

# Dynamic DOIs

the best way to research



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# The need for transparency... now



## PUBLIC

Increasingly want  
public funding = public  
research

## FUNDING BODIES

U.S. NIH  
NSF  
NHMRC

## LOOKING AHEAD

Future-proof workflows  
and data now



# Repositories

## *FROM BROAD...*

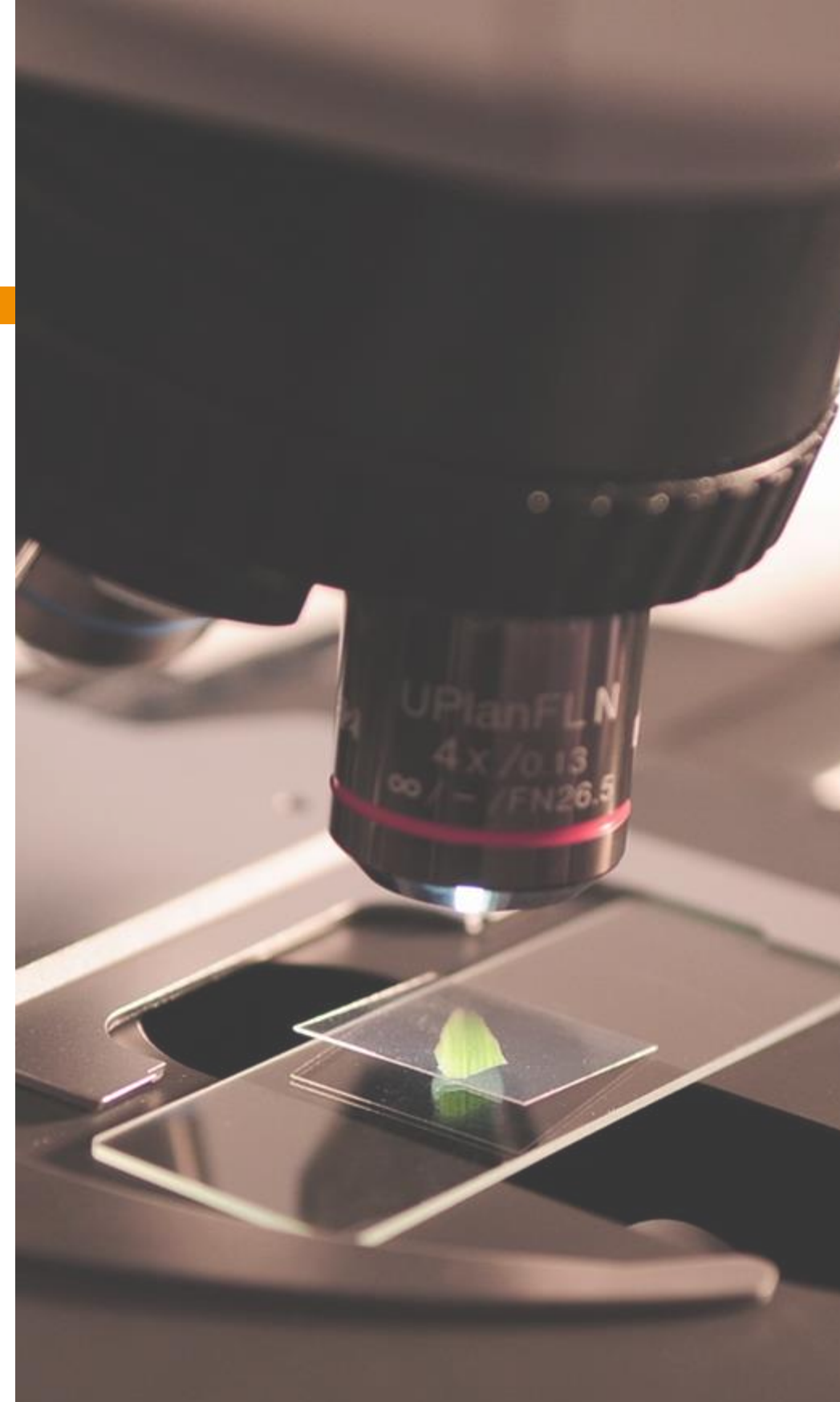
Some hold any data type.

## *...TO SPECIFIC...*

Some are industry specific.

## *...BUT WITHOUT CONTEXT.*

Transparent in name not practice.



**just a  
snap shot**



# Electronic Lab Notebooks

## *A CONTEXTUAL...*

Versioning, time and date stamps.

## *...AND DYNAMIC...*

Investigate and revise in the future.

## *... DIGITAL REPOSITORY.*

Data history + context = transparency

the whole  
picture





# LabArchives ELN

The screenshot shows the LabArchives ELN interface. On the left is a sidebar with a tree view of folders and files. The main content area displays details for a notebook entry named 'elektra'. The details include:

- Limits of the Critical Region:** 44187191 - 88990222 bp
- Type of Mutation:** MISSENSE
- DNA Base Change (Sense Strand):** T to A at 82883102 bp
- Amino Acid Change:** Isoleucine changed to Asparagine
- Ref Sequences:** I135N in NCBI: [NP\\_035538.1](#) (fasta)
- SMART Domains:** A horizontal bar chart shows protein domains. A table below lists:

Domain	Start	End	E-Value	Type
<a href="#">low complexity region</a>	162	172	N/A	INTRINSIC
<a href="#">Pfam:AAA_4</a>	231	365	1.2e-7	PFAM
- Predicted Effect:** probably damaging. PolyPhen 2 Score 0.994 (Sensitivity: 0.68; Specificity: 0.97). A color scale bar ranges from 0.0 (green) to 1.0 (red).
- Phenotypic Category:** CD8 deficiency, decreased CD8 response, hematopoietic system, immune system, MCMV susceptibility, NKT
- Penetrance:** 100%

Time stamps

Date stamps

Data 'in situ'

Forget file uploads

Any file type

Complete versioning

Add future investigation

# LabArchives Dynamic DOIs



The screenshot shows the LabArchives interface. On the left is a navigation sidebar with a tree view containing folders like '# - B', 'C - D', 'E - G', 'H - K', 'L - M' and files like 'L1', 'L10', 'L1N', 'L23'. The main content area displays a notebook entry titled 'languid' from 'Bruce Lab' dated 'May 21, 2012 @04:15 PM NZST'. Below the title is a 'hide revisions' link and a table with the following data:

Date and Time	Entry version #	Revised by	Revised by ip	Revision Action	Data Type	Change	Revert Revision
May 21, 2012 @04:15 PM NZST	2	Bruce Lab	72.220.103.87	edited	text entry	54.9 KB	
May 14, 2012 @11:50 AM NZST	1	Bruce Lab	72.220.103.87	added	text entry	65.7 KB	

Below the table, the text 'Phenotypic Mutation 'languid'' is followed by a table of gene information:

Gene Symbol	<a href="#">Tlr2</a>
Gene Name	toll-like receptor 2
Synonym(s)	Ly105
Accession Number	NCBI RefSeq: <a href="#">NM_011905</a> ; MGI: 1346060

Publically available  
data sets

Stores older  
versions of data

High level of  
context