# Proposal Form

In order to submit a Research Topic proposal, you simply need to form a group of co-Editors, define the scope of your Research Topic, and identify potential authors. We have included more information on each of these parts below.

## Team of Guest Editors

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Full name and title**  *Ex.: Prof. Jane B. Brown* | **Affiliation**  *Ex.: Univ. of Texas, USA* | **Email address** | **CV sent**  *Yes/No* | [Loop](https://www.frontiersin.org/Registration/Register.aspx) **profile created with this email address** |
| Dr. Shicheng Guo | Marshfield Clinic Research Instititute, USA | [Shihcheng.Guo@gmail.com](mailto:Shihcheng.Guo@gmail.com) | Yes | Yes |
| Dr. Zhifu Sun | Mayo Clinic | [sun.zhifu@mayo.edu](mailto:sun.zhifu@mayo.edu) | Yes | Yes |
| Dr. Shenying Fang | MD Anderson Cancer Center | [sfang@mdanderson.org](mailto:sfang@mdanderson.org) | Yes | Yes |
| Dr. Qing Dai | University of Chicago | [daiqing@uchicago.edu](mailto:daiqing@uchicago.edu) | Yes | Yes |
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Do you or any of your co-Editors have any **competing interests** to declare (financial interests, business, professional partnerships or relations with commercial company involved in the topic)?

**Yes  No**

*If yes, please specify:*

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|  |

#### Other elements to include:

**Please send us a CV in English for each Guest Editor** (including education, work history, and a list of publications). These will be shared with the Chief Editors for evaluation.

**All Guest Editors will also need to register on** [**Loop**](https://www.frontiersin.org/Registration/Register.aspx) **in order to have access to our platform. This must be done before the proposal can be sent to the Chief Editor.**

#### Additional information:

### *Who should my co-editors be?*

Research Topics are edited by a team of two or more Guest Editors (Topic Editors).

When forming your team of editors, bear in mind that your team will be acting as handling editors for the manuscripts submitted to this collection (perform a preliminary evaluation, assign reviewers, oversee the review process, accept manuscripts or recommend rejection to the Chief Editor). This means that the expertise of the team of Guest Editors must closely match the scope of your proposed Research Topic.

Guest Editors **must** be geographically diverse, coming from different institutions and countries in order to expand your network and help prevent conflicts of interest. The team should include researchers who are well established in the field, but can also include early career researchers with relevant expertise (minimum requirement of a PhD degree and three years of relevant experience).

Please insert the information for your group of Guest Editors above, and add lines to the table if needed.

## Journal and Section

JOURNAL:Choose the [journal](http://home.frontiersin.org/about/journals-a-z) that best matches the scope of your Research Topic.

Frontiers in Oncology

SECTION:All of our journals are broken into sections, which reflect the sub-disciplines in the field. Please select [the section](http://home.frontiersin.org/about/journals-a-z) that best matches the scope of your Research Topic. For a complete list of sections in each journal visit the [journal](http://home.frontiersin.org/about/journals-a-z) homepage and click on the ‘sections’ menu at the top of the page.

Cancer Genetics, Molecular and Cellular Oncology, RNA (Frontiers in Genetics) -

**Note:** All manuscripts submitted to your article collection will need to fall within the scope of the journal and section which you select. If you feel that multiple sections are necessary to encompass the scope of your expected manuscripts ([cross-listing](http://www.frontiersin.org/files/pdf/Frontiers_what_is_crosslisting.pdf)), please let us know, we are happy to discuss the possibility of listing your Research Topic in more than one specialty section.

## Title and Description of the Research Topic

TITLE: max. 150 characters

**Genetics and Epigenetics of RNA Methylation System in Human Cancers**

KEYWORDS: 5 keywords

RNA methylation (m6A/m1A), Post-transcriptional regulation, Human cancers, Epigenetics

DESCRIPTION: Your description will serve as your call for participation and will appear online. It should be written like an abstract - do not include references. Maximum 500 words.

The recently identified RNA modification system has been demonstrated to play important roles in human cancer, immune diseases and mental disorders. The general functions and roles of m6A modification, such as N6-methyladenosine (m6A) and N1-methyladenosine (m1A), have been well described in the past decades, including m6A machines (writer, eraser, and reader genes) and systems, the role of m6A on splicing, RNA exporting, RNA stability, protein translate and specific abnormalities in individual cancers. However, the pan-cancer and cancer specific m6A variation and characteristics are still unknown. Recent technological advancements such as MeRIP-Seq/m6A-seq have allowed considerable progress in understanding the role played by m6A/m1A RNA modification mechanisms in the pathogenesis of human cancers. Genome-wide RNA methylation studies have been completed in several cancers such as liver cancer and lung cancer. However, genome-wide RNA modification profiles for the majority of cancers are still needed, especially m1A patterns. In addition, the details of the mechanism and the heterogeneity of how m6A/m1A genes regulate mRNA modification to influence cancer development and prognosis are still unknown. Since distinct patterns of DNA and RNA methylation are associated with specific cancer types they show interesting prognostic potential and play an important role in favorable treatment selection, which is important in precision medicine. Finally, recent evidence suggests that RNA-modifying proteins, such as METTL3 and METTL14, can be promising novel target targets for cancer treatments.

Hence, in this Research Topic, we would like to focus on mRNA modification system in human cancers. We welcome the submission of Mini-reviews, Reviews and Original Research articles related to genetic (germline and somatic) and epigenetic variations (DNA methylation and histone modifications) in m6A/m1A genes and the consequence to human cancers as well eQTL, meQTL and miRNA/lncRNA regulation of m6A/m1A genes. This Research Topic will cover but not be limited to the following:

1. Genome-wide m6A/m1A landscape research for different human cells or tissues and compared the profile difference between different cancers. Identification of m6A/m1A sites of interest which are involved in gene expression regulation, mRNA stability and protein translation efficiency. For such research, we require solid techniques such as [MeRIP-Seq/m6A-seq and we welcome all novel m6A/m1A detection biotech assay and computational analysis pipeline to accelerate m6A related research. NGS data must be deposited to public database such as GEO and SRA.](https://www.illumina.com/science/sequencing-method-explorer/kits-and-arrays/merip-seq-m6a-seq.html)

2. Association between genetic variants in mRNA modification (writer, eraser, and reader genes) and human cancers, especially rare variants or somatic mutations or rare copy number variations occurred in mRNA modification gene regions. We welcome the pheWAS study based on large population cohort such as UK-biobank, eMERGE to identify interesting genetics association between m6A/m1A systems with complex human diseases with a large phenotypes.

3. Genetic and epigenetic regulations of mRNA modification proteins (writer, eraser, readers) including identify eQTLs, TFBS and DNA methylation, histone modification and miRNAs as well as the corresponding interaction on how to transcriptional regulate mRNA modification gene expression.

4, Pathway analysis to show how m6A modification are involved in different disease pathways, especially cancer related pathways, such as ferroptosis, immune tolerance pathway and epithelial–mesenchymal transition pathway.

Please include a separate Word-compatible document with this information.

#### Additional information:

#### How do I choose a title?

A good title should condense the Research Topic’s scope in a few words and capture the reader’s attention. In order to be attractive, you may want to keep in mind these three tricks: keep it **simple and brief**, use **appropriate descriptive words,** and **avoid abbreviations and jargon**.

#### What should I include in my description?

It should include background information as well as details for potential authors:

**Background**: Give the background information needed to understand your Research Topic (e.g., explain your subject, why it is important, what is already known, where the research is heading)

**Goal**: Present the underlying problem which you want to tackle in your Research Topic

**Scope**: Define the scope of your proposed article collection.

**Details for Authors:** Provide authors with specific guidelines (e.g., indicate the types of manuscripts you are interested in, list specific themes you would like potential contributors to address)

**SUBMISSION DEADLINES:**

Please enter your preferred submission deadlines below.

We suggest about 2 months from the acceptance of your proposal to the abstract submission deadline, and 4-6 months after that for the manuscript submission deadline, but you are free to decide on the time frame that works best for your team. If you would like to use the default deadlines described above, you are welcome to leave the boxes below blank.

|  |  |
| --- | --- |
| Abstract Submission | *+ 2 Months after acceptance* |
| Manuscript Submission | *+ 6 Months after acceptance* |

## List of Potential Authors

Use this[*Excel template*](http://fron.tiers.in/download/ExcelTemplate.xlsx) to list the name and email address (other fields are optional) of researchers who you think may be interested in submitting a manuscript to your Research Topic. We suggest making this list varied in terms of affiliation and geographic distribution, as this helps make sure the reach of your Topic will be as broad as possible.

You do not need to contact potential authors at this stage. After your Research Topic is approved by our Chief Editors, you will use this list to send a call for participation via our platform.

## Image (Optional)

An image helps improve the visibility of your Topic on our website. If you would like to include an image on your Research Topic homepage, please send a JPEG image. The image must be at least 400 pixels x 400 pixels. We suggest that you use a square image; if you use an image that is not square, it will be cropped.

Please be sure you have copyright permission to use the image (e.g., your own image, a stock/free use image such as from [Pixabay](https://pixabay.com/" \t "_blank), [The Metropolitan Museum of Art](http://mymodernmet.com/metropolitan-museum-of-art-open-access/), or [Shutterstock](https://www.shutterstock.com/" \t "_blank)), and provide details of the source or who should be acknowledged for photo credit.

**To submit your proposal, email me the following:**

* This form and a Word document containing your description
* Your list of potential contributors
* CVs for you and each of your co-Guest Editors

I will then perform a final check and send it to the Chief Editor for evaluation.