

Congress should reform federal science policy 1) to require best existing practices to ensure reproducibility in science the government funds or uses to inform policy; 2) to prevent universities from overcharging the government systematically in its grants; 3) to prohibit the use of federal science regulations and grants to impose identity-group discrimination and DEI ideology; and 4) to prevent foreign intellectual espionage in our universities.

Reproducible Policy Act

Require federal agencies 1) to use only publicly accessible research which meets Good Laboratory Practice Standards; 2) to use professional literature assessments to judge the quality of bodies of research; 3) to fund reviews of existing regulatory actions and scientific inventories and rescind regulations that do not use only publicly accessible research; and 4) to establish a quantitative measure of how often scientific research has been confirmed by replication studies and apply that quantitative measure into their scientific inventories and assessments of weight of evidence.

Mathematical Modeling Reform Act

Require federal public health agencies only to use or fund preregistered and publicly accessible mathematical models in all forecasts, policymaking, and interventions.

Weight of Evidence Act

Require federal agencies to establish transparent, explicit, consistent, and falsifiable “weight-of-evidence” judgments. It also requires federal agencies to include judgments of negative and null studies as well as of positive studies.

Reproducible Grants Act

Restrict new federal grant funding to publicly accessible research and require an individual grantee to convert his entire body of research into publicly accessible research, or to attest which portions of his body of research are not publicly accessible, and therefore are not reproducible.

Replication Studies Funding Act

Dedicate ten percent of the funds for each research grant program to replication studies, especially to replication studies of government-funded research and to replication studies of research that justified a significant regulatory action or a highly influential scientific assessment.

Negative Research Act

Reduce the government contribution to publication bias by requiring each granting program to catalogue and describe the proportions of positive research results to negative and null research results, and not to fund research grant programs with more than 65% positive results.

Research Integrity Act

1) Require federal agencies to publish research integrity guidelines; 2) limit grant funding to researchers whose institutions adopt research integrity practices; and 3) prohibit funding of any researcher who has committed a serious research integrity violation.

Indirect Costs Act

Cap indirect costs charges at a maximum of 10% of the direct costs of the program.

Science Depoliticization Act

1) Forbid federal science agencies from imposing DEI policies or identity-group discrimination on their own operations; and 2) forbid them from funding researchers affiliated with institutions that impose DEI policies or identity-group discrimination.

Science National Interest Act

Prohibit federal agencies from funding research at institutions that fail to disclose foreign gifts or who have received more than 5% of their expenditures from foreign gifts.

Learn more at <https://www.nas.org/policy/model-science-policy-code>.