

JoVE Manuscript Instructions for Authors

What to Submit – Checklist for Manuscript Submission

1. A cover letter with:
 - A rationale on why this work should be published in JoVE's unique multimedia format
 - All author contributions
 - The names of any JoVE editors who have assisted you in the submission process
 - A list of 6 peer reviewers' names with their institutional affiliation and email address. Up to three opposed reviewers may also be suggested.
2. A written manuscript. Please use our [Standard Template](#).
3. Individual figure files
4. A Materials Table of specific reagents and equipment used
5. A signed Author License Agreement (only 1 Agreement is required per submission)
 - Upload to Editorial Manager
 - Mail to JoVE at 1 Alewife Center, Suite 200, Cambridge, MA 02140
 - Fax to the Editorial Office at 866-381-2236

Manuscript Requirements

Required Sections (Please note the more detailed style guide below.):

- Title (maximum 150 characters)
- Authors (including affiliation(s), address, and e-mail addresses for each author)
- Corresponding Author
- Keywords (6-12 words or phrases)
- Short Abstract (10 - 50 words)
- Long Abstract (150 - 300 words)
- Introduction (150 - 1,500 words)
- Protocol (2-page minimum)
 - Protocol Content
 - Protocol Length
- Representative Results
 - Results Text (1-3 paragraphs)
 - Figures and Tables (1 figure or table minimum)
- Discussion (3-6 paragraphs)
- Acknowledgments
- Disclosures
- References (at least 10 correctly formatted references)

How to Submit

Submit online at <http://www.editorialmanager.com/jove/>. Step-by-step submission instructions can be found here. If you have communicated directly with an editor prior to submission, you will have received an email with specific links for submitting your manuscript. Large files are not accepted by our Manuscript Tracking System. Please contact your Editor if you would like to submit files over 50 MB. We will direct you on how to use our file sharing site.

Detailed Instructions

Your manuscript must include the following information. Failure to follow these guidelines will delay the editorial and peer review process, video production, and ultimately the publication.

Required formatting:

- File Type: Microsoft Word is JoVE's preferred word processor. All manuscripts must be submitted as a .doc or .docx file.
- Font: 12 pt. Arial, Calibri, or Times New Roman throughout the entire document
- Page margins: 1 inch on all sides
- Line spacing: single spaced with a space between each paragraph

Style Guidelines:

The written submission is an integral component of your manuscript. Please take care that it is well-written using proper and formal English (American-English preferred), grammar, and syntax. Please ensure that your document has been copy-edited prior to submission. Failure to do so will delay the review of your manuscript. Please pay particular attention to the following areas:

- Avoid the use of colloquial phrases and personal pronouns.
- Use consistent formatting throughout the document (*e.g.*, consistent spacing, capitalization, and punctuation).
- Avoid the use of commercial language, including any [™] and/or [®] symbols or the mention of company brand names before an instrument or reagent.

Technical Language

- Define acronyms upon first usage.
- Use standard abbreviations for SI units: L, mL, μ L, *etc.*
- Abbreviate time designations: h, min, s, μ s, *etc.*
- Italicize all Latin words and nomenclature: *et al.*, *in vivo*, *in vitro*, *in silico*, *i.e.*, *e.g.*, *etc.*
- Abbreviate binomial nomenclature after first usage: *Caenorhabditis elegans* should be abbreviated *C. elegans*.
- Include a space between the temperature and degree sign: 37 °C
- List all centrifugation speeds in terms of centrifugal g force: 100 x g
- Molecular formulas should include subscripts: CO₂, H₂O₂, O₂, *etc.*

Manuscript Contents:

The following contents are **required** for all JoVE submissions. Exclusion of one or more sections will delay the review of your manuscript.

TITLE: (maximum 150 characters)

The title should be a specific and concise description of the technique and its application. If applicable, the title should also include the model system used or the type of study design. Please avoid the use of abbreviations.

AUTHORS:

Authorship should be assigned at the initial stages of submission and cannot be altered following editorial review. Please keep in mind that appearance in the video portion of your submission is not a requirement of authorship, but you may want to acknowledge all those who will appear in the video. Please see [our Editorial Policies](#) for more details regarding authorship.

Use the following format for all author affiliations. Include the telephone number for the corresponding author. For multiple affiliations, denote with numerical superscripts. For equal contribution or other footnotes, indicate with an asterisk (*). Affiliations should reflect where the work was performed and the authors' current locations.

First Author¹, Second Author², etc.

¹Affiliation of First Author

²Affiliation of Second Author, etc.

(format names: First Name Middle Initial Last Name)

(format affiliations: Department, Institution, City, State (if applicable), Country)

E-MAIL ADDRESSES: (required for **all authors**)

Author name (email address)

CORRESPONDING AUTHOR:

The corresponding author represents all authors during the publication process.

- The published corresponding author may differ from the one used for correspondence with the editorial office during the submission and publication process.
- Authors should specify a corresponding author in their manuscript document, which will be listed on the final publication.
- Please consider designating a long-term corresponding author for final publication.

KEYWORDS: (6 – 12 words or phrases)

Keywords should highlight the most important aspects of the manuscript's content.

For example: Neuroscience, Medicine, brain, mouse, transplantation, labeling

SHORT ABSTRACT: (10 – 50 words)

The short abstract should clearly state the goal of the protocol. It may include a general description of the article and its applications. This description should focus around the protocol, not the results obtained by the technique.

LONG ABSTRACT: (150 – 300 words)

The focus of the abstract should be on the technique being presented rather than the results of a specific experiment. It must include a statement that re-iterates the purpose of the technique being presented. A more detailed overview of the technique and a brief summary of its advantages, limitations, and applications are appropriate. Avoid discussing specific results acquired using the experimental approach. Instead focus on the general types of results acquired.

INTRODUCTION: (150 - 1,500 words)

This section should include:

- A clear statement of the overall goal of this method.
- The rationale behind the development and/or use of this technique.
- The advantages over alternative techniques with applicable references to previous studies where the technique was used.
- A description of the context of the technique in the wider body of literature.
- Information that can help readers determine if the method described is appropriate for their application.

PROTOCOL: (2-page minimum, 10-page maximum)

The protocol text should provide a detailed description to enable the accurate replication of the presented technique (including set up, materials, actions, conditions, *etc.*). Well-established techniques (such as Western Blotting, PCR, *etc.*) used within the protocol should be cited as necessary and any modification of the aforementioned procedures should be described in detail.

All methods including the use of human or animal subjects and/or tissue or field sampling must include an ethics statement **before** the numbered protocol section.

A) **Protocol Content:** The protocol should be a step-by-step methodology written as follows.

Format:

- Use 12 pt. font, single spaced, 1 space between each step, 1 inch margins, and no indentations.
- This section must be a **numbered** list: step 1 followed by 1.1, followed by 1.1.1, etc.
- Each step should only include 1-2 actions and be no longer than 2-3 sentences. Use sub-steps as necessary.
- DO NOT underline any text in the protocol, but **bold** text is acceptable for emphasis.

Grammar:

- Use complete sentences throughout the entire protocol.
- Use the active/imperative tense throughout this section.
Good Example: Add 30 μL of solution A to 30 μL of solution B.
Bad Example: Thirty μL of solution A was added to 30 μL of solution B.
- Avoid the use of pronouns throughout this section (e.g., you, your, we, our).
- Avoid the use of commercial language, including any TM/[®]/[©] symbols or the mention of company brand names before/after an instrument or reagent.

Technical Specifications:

- Use subheadings for clarity if there are discrete stages of the protocol.
- Please indicate any points at which the experiment can be paused and then restarted later. For these situations, indicate the choices at that point in the protocol.
Example: The filter can be incubated for 4 hours at room temperature or overnight at 4 °C.
- Indicate any toxic or harmful chemicals with the word “CAUTION” when they are first used and include notes that describe the hazard and appropriate handling guidelines.
- Please make sure all equations are formatted the same across the entire document using the same font size and family. Please separate each equation on its own line.

Example:

1. Deactivation of Basic Alumina and Purification of the Iodoaziridine

1.1. To generate basic alumina (activity IV), add 100 g of basic alumina (activity I) to a 500 mL round bottom flask.

1.1.1. Add 10 mL water to the flask and fit with a glass stopper.

1.1.2. Shake the flask vigorously until no lumps are visible, indicating even spreading of water throughout the alumina. Allow the alumina to cool to RT.

Caution: The adsorption of water is exothermic, so the flask may get hot and may result in a buildup of pressure. Release any pressure buildup frequently.

1.2. Purify the crude iodoaziridine by column chromatography using the basic alumina (activity IV) as the stationary phase, eluting with hexane, grading to 5% EtOAc/hexane.

Note: High concentrations of EtOAc should not be used with basic alumina. In these cases, diethyl ether can be used instead.

1.3. Combine the product containing fractions and remove the solvent under reduced pressure to obtain the pure iodoaziridine.

Note: The protocol can be paused here.

B) **Protocol Length:** There is a 10-page limit (with proper formatting) for the amount of text written for the protocol section. For a Video Produced by JoVE, there is also a limit to the amount of content we can film for a single video article, so there are additional length guidelines.

Length Guidelines for a Video Produced by JoVE:

- Make sure that the protocol has the proper formatting: 12 pt. text, 1 inch margins, single-spaced, with a space between each step, and no indentations.
- **For protocol sections 3 pages or less:** No changes are necessary.
- **For protocol sections over 3 pages:** Highlight up to 2.75 pages of protocol text (including headers and spacing) that you want featured in the video. This text should tell a cohesive story and will be used to guide our scriptwriters in preparing a script for the video.
 - When highlighting, keep in mind which steps need to be visualized and which steps are described sufficiently in text.
 - Please ensure that the highlighted part of the step includes at least one action that is written in imperative tense. The highlighting must include all relevant details that are required to perform the step.
 - Please ensure that the highlighted steps form a cohesive narrative with a logical flow from one highlighted step to the next.
 - You do not need to delete any steps from your protocol. The full length manuscript will be published along with the video. All un-filmed steps will still be available for people to read.
- To ensure that only three pages or <2.75 highlighted, please copy the file, delete all un-highlighted text and determine if your highlighted sections fit within JoVE's length guidelines.

There are no length guidelines for a Video Produced by Author article.

REPRESENTATIVE RESULTS:

All claims of the effectiveness of a technique must be backed up with data, *i.e.*, representative results. For example: If authors claim that technique X cleanly purifies nuclear envelope proteins from a cell, they must include a figure conclusively demonstrating such.

A) Representative Results Text (Paragraph form and complete sentences)

Please add a concise, written description of a representative outcome following the use of this protocol, so that a viewer will have a sense of a "positive" or "negative" result. This section should allude to **all of the data figures** included in the manuscript, emphasizing how the results confirm the success of the represented protocol and how to interpret the data. Include information both on likely outcomes and cases where results are ambiguous or un-interpretable.

Below is an example of a Representative Results section:

The median lifespan of *C. elegans* is temperature dependent. **Figure 1A** shows that temperature dependent changes in lifespan are accurately reproduced by the microtiter based lifespan assay²². Similarly, the microtiter plate assay reproduces changes in lifespan from mutants reported to have lifespans that differ from wild type N2 animals²³⁻²⁵ (**Figure 1B**).

The assay also can be used to make more quantitative statements. In **Figure 1C** mean lifespan is plotted as a function of Mirtazepine concentration⁷. Each data point represents the mean lifespan of 7-12 population, each living in a different well. Even though the number of animals per well is relatively low (5-15 animals) the well-to-well variation is relatively small as can be seen from the error bars.

B) Figures and Tables (separate figure files, titles, and legends within the manuscript text)

Your manuscript must include at least one data figure or table providing Representative Results. If any figure is adapted or republished from a previous publication, authors must appropriately cite the original article in the figure legend and receive permissions from the publisher. All figures and results tables are placed below the Representative Results text unless otherwise noted; please use brackets ([place Figure 1 here], etc.) to indicate alternative figure placement.

Content:

- Data from successful experiments
- Data from sub-optimal experiments (Useful to demonstrate the range of outcomes possible and what could occur if critical steps were not followed)
- A diagram/schematic of the technique is recommended but is NOT sufficient representative data and must be accompanied by at least one other figure.

Legends:

- Each figure or table must have an accompanying legend comprised of a short title and a short description of each panel or a general description.
- Legends should be included as part of the manuscript and NOT included in the figure file.

Format:

Figures:

- Text: Use Arial, 20 pt. font or greater.
- Axis/Axis Tick Labels/Graph Lines: Use 20 pt. font or greater, weight 3 pt. or greater.
- All figures should be provided as individual files. DO NOT embed in the manuscript file.
- Multi-section figures (with parts A, B, C, etc.) should be submitted as a single, combined image file that contains all parts of the figure.
- All data figures must include measurement definitions and error bars (if applicable).
- DO NOT include the figure title or figure legend as part of the figure file.

Tables:

- All tables should be provided as individual .xls or .xlsx files and submitted as Tables. DO NOT embed tables in the manuscript.
- There are no specific formatting requirements for tables *except* the required Table of Specific Reagents/Materials (JoVE will reformat all tables as necessary).

Technical Specifications:

- 50 MB maximum size (Contact your Editor or submissions@jove.com for exceptions)
- Preferred figure file types: .eps, .psd, .pdf (Please save any .ai files as .pdf for submission but maintain .ai files for production purposes.)
- If submitting as .tif (accepted) or .jpg (not preferred), the file must be at least 1440x480 pixels or 300 dpi.
- Preferred animated figure file types (if necessary): .mov, .mp4, .m4v (uploaded as “Animated/Video Figure”)

DISCUSSION: (3-6 paragraphs)

Please remember that JoVE articles are focused on the method and protocol. Thus, the discussion should be similarly focused. This should be written in complete sentences and in paragraph form.

This section should discuss the following with citations:

- Critical steps within the protocol
- Modifications and troubleshooting
- Limitations of the technique
- Significance of the technique with respect to existing/alternative methods
- Future applications or directions after mastering this technique

ACKNOWLEDGEMENTS:

Please list acknowledgments and all funding sources for this work here. Also consider listing any person demonstrating the protocol technique on film who does not appear in the authors list.

DISCLOSURES:

The published manuscript will include a statement at the end of the article that provides information regarding the authors’ competing financial interests or other conflicts of interest. The corresponding author must ensure that all authors have been asked to disclose any and all conflicts of interest. When a conflict of interest is disclosed, either by an author or an editor, it is included in the published article. **If authors have no competing financial interests, then a statement indicating no competing financial interests must be included.**

Here are some examples of appropriate conflict of interest statements:

Example 1: The author [full name] is an [employee/shareholder etc.] of [full company name] that produces reagents and/or instruments used in this Article.

Example 2: The authors received funding that was provided by [full company name], which produces reagents and instruments used in this Article.

Example 3: The authors declare that they have no competing financial interests.

If you have any concerns regarding a specific conflict of interest, please see JoVE's Editorial Policies or contact submissions@jove.com.

TABLE OF SPECIFIC MATERIALS/EQUIPMENT: (separate spreadsheet file; DO NOT embed in manuscript)

Authors should provide a table of the essential supplies, reagents and equipment and upload as a separate .xls file: Table of Materials/Equipment Template

This table should include information for viewers to obtain the materials used in the protocol such as the company, the web address and the catalog number. It is appropriate to include the specific brand of reagent used in your experiments especially if this specificity influences the outcome of the experiment. However, it is not appropriate to mention specific brand names or company names throughout the manuscript text. Please avoid the use of any copyright or trademark symbols throughout the text, especially in the tables of specific reagents and equipment.

In the "Comment" column, please include information on multiple suppliers or if an alternative product can be used. Also in the "Comment" column, please note if any reagent is harmful or toxic. If appropriate, include the nature of the hazard and any standard precautions that should be made in the "**PROTOCOL**" text. Also highlight any custom or specialized equipment required.

JoVE will link some of the reagents and equipment to a product finder tool to connect directly to supplier sites. Please include as much information as possible so that these links are accurate (*i.e.*, company name, company website, product code).

Example Table of Specific Materials/Equipment:

Material/Equipment	Company	Catalog Number	Comments/ Description (optional)
DMEM	Invitrogen	ABCD1234	Warm in 37 °C water bath before use
Experimental Control Software	SR Research Ltd.	Experimental Builder	

REFERENCES: (10 minimum)

Compile all references used in the text in a numbered list. List references in the order that they appear in the manuscript; each publication cited should have its own listing (multiple items listed under one reference number are not allowed). **A minimum of 10, correctly-formatted references should be provided.** Citations should include articles in formal, peer-reviewed journals, laboratory manuals, textbooks, and patents among others.

In-Text Formatting:

- The corresponding reference numbers should appear as superscripts after the appropriate statement(s) in the text (before punctuation but after closed parenthesis).
- Multiple references should be separated by commas, or a dash for inclusive numbers (example^{2, 5} refers to references 2 and 5 while example²⁻⁵ refers to references 2 through 5).
- Personal communications, unpublished data, website URLs, and conference abstracts can be cited parenthetically in the text with author last name, initials and year.
- Footnotes should not be used. Grant details and personal acknowledgments should not be cited as a numbered reference (but included in the Acknowledgments section).

Citation Formatting: (in order)

- Last name, first name and middle initials (if available). (List ALL authors: if there are more than six authors, list the first author and then state “*et al.*”)
- Include article, book, or chapter titles
 - Titles of books should be italicized, whereas article and chapter titles should not.
 - Article titles should start with a capital letter and end with a period.
 - The title should be exactly how it was published in the original work with no abbreviations or truncations.
- Write journal names in italics and list using standard abbreviations with periods. The city or country where a journal is located can be included in parenthesis with the journal name. For books or other works, a publisher name, city and country can be included.
- Write volume numbers in bold, followed by a space, then issue number (in parentheses), a comma, then a range of page numbers (start page – last page). A single page number or publisher item identifier, [pii], can be substituted for a range of page numbers (but should not be included in the DOI field in any referencing software).
- DOI (if available), preceded by a comma and listed as “doi:” then the number.
- Year published (in parentheses), preceded by a comma. “Accepted” or “In Press” can be listed after the title or journal name and before the year.

For example: [Lastname, F.I., *et al.* Article Title. *Source*. **Volume** (Issue), FirstPage – LastPage, doi:DOI (YEAR).]

If you use EndNote, please use the JoVE EndNote style file.

Please use the reference examples below as a guide:

1. Cashdollar, J.L. & Dahling, D.R. Evaluation of a method to re-use electropositive cartridge filters for concentrating viruses from tap and river water. *J. Virol. Methods*. **132** (1-2), 13-17, DOI: 10.1016/j.jviromet.2005.08.016 (2006).
2. Astley, V., Reichel, K., Jones, J., & Mendis, R. Terahertz multichannel microfluidic sensor based on parallel-plate waveguide resonant cavities. *Appl. Phys. Lett.* In Press, (2012).
3. O'Leary, O.F. & Cryan, J.F. The tail suspension test: A model for characterizing antidepressant activity in mice. In: *Mood and Anxiety Related Phenotypes in Mice*. Volume **42**, Gould, T.D., ed., Humana Press, 119-137 (2009).
4. Finkel, A. & Bookman, R. The electrophysiology setup. In: *Current protocols in neuroscience*. Crawley, J.N., et al., eds., Chapter 6, Unit 6, 1, doi: 10.1002/0471142301.ns0601s00 (2001).
5. Nagy, A., Gertsenstein, M., Vintersten, K., & Behringer, R. Manipulating the mouse embryo: A laboratory manual. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY (2003).
6. Rasband, W.S. ImageJ. U.S. National Institutes of Health, Bethesda, Maryland, USA, <http://rsb.info.nih.gov/ij/>, 1997-2007 (2007).

Other Journal Information

Abbreviation: The correct ISO abbreviation for citing and indexing purposes is *J. Vis. Exp.*

ISSN: The International Standard Serial Number (ISSN) for JoVE is **1940-087X**.

LCCN: The Library of Congress Control Number for JoVE is **2007216071**.

Contact Information

For questions, please contact your editor or the editorial office (submissions@jove.com).
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+1.866.381.2236 (fax)

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