# Content:

If applicable to the proposed science, briefly describe methods to ensure the identity and validity of key biological and/or chemical resources used in the proposed studies. A maximum of one page is suggested.

# More information:

# Key biological and/or chemical resources are characterized as follows:

Key biological and/or chemical resources may or may not have been generated with NIH funds and: 1) may differ from laboratory to laboratory or over time; 2) may have qualities and/or qualifications that could influence the research data; and 3) are integral to the proposed research. These include, but are not limited to, cell lines, specialty chemicals, antibodies, and other biologics.

Standard laboratory reagents that are not expected to vary do not need to be included in the plan. Examples are buffers and other common biologicals or chemicals.

See NIH's page on Rigor and Reproducibility for more information.

# AUTHENTICATION OF KEY BIOLOGICAL and/or CHEMICAL RESOURCES

**Cell lines:**

CSHL runs a central service designed to comply with NIH rules regarding the authentication of cell lines. In particular, this facility expands and stores a variety of human cell lines, tests these lines for mycoplasma contamination, and confirms cell line identity through Short Tandem Repeat (STR) profiling of genomic DNA (done off-site). The proposed experiments will use HeLa and/or other human cell lines provided and validated through this shared resource. Any new cell lines created in the course of Dr. Desmarais’ experiments will, in a similar manner, be tested for mycoplasma contamination and validated using STR profiling.

**Chemical agents:**

We do not plan to generate new chemical resources as part of this proposal, but will rather use previously published, well-characterized chemical agents.

**Microbial strains:**

The genotypes of bacterial strains used in the proposed experiments will be confirmed by whole-genome sequencing. Key phenotypes will be validated using growth assays, flow cytometry, and microscopy.

**Plasmids:**

Plasmids used in the course of this project will be validated by whole plasmid sequencing. Expression and splicing of key constructs will be validated with RT-qPCR, RT-PCR and electrophoresis, and RNA sequencing.

**Statistics:**

Dr. Kinney is an expert in statistics and will oversee the execution of all statistical methods reported in the publications that arise from this research. CSHL also has an onsite biostatistician who provides advice on and review of statistical methods.