CRediT statements should be provided during the submission process and will appear above the acknowledgement section of the published paper as shown further below.

| Term | Definition |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Conceptualization | Ideas; formulation or evolution of overarching research goals and aims |  |  |  |  |  |
| Methodology | Development or design of methodology; creation of models |  |  |  |  |  |
| Software | Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components |  |  |  |  |  |
| Validation | Verification, whether as a part of the activity or separate, of the overall replication/ reproducibility of results/experiments and other research outputs |  |  |  |  |  |
| Formal analysis | Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data |  |  |  |  |  |
| Investigation | Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection |  |  |  |  |  |
| Resources | Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools |  |  |  |  |  |
| Data Curation | Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later reuse |  |  |  |  |  |
| Writing - Original Draft | Preparation, creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation) |  |  |  |  |  |
| Writing - Review & Editing | Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre-or postpublication stages |  |  |  |  |  |
| Visualization | Preparation, creation and/or presentation of the published work, specifically visualization/ data presentation |  |  |  |  |  |
| Supervision | Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team |  |  |  |  |  |
| Project administration | Management and coordination responsibility for the research activity planning and execution |  |  |  |  |  |
| Funding acquisition | Acquisition of the financial support for the project leading to this publication |  |  |  |  |  |

**Example**

**Author contribution**

**Author 1**: Formal analysis, Investigation, Data Curation (partially), Writing - Original Draft, Writing - Review & Editing, Visualization

**Author 2**: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Data Curation, Writing - Original Draft, Writing - Review & Editing

**Author 3**: Conceptualization, Investigation, Writing - Review & Editing, Project administration

**Author 4:** Investigation, Resources, Writing - Review & Editing

**Author 5**: Writing - Review & Editing