This is the manuscript template for *labx@scut (adapted from NAR word temaplate)*. Instructions are included in red at relevant places in the text. Please delete this text before submitting your manuscript

**MANUSCRIPT TITLE**

The title must be clearly intelligible to a non-specialist. The use of jargon and non-standard abbreviations in the title is not permitted

**AUTHORS**

Read the full [Authorship Guidelines](https://academic.oup.com/pages/authoring/journals/preparing_your_manuscript/ethics#Authorship).

Name Surname1, Name Surname2 and Name Surname2,\*

1 Department, Institution, Town, State, Postcode, Country

2 Department, Institution, Town, State, Postcode, Country

\* To whom correspondence should be addressed. Tel: [insert phone number including country code]; Fax: [insert fax number including country code]; Email: [insert email address]

**Corresponding authors**: no more than 3 corresponding authors. 2nd and 3rd corresponding authors (if included) will be introduced by “Correspondence may also be addressed to…” All corresponding authors will be designated by an asterisk and can appear at any place in the list of authors.

**Joint authorship**: Joint first and/or last authorship is allowed, joint authors must be designated with a dagger † symbol. Please add the following statement in footnote : "† Joint Authors".

Present Address: [Author name], Department, Institution, Town, State, Postcode, Country

Authors who have moved since completion of the work can enter their new affiliations and addresses in this section

**Groups and Consortia** can be included in the byline. The members will be tagged by PubMed as ‘collaborators’.

* + - * If the group only has a few members, the members should be listed in the author by-line on the manuscript's title page..
      * If the group has many members, he members should be listed in the Acknowledgements section or in an Appendix at the end of the article..

If a paper was authored by a collaborator group, one author must be chosen as the corresponding author and will be listed as the author "on behalf of" the collaborator group. Acronyms in the list of Authors are acceptable if they are unambiguous.

**EXECUTIVE SUMMARY**

|  |  |  |
| --- | --- | --- |
| **Introduction** | **Big Question / Importance**  (Why people care about this?) | one sentence statement of the broad scientific question |
| **Specific Q / Expected Delivery**  (What will you achieve?) | one sentence statement of the specific scientific question |
| **Known Limits**  (What/Why others did/cannot do this?) | 1. two to three points of current  2. bottlenecks, challenges,  3. issues or difficulties |
| **Novelties**  (What you newly contributed?) | 1. two to three points of your novel  2. ideas, solutions, improvements, in this work  3. in response to the **Known Limits** |
| **Results** | **Points and evidence**  (What are newly possible or known with your work? Why should people believe you?) | 1. new knowledge one, proved by Fig x  2. new knowledge two, proved by Tab y  3. new knowledge three, proved by Result z  4. delivery as expected, based on 1, 2, and 3 |
| **Methods** | **Points and usage**  (What software/statistics/analyses are used to generate the evidence?) | 1. software 1, used in Fig x  2. statistical analysis 2, used in Tab y  3. bioinformatics tool 3, used in Result z |
| **Discussions** | **Points and connection**  (What are possible relation/impact? Where to find further clues?) | 1. impact one, relating to abc’ paper ….  2. impact two, relating to efg’ paper ….  3. impact three, relating to xyz’ paper …. |
| **Limitations** | **Points and response**  (What are possible criticism, dislikes to your work? How to response?) | 1. criticism one: critical? can response by ….  2. criticism two: critical? can response by ….  3. criticism three: critical? can response by …. |

**CHECKLIST**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |

**GRAPHICAL ABSTRACT**

Graphical Abstracts are **mandatory** for all article types **at revision**. Please ensure that it adheres to the following guidelines

Technical Requirements:

* Size: 5:2 aspect ratio, 127x50mm or 5x2in minimum
* Orientation: landscape
* Please see our [short guidelines to preparing figures](https://static.primary.prod.gcms.the-infra.com/static/site/journals/document/images-author-guidance.pdf?node=1bf05d0b2fbd9c529a23&version=490455:30c2211aa70bba63a5ee). These guidelines cover recommended file formats, resolution, sizing, and colour management options, to help you achieve the best outcomes online and in print.
* Font: Use a sans serif font such as Arial, 12–16 points

The graphical abstract should:

* be simple
* be original i.e. not an existing main or supplementary figure
* importantly, not include trademarked or copyrighted images or logos. For example, you could use the text UniProt, but not the logo
* use colour
* use text sparingly, mainly for labels
* consist of a drawing, diagram, graph, etc. illustrating a main point or methodology of the paper
* read from top-down or left-to-right

See [examples from previous issues](https://academic.oup.com/nar/pages/graphical_abstracts_examples).

**ABSTRACT**

The abstract should be a single paragraph, not exceeding **200 words**. URLs and references to figures or schemes should NOT be included. However, note that URLs MUST be included in the abstract of manuscripts submitted to the Database and Web Server issues. References should not be included in the abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam metus est, dignissim eget enim ac, suscipit venenatis ex. Nunc in semper tellus. Vivamus rutrum vel elit nec cursus. Duis tristique elementum urna non pharetra. Aliquam at diam ornare, vulputate mi id, ultricies dui. Duis arcu nibh, finibus id arcu non, accumsan dignissim enim. Vestibulum nisi sapien, venenatis eu odio eget, vehicula ullamcorper purus. Suspendisse a odio non quam posuere efficitur nec a magna. Aliquam sagittis turpis vitae tempor maximus. Aliquam a est ultrices, lacinia diam in, porta tellus. Vestibulum dignissim imperdiet leo vel suscipit. Morbi eget tellus quam. Vestibulum eu molestie metus, vel efficitur felis. Praesent facilisis egestas risus id interdum.

**INTRODUCTION**

Donec vel sollicitudin lacus. Donec aliquam ante ac metus eleifend sodales. Donec sed magna elementum, suscipit quam sed, sagittis dui (1). Mauris eu sagittis justo. Maecenas congue tempor orci, in semper nunc tempor eu. In eleifend eget nibh id tincidunt. Aenean diam lorem, scelerisque dignissim leo et, mattis pharetra odio (2). Donec nec orci leo. Aenean laoreet lacus sed mollis condimentum. Nunc ipsum sapien, aliquam tempus bibendum vel, rutrum eu ex (3). Duis posuere turpis et elementum fermentum. Quisque faucibus euismod dolor, et condimentum magna tempus ac.

**MATERIAL AND METHODS**

**This is an A Heading**

Etiam sit amet euismod ipsum, eu pretium neque. Maecenas et maximus tortor. Ut laoreet ullamcorper tincidunt. Aenean dapibus ullamcorper sapien, eu iaculis nisl aliquet et. Vivamus ornare, dui ultricies cursus euismod, odio magna porttitor diam, quis dictum metus ante vel metus. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos.

Equation *(1)*

Equations: Use Word’s ‘Insert equation’ and ‘Insert symbol’ functions to insert symbols or special characters. **Do not use images**. Times New Roman and Arial Unicode MS typically provide the widest range of symbols and special characters.

*This is a B Heading.* Quisque est nisl, fringilla eget nisl pharetra, aliquet faucibus lorem. Donec sit amet quam ac massa posuere dapibus. Nulla enim sapien, vestibulum a vehicula id, fermentum at est. Proin non ipsum eget nisl porttitor tempus. Donec ultrices arcu vel leo viverra iaculis et vel justo. Interdum et malesuada fames ac ante ipsum primis in faucibus. Pellentesque et ligula in nunc rutrum ultricies sit amet eu lectus. Donec convallis consectetur imperdiet. In porttitor ullamcorper augue, vitae vulputate ex consequat vel.

**RESULTS**

**This is an A Heading**

Mauris nec mi enim. Proin et ligula et felis rutrum accumsan eu sed libero. Pellentesque commodo suscipit arcu, et tincidunt libero. In rhoncus diam tellus, ac ullamcorper tellus pretium a. Nullam quis justo imperdiet, dapibus felis sed, aliquet ex. Pellentesque mattis ornare consequat. Donec porttitor tempus sapien, et varius ipsum varius et. Ut id eros vel quam efficitur dictum. Praesent suscipit in ex vitae laoreet. Ut ullamcorper mollis aliquam.



**Figure 1: caption**

Embed figures and captions at relevant points in the text to facilitate reviewing

*This is a B Heading.* Morbi magna ipsum, sollicitudin sagittis malesuada fringilla, semper aliquet erat. Nulla sit amet euismod risus. Nullam euismod lobortis dolor, id varius enim ornare pretium. Donec a maximus enim. Aliquam elementum consectetur risus non rutrum. Nullam maximus ornare nunc, ornare sagittis mi. Proin egestas risus nec est ultrices pellentesque. Nulla et tempor quam. Donec pellentesque, purus ac dignissim maximus, est eros interdum nulla, fermentum auctor nibh ligula in ipsum. Phasellus eu nibh libero. Morbi quam dolor, fermentum in purus sed, faucibus semper velit.

**DISCUSSION**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam metus est, dignissim eget enim ac, suscipit venenatis ex. Nunc in semper tellus (1). Vivamus rutrum vel elit nec cursus. Duis tristique elementum urna non pharetra. Aliquam at diam ornare, vulputate mi id, ultricies dui. Duis arcu nibh, finibus id arcu non, accumsan dignissim enim. Vestibulum nisi sapien, venenatis eu odio eget, vehicula ullamcorper purus (2). Suspendisse a odio non quam posuere efficitur nec a magna. Aliquam sagittis turpis vitae tempor maximus. Aliquam a est ultrices, lacinia diam in, porta tellus (3). Vestibulum dignissim imperdiet leo vel suscipit. Morbi eget tellus quam. Vestibulum eu molestie metus, vel efficitur felis. Praesent facilisis egestas risus id interdum (4).

**DATA AVAILABILITY**

The inclusion of a Data Availability Statement is a requirement for articles published in NAR. Data Availability Statements provide a standardised format for readers to understand the availability of data underlying the research results described in the article. The statement may refer to original data generated during the study or to third-party data analysed in the article. The statement should describe and provide means of access, where possible, by linking to the data or providing the required unique identifier.

By order of preference, authors should:

1. Deposit their data in a [subject-specific public repository](https://academic.oup.com/nar/pages/data_deposition_and_standardization) and provide accession numbers, identifiers, etc.
2. If there is no such repository, deposit in a generic repository such as [Zenodo](https://zenodo.org/), [Dryad](https://datadryad.org/stash), or [Figshare](https://figshare.com/) and provide the permanent, citable DOIs. Sites that do not offer a DOI (Google Drive, GitHub, DropBox...) are not suitable.
3. If options 1 or 2 are not possible, deposit them in an institutional repository and provide a link. **Authors are responsible for the stability and permanence of the link**.
4. If options 1-3 above are not possible, provide the data as supplementary files to be published alongside the article.

More information and example Data Availability Statements can be found [here](https://academic.oup.com/pages/open-research/research-data#Data%20Availability%20Statements). Please select the statement that applies to your data and fill in the information in [square brackets].

[Learn how to connect Zenodo and Figshare with your GitHub account](https://docs.github.com/en/repositories/archiving-a-github-repository/referencing-and-citing-content).

**SUPPLEMENTARY DATA**

* Online supplementary material should enhance the written article without being necessary to understand it.
* Supplementary material will only be available online and will not be copyedited.
* Supplementary material should be submitted in a separate file to the main article.
* Filenames should be self-explanatory (e.g. Supplementary Figure 1).
* Supplementary material must be cited in the text of the main manuscript.
* The supplementary data should preferably be saved as **one single PDF file**, including all text, figures, tables, and legends. If this is not possible, a **maximum of 10 files** is acceptable to make up the supplementary data unit for the article.
* Supplementary material files should be no larger than **2MB** each.
* If you cannot convert all your files to PDF (.pdf), please provide the following:
  + text files in MS Word (.docx), HTML (.html) or RTF (.rtf) format.
  + spreadsheet files in MS Excel (.xlsx) or CSV (.csv) format. Where possible, **combine all tables into a single Excel workbook, saving individual tables on separate clearly labelled worksheets** (tabs).
  + for supplementary figures, please see our [short guidelines](https://static.primary.prod.gcms.the-infra.com/static/site/journals/document/images-author-guidance.pdf?node=1bf05d0b2fbd9c529a23&version=490455:30c2211aa70bba63a5ee)
  + movie clips in mp4 format
* Style and formatting of supplementary material should be consistent with that of the manuscript.
* Supplementary material should be formatted to function on any internet browser.
* Supplementary material may be hosted on OUP’s website or at one of our preferred partner sites, such as Dryad. Material hosted elsewhere (e.g. the author’s personal website, Google Docs, YouTube) is not allowed as links may expire.

**Supplementary Data statement**

For manuscripts that have supplementary data, the following statement must be added at the end of the manuscript:

Supplementary Data are available at NAR online.

**AUTHOR CONTRIBUTIONS**

The journal permits but **does not require** inclusion of a statement detailing each author's contribution. If included, please follow the [CRediT taxonomy](https://credit.niso.org/).

John Smith: Conceptualization, Formal analysis, Methodology, Validation, Writing—original draft. Peter Jones: Conceptualization, Formal analysis, Visualization, Writing—review & editing. Paul White: Formal analysis, Methodology. Mary Carter: Methodology, Writing—review & editing. Sarah Johnson: Formal analysis.

**ACKNOWLEDGEMENTS**

Donec vel sollicitudin lacus. Donec aliquam ante ac metus eleifend sodales. Donec sed magna elementum, suscipit quam sed, sagittis dui.

**FUNDING**

Cite all funding for your research **and for the Open Access charge**, providing the grant number and the funder name. If the funder is listed in the [Crossref funder registry](https://www.crossref.org/services/funder-registry/), the funder name should appear exactly as it appears in that database. See [this page](https://academic.oup.com/journals/pages/open_access/funder_policies) for more information on funding agency requirements. Where grants were received by specific members of the author group, they should be identified by initial. An example is shown below.

The following rules should be followed:

* The full official funding agency name should be given, i.e. ‘National Institutes of Health’, not ‘NIH’ ([full RIN-approved list of UK funding agencies](http://www.rin.ac.uk/system/files/attachments/List-of-major-UK-research-funders.pdf)) Grant numbers should be given in brackets as follows: ‘[grant number xxxx]’
* Multiple grant numbers should be separated by a comma as follows: ‘[grant numbers xxxx, yyyy]’
* Agencies should be separated by a semi-colon (plus ‘and’ before the last funding agency)
* Where individuals need to be specified for certain sources of funding the following text should be added after the relevant agency or grant number 'to [author initials]'>>
* The statement should end with ‘Funding for open access charge: [insert grant agency name/number]’

[More information on funding agency requirements](https://academic.oup.com/pages/open-research/open-access/complying-with-funder-policies)

This work was supported by the National Institutes of Health [AA123456 to A.B., BB123456 to C.D.]; and the Alcohol & Education Research Council [abcde123456]. Funding for open access charge: National Institutes of Health.

**CONFLICT OF INTEREST**

Please disclose any financial interests or connections, direct or indirect, or other situations that might raise the question of bias in the work reported or the conclusions, implications, or opinions stated - including pertinent commercial or other sources of funding for the individual author(s) or for the associated department(s) or organization(s), personal relationships, or direct academic competition. Further information is available at <https://academic.oup.com/pages/authoring/journals/preparing_your_manuscript/conflicts_of_interest>

**REFERENCES**

* These should be cited in the text by **sequential number** only, in order of appearance, and **listed numerically** in the References section.
* Authors should check all references carefully and ensure that all references in the Reference section are cited in the text.
* Personal communications, unpublished results, manuscripts submitted or in preparation, statistical packages, computer programs and web sites should be cited **in the text only**, NOT included in the References section.
* Journal names should be abbreviated in the style of Chemical Abstracts.
* Where the list of authors is extensive it is acceptable to list the **first 10 authors followed by et al.**
* **Full titles of journal articles must be provided**

1. Journal article: Schmitt,E., Panvert,M., Blanquet,S. and Mechulam,Y. (1995) Transition state stabilisation by the 'high' motif of class I aminoacyl-tRNA synthetases: the case of Escherichia coli methionyl-tRNA synthetase. Nucleic Acids Res., 23, 4793-4798.
2. Book: Maniatis,T., Fritsch,E.F. and Sambrook,J. (1982) Molecular Cloning: A Laboratory Manual. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.
3. Book chapter: Huynh,T.V., Young,R.A. and Davies,R.W. (1988) Constructing and screening cDNA libraries in lambdagt10 and lambdagt11. In Glover,D.M. (ed.), DNA Cloning - A Practical Approach. IRL Press, Oxford, Vol. I, pp. 49-78.
4. Online journal article: Capaldi,S., Getts,R.C. and Jayasena,S.D. (2000) Signal amplification through nucleotide extension and excision on a dendritic DNA platform. Nucleic Acids Res., 28, e21.
5. Preprints: Fan,X., Yang,Y. and Wang,Z. (2018) Pervasive translation of circular RNAs driven by short IRES-like elements. biorXiv doi: https://doi.org/10.1101/473207, 18 November 2018, pre-print: not peer-reviewed.

**TABLE AND FIGURES LEGENDS**

**Figures**

For a simple guide to preparing figure files, please see our [short guidelines](https://static.primary.prod.gcms.the-infra.com/static/site/journals/document/images-author-guidance.pdf?node=1bf05d0b2fbd9c529a23&version=490455:30c2211aa70bba63a5ee). These guidelines cover recommended file formats, resolution, sizing, and colour management options, to help you achieve the best outcomes online and in print.

**Tables**

* Supply any tables in an editable format (such as Microsoft Word), not as an image file.
* Avoid excessive formatting, such as the use of colour and shading which are not replicated in the published web version, and the use of tabbed spacing to indicate alignment.
* Ensure that any formatting or superscript symbols such as asterisks are explained in the table footnote.
* Provide units in column or row headers, rather than in the table body.
* All tables provided should be cited within the article text.

**Permissions**

As an author you will need to secure the necessary reproduction rights for any third party material you have used in your article with the rights holder prior to submission or, if not possible, at the very latest before acceptance of the manuscript. Please read our [permissions guidelines](https://academic.oup.com/pages/authoring/journals/preparing_your_manuscript/rights-and-permissions).

Table 1. Etiam sit amet euismod ipsum, eu pretium neque. Maecenas et maximus tortor. Ut laoreet ullamcorper tincidunt. Aenean dapibus ullamcorper sapien, eu iaculis nisl aliquet et.

Figure 1. Vivamus ornare, dui ultricies cursus euismod, odio magna porttitor diam, quis dictum metus ante vel metus. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos.

**VIDEOS**

Videos should be submitted as an .mp4 file-type, at the highest possible resolution, and include a still image to represent the video in the print PDF. If supplied alongside the manuscript and cited within the article text, published videos will appear as streamable content within the article body. We cannot use videos hosted on third-party sites such as YouTube, as the link may expire.

**APPENDIX**

If a group or consortium has many members, the members can be listed in an Appendix at the end of the article. Please check this [example](https://doi.org/10.1093/nar/gkac1073) and its corresponding entry on [PubMed](https://pubmed.ncbi.nlm.nih.gov/36420893/).