NOTE: Please save this file locally before filling in the table, DO NOT work on the file within your internet browser as changes will not be saved. Adobe Acrobat Reader (available free here) is recommended for completion.

The ARRIVE guidelines 2.0: author checklist

The ARRIVE Essential 10

These items are the basic minimum to include in a manuscript. Without this information, readers and reviewers cannot assess the reliability of the findings.

Item		Recommendation	Section/line number, or reason for not reporting
Study design	1	For each experiment, provide brief details of study design including: a. The groups being compared, including control groups. If no control group has been used, the rationale should be stated. b. The experimental unit (e.g. a single animal, litter, or cage of animals).	In vivo: Sham, MIRI, MIRI+NaHS (Methods, lines 84 97; Results, Fig. 1). In vitro: Control/Sham, OGD/R, OGD/R +NaHS, OGD/R+NaHS+Erastin (Fig. 3/4 legends). Not explicitly defined. In vivo n=6/group (Fig. 1/2 legends) and in vitro n=3 independent experiments (Fig. 3/4 legends) are reported, but the unit (single animal vs. well/coverslip/independent culture) is not explicitly stated.
Sample size	2	a. Specify the exact number of experimental units allocated to each group, and the total number in each experiment. Also indicate the total number of animals used. b. Explain how the sample size was decided. Provide details of any *a priori* sample size calculation, if done.	In vivo: n=6/group reported in Fig. 1 and Fig. 2 legends. Total number of animals used is NR. In vitro: n=3 independent experiments reported in Fig. 3/4 legends. A priori sample-size calculation or rationale is NR.
Inclusion and exclusion criteria	3	a. Describe any criteria used for including and excluding animals (or experimental units) during the experiment, and data points during the analysis. Specify if these criteria were established *a priori.* If no criteria were set, state this explicitly. b. For each experimental group, report any animals, experimental units or data points not included in the analysis and explain why. If there were no exclusions, state so. c. For each analysis, report the exact value of *n* in each experimental group.	[illegible] ability to move voluntarily or respond to external stimuli (e.g., touch and sound), and persistent hypotension after myocardial ischemia/reperfusion were all defined as reaching the predetermined humane endpoint. During this experiment, rats that died during model induction and those in which the model was not successfully established were excluded. Myocardial tissues were collected from 3 rats for histological evaluation and molecular assays, while myocardial tissues from the remaining 3 rats were subjected to TTC staining.
Randomisation	4	a. State whether randomisation was used to allocate experimental units to control and treatment groups. If done, provide the method used to generate the randomisation sequence. b. Describe the strategy used to minimise potential confounders such as the order of treatments and measurements, or animal/cage location. If confounders were not controlled, state this explicitly.	Rats were randomly divided into experimental groups . The method used to generate the randomisation sequence is NR. Strategies to minimise confounders (e.g., treatment order, cage/location) are NR. Randomisation for in vitro experiments is NR.
Blinding	5	Describe who was aware of the group allocation at the different stages of the experiment (during the allocation, the conduct of the experiment, the outcome assessment, and the data analysis).	Randomization was performed by a researcher who was independent of the subsequent experimental procedures and outcome assessment. This researcher was the only person aware of the animals' group allocation.
Outcome measures	6	a. Clearly define all outcome measures assessed (e.g. cell death, molecular markers, or behavioural changes). b. For hypothesis-testing studies, specify the primary outcome measure, i.e. the outcome measure that was used to determine the sample size.	y cytokines, lipid ROS (C11-BODIPY), MDA, 4-HNE, GSH/GSSG, intracellular iron (FerroOrange/Iron kit), Western blot for SLC7A11, GPX4, nuclear/cytosolic Nrf2 (lines 131–180; Figs. 3–4). The primary outcome measure used to determine sample size is NR.
Statistical methods	7	a. Provide details of the statistical methods used for each analysis, including software used. b. Describe any methods used to assess whether the data met the assumptions of the statistical approach, and what was done if the assumptions were not met.	Mean ± S.E.M.; one-way ANOVA or Student's t-test; GraphPad Prism 6.0; P<0.05 significant. Assumption checks (e.g., normality, equal variance) and handling if assumptions were not met are NR.
Experimental animals	8	a. Provide species-appropriate details of the animals used, including species, strain and substrain, sex, age or developmental stage, and, if relevant, weight. b. Provide further relevant information on the provenance of animals, health/immune status, genetic modification status, genotype, and any previous procedures.	Male Sprague-Dawley rats, 2-month-old . Weight is NR. Provenance/source, health/immune status, genetic modification status, genotype, and previous procedures are NR.
Experimental procedures	9	For each experimental group, including controls, describe the procedures in enough detail to allow others to replicate them, including: a. What was done, how it was done and what was used. b. When and how often. c. Where (including detail of any acclimatisation periods). d. Why (provide rationale for procedures).	Methods, Section 2.2 Section 2.2 Animal Model of MIRI All animal procedures were performed in accordance with the approved guidelines. Male Sprague-Dawley (SD) rats (2-month-old) were randomly divided into experimental groups. N/A
Results	10	For each experiment conducted, including independent replications, report: a. Summary/descriptive statistics for each experimental group, with a measure of variability where applicable (e.g. mean and SD, or median and range). b. If applicable, the effect size with a confidence interval.	Figures report group data as mean ± SEM with n (Fig. 1/2 legends: n=6/group; Fig. 3/4 legends: n=3 independent experiments). Effect sizes with confidence intervals are NR. Per-experiment descriptive statistics are presented graphically rather than in tables.