria Giovanni
- Dasha Pokutnaya

**ODSET Fellows**

- Fausto Bustos
- Diego Seira
- Linh Shinguyen
- Rahul Subramanian

## Contact us!

- reed.shabman@nih.gov
- General Questions: datascience@niaid.nih.gov

**Search:** "NIAID Office of Data Science"

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