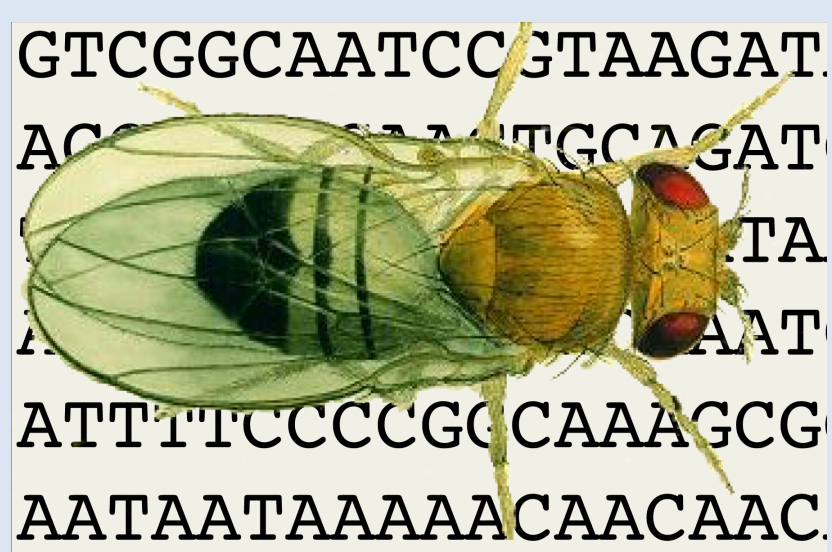


GTCGGCAATCCGTAAGAT.
 ACCGAGGATGCGAGAT
 TA
 AAT
 ATTTTCCCGCCAAAGCG
 AATAATAAAAACAACAAC.



Author Reagent Table: a proposal

Madeline Crosby, Norbert Perrimon, and the FlyBase Consortium*

Department of Molecular and Cellular Biology, Harvard University

A	B	C	D	E	F	G	H	I
Data type	Experimental species	Symbol/name used in publication	Source – public	Source – published	Source – unpublished	Identifiers	New reagent	Comments
Data type (mandatory) Duplicate rows as needed. Order is flexible, but row titles must be preserved.	Experimental species (mandatory, "NA" okay)	Symbol/name used in publication (mandatory)	Source – public [stock center; company, data repository] (one of D,E,F mandatory)	Source – published [PMID or 'this paper'] (one of D,E,F mandatory)	Source – unpublished [description, incl. lab of origin] (one of D,E,F mandatory)	Identifiers [format as ID_source:identifier] Separate multiple entries with semi-colon, space	New reagent (mandatory for new entities) Description, progenitor(s)	Comments (optional) Genotypes, purpose of reagent, additional information
gene (source not applicable)			NA	NA	NA			
strain, strain background								
genetic reagent (in whole organism)								
cell line								
transfected construct (in cell line)								
antibody								
recombinant DNA reagent								
sequence-based reagent								
peptide, recombinant protein								
large-scale dataset								
commercial assay	NA							
chemical compound, drug	NA							
software, algorithm	NA							
other								

Standardized template provided to researchers.

ABSTRACT

In consultation with other model organism databases, FlyBase has formulated a prototype "author reagent table" (ART). Our goal is to facilitate handling of reagent source and identifier information at multiple steps, benefiting researchers, journals, and biological databases. The proposed ART is in the format of a spreadsheet with standardized columns and invariant row labels. It is designed to be used regularly during the course of a research project, recording reagents as they are received and/or used. Lab-wide use of such a common reagent form would facilitate tracking of reagents within the lab. At the point of submission of a manuscript, with a completed ART in hand, provision of reagent data would be very straightforward, particularly to journals using formatted submission systems such as STAR Methods (Marcus, E. et al., 2016; PMID:27565332). Use of reagent identifiers is one of the key requirements of the system, encouraging the use of database and stock center identifiers, RRIIDs (Bandrowski, A. et al., 2016; PMID:26589523), and catalog numbers for commercial providers. Wider use of identifiers and recognized symbols would increase the transparency and reproducibility of biological research, while facilitating curation into research databases. For genetic experiments, unambiguous identification of the genes studied could be an additional component of the ART. A secondary goal of this proposed system is to encourage journals to make such data available as downloadable TSVs, spreadsheets or similar formats. The author reagent table could also be incorporated into the evolving use of preprint repositories: an ART could simply be appended to the preprint manuscript. Feedback on this proposal from the larger biocuration community would be most welcome. Addendum: Genetics has now adopted the author reagent table; see their "Preparing Manuscripts for Submission" page.

The template and example can be downloaded from flybase.org/journal/reagent_form.

- In the form of a spreadsheet that can be used regularly during the course of a research project, recording reagents as they are used.
- Would facilitate tracking within a lab.
- If the same format is used for manuscript submissions, requires only minor editing on the part of the researcher.
- Journals would receive reagent information in a format that is straightforward to handle and that allows downloads as TSV format or spreadsheet.
- Wider use of identifiers and parsable formats would be a huge help for biological databases.
- A widely used standardized format would facilitate propagation of accurate reagent information, allowing import of existing entries into a new table.

Designed to facilitate automated parsing:

Column order and titles must remain unchanged.

Rows duplicated as needed (one row for each reagent).

Row titles must remain unchanged; order can be changed; unused categories can be removed.

Colors entirely optional and can be changed.

A	B	C	D	E	F	G	H	I
Data type	Experimental species	Symbol/name used in publication	Source – public	Source – published	Source – unpublished	Identifiers	New reagent	Comments
gene (source not applicable)	D. melanogaster	nito	NA	NA	NA	FB:FBgn0027548; NCBI:35756		CG2910
gene (source not applicable)	D. melanogaster	Sxl	NA	NA	NA	FB:FBgn0264270; NCBI:3772180		CG43770
genetic reagent (in whole organism)	D. melanogaster	w[1118]			N. Perrimon lab	FB:FBal0018186		w[1118]
genetic reagent (in whole organism)	D. melanogaster	MTD-Gal4	Bloomington Drosophila Stock Center			BDSC:31777; FB:FBtp0001612		FB:P{GAL4-nos.NGT}
genetic reagent (in whole organism)	D. melanogaster	ap-Gal4	Bloomington Drosophila Stock Center			BDSC:3041; FB:FBti0002785		FB:P{GawB}ap[md544]
genetic reagent (in whole organism)	D. melanogaster	nub-Gal4		PMID: 20798049		FB:FBti0016825		FB:P{GawB}nubbin-AC-62
genetic reagent (in whole organism)	D. melanogaster	nito[1]		this paper			progenitor = nito[HP25329]; imprecise excision; lethal	
antibody	NA	anti-Nito (rabbit)		this paper			Polyclonal; in rabbits; against aa 479-500; used YZ3137	
antibody	NA	anti-alpha-Spectrin (mouse)	Developmental Studies Hybridoma Bank			DSHB:3A9		
other	NA	DAPI stain	Molecular Probes					
cell line	D. melanogaster	S2			N. Perrimon lab	FB:FBic0000181; DGRC:181; RRID:CVCL_Z992		FB:S2-DRSC
recombinant DNA reagent	NA	pAGW (Gateway vector)	Drosophila Genomics Resource Center			DGRC:1071		
recombinant DNA reagent	NA	pAHW (Gateway vector)	Drosophila Genomics Resource Center			DGRC:1095		
recombinant DNA reagent	D. melanogaster	GH11110 (cDNA)	Drosophila Genomics Resource Center			DGRC:5666		
recombinant DNA reagent	NA	GFP-Nito (plasmid)		this paper			Progenitors: GH11110 (cDNA); Gateway vector pAGW	
recombinant DNA reagent	NA	HA-Sxl (plasmid)		PMID:16207758			Progenitors: PCR, UAS-Sxl files; Gateway vector pAHW	Progenitor UAS-Sxl = P(UAS-Sxl.M3) (FBtp0022118)
recombinant DNA reagent	NA	GFP-Sxl (plasmid)		PMID:16207758			Progenitors: PCR, UAS-Sxl files; Gateway vector pAGW	Progenitor UAS-Sxl = P(UAS-Sxl.M3) (FBtp0022118)

Genetics and G3 are encouraging use of the Reagent Table.

They are also soliciting feedback from authors.

Additional journals are being contacted.

GENETICS

G3

Reagent Table

Wider use of identifiers and recognized symbols increases the transparency and reproducibility of biological research, while aiding curation into research databases. Authors are encouraged to download the spreadsheet [here \(Excel file\)](#), which is designed to be used regularly during the course of a research project, recording reagents as they are received and/or used.

The spreadsheet format is convenient and flexible for the researcher and provides commonly used download options for readers of publications. Lab-wide use of a common reagent form would facilitate tracking of reagents within the lab and provides information in a structured format that allows bulk downloads and greatly facilitates curation into research databases. In addition to reagents, unambiguous identification of specific genes studied is particularly helpful for genetic and genome databases, as well as for the larger research community.

Authors should upload the spreadsheet as a supplemental file and refer to it at least once in their manuscript as "Reagent Table". No numbering is required. Please refer to these [instructions](#) and this [example file \(Excel\)](#) when creating your Reagent Table using this [Excel file](#). This template is a new resource from FlyBase, with input from other model organism databases, and will be of use to the wider research community. We welcome your feedback: genetics-gsa@theagsajournals.org.

Opportunity to encourage use of RRIIDs.
<https://scicrunch.org/resources>



Multiple outstanding issues, for example:

Should there be a dedicated column for RRIIDs? (Would that discourage use of other identifiers?)

Ideally, the use of standard identifiers would facilitate rigorous searches of the literature. This proposal does not address that issue, since a reagent table as part of supplementary information would not be visible to most text-mining.

We welcome feedback on this proposal, from researchers within and outside the model organism communities, from biocurators, and from any other interested parties.

All feedback is helpful – whether detailed and specific, or more general. We are especially interested in additional data types that should be added.

Please contact: Madeline (Lynn) Crosby crosby@morgan.harvard.edu

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*Members of the FlyBase Consortium (flybase.org): Norbert Perrimon, Susan Russo Gelbart, Julie Agapite, Kris Broll, Madeline A. Crosby, Gilberto do Santos, David B. Emmert, L. Sian Gramates, Kathleen Falls, Beverley B. Matthews, Christopher J. Tabone, Pinglei Zhou, Mark Zytovicz (FlyBase-Harvard), Nicholas H. Brown, Giulia Antonazzo, Helen Attrill, Silvie Fexova, Phani Garapati, Tamsin Jones, Aoife Larkin, Steven J. Marygold, Gillian H. Millburn, Alix J. Rey, Vitor Trovisco, Jose-Maria Urbano (FlyBase-Cambridge), Thomas Kaufman, Bryon Czoch, Joshua L. Goodman, Gary B. Grumbling, Victor B. Strelets, Jim Thurmond (FlyBase-Indiana), Richard Cripps, Maggie Werner-Washburne, Phillip Baker (FlyBase-New Mexico).

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