



## CRedit (Contribution Roles Taxonomy)

CONTRIBUTOR ROLE	ROLE DEFINITION
<b>Conceptualization</b>	Ideas; formulation or evolution of overarching research goals and aims.
<b>Data Curation</b>	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.
<b>Formal Analysis</b>	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data.
<b>Funding Acquisition</b>	Acquisition of the financial support for the project leading to this publication.
<b>Investigation</b>	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection.
<b>Methodology</b>	Development or design of methodology; creation of models.
<b>Project Administration</b>	Management and coordination responsibility for the research activity planning and execution.
<b>Resources</b>	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.
<b>Software</b>	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components.
<b>Supervision</b>	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team.
<b>Validation</b>	Verification, whether as a part of the activity or separate, of the overall replication/reproducibility of results/experiments and other research outputs.
<b>Visualization</b>	Preparation, creation and/or presentation of the published work, specifically visualization/data presentation.
<b>Writing – Original Draft Preparation</b>	Creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation).
<b>Writing – Review &amp; Editing</b>	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 post-publication stages.

### AN EXAMPLE OF AN AUTHORS' CONTRIBUTION STATEMENT USING CREDIT:

**Emma Pieth:** Conceptualization (lead); writing – original draft (lead); writing – review and editing (equal). **John Smith:** Formal analysis (lead); review and editing (equal). **Paulo Laudus:** Software (lead); writing – review and editing (equal). **Monica Hrabal:** Methodology (lead); writing – review and editing (equal). **Peter Hukada:** Conceptualization (supporting); Writing – original draft (supporting); Writing – review and editing (equal).