



CALIFORNIA
TABLE GRAPE
COMMISSION

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Letter of Intent Guidelines 2022-23 Health Research Grants Program

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Letter of Intent Due Date: Wednesday, December 1, 2021

Purpose

The California Table Grape Commission (commission) seeks to fund human clinical research projects that assess the benefits of table grapes to human health, using a freeze-dried powder made from fresh table grapes. Of particular interest this year is research on the impact of grapes on eye health and GI health, as well as brain, skin, and immune health.

Background

Fruits and vegetables contain a large number of naturally occurring nutritive and non-nutritive constituents and have been shown to help maintain health and prevent chronic illnesses such as certain cancers, heart disease, stroke, and obesity. In grapes, over 1,600 compounds have been identified so far, including a variety of polyphenols. The role that grapes can play in supporting heart health is well established. Research suggests that grapes may also play a role in promoting other aspects of health as well, and may contribute to healthy aging. For example:

Eye health: Preliminary research suggests that grapes may play a role in supporting eye health by promoting antioxidant and anti-inflammatory activity, or other unknown mechanisms. Oxidative stress is known to play a role in macular degeneration and retinal disease, cataract formation, glaucoma, and diabetic retinopathy.

GI health: Preliminary research suggests that grapes may play a role in supporting gastrointestinal health by acting as prebiotic agents; serving as antimicrobial agents; neutralizing pro-oxidants; reducing populations of gut microbes that produce pro-oxidants; and modulating inflammation. Grapes may also play a role in maintaining the health of colon tissue, protecting against cancer-promoting genes.

Brain health: Preliminary research suggests that grapes may contribute to brain health. A study conducted in elderly subjects with mild cognitive impairment found that consuming

grapes every day preserved metabolic activity in regions of the brain associated with early-stage Alzheimer's disease, where metabolic decline takes hold.

Skin health: Preliminary research suggests that grape consumption may help protect healthy skin during sun exposure. In a study of healthy human subjects consuming grapes daily for two weeks showed increased resistance to sunburn and a reduction in markers of UV damage at the cellular level.

Immune health: Preliminary research suggests that certain grape compounds, including resveratrol and quercetin, may positively influence immune function. Grapes are a good source of vitamin K that may help support lung health during Covid-19. Focused research is needed on consumption of grapes and immune health.

Other: Studies of grapes and/or isolated grape constituents such as resveratrol, catechins, procyanidins, flavonols, and anthocyanins have shown that these may help protect against certain cancers, nerve and brain disorders, arthritis, and an array of other conditions.

The focus of this health research grant program is on the benefits of consuming grapes, the whole fruit, as opposed to in-depth research on individual components of grapes.

Freeze-Dried Table Grape Powder

In order to facilitate reproducible research and to provide researchers with a grape sample representing the whole fruit that is available year-round, the commission produces a freeze-dried whole grape powder made from fresh California grapes. It is important to note that it is not an extract. Research results observed using the grape powder are thus the result of grape consumption and research proposals should be titled and written to reflect this.

The table grape powder is a composite of whole red, green, and black California grapes, seeded and seedless varieties, in a freeze-dried powder form. It was created using Good Manufacturing Practices (GMP) and precautions to preserve the integrity of the biologically active compounds found in fresh grapes. As with fresh table grapes, the grape powder is known to contain anthocyanins, catechins, resveratrol, flavonols (including quercetin), flavans and simple phenolics as well as sugars. An information sheet about the freeze-dried table grape powder is available online, along with guidelines for using the grape powder in research studies, at www.grapesfromcalifornia.com/grapes-health/health-research-grants/. This request for Letters of Intent can be accessed there as well.

Table Grape Powder Placebo

The commission has developed a placebo for control diets in human studies.

Specific Objectives

The emphasis of this research program is to facilitate research that will increase understanding of the potential effects of grape consumption on **human** health. Research should focus on the

beneficial effects of grapes as a food, in pursuit of health. Research projects should be designed to provide the foundation for subsequent, large-scale studies in humans, such as those that could be supported by larger funding entities such as the National Institutes of Health.

Specifically, the grants are to be used to conduct research, using the freeze-dried grape powder as a stand-in for fresh grapes, to examine the link between consumption of grapes and health, including protection of eye health and GI health, as well as brain, skin, and immune health. Research on grapes and diseases such as heart disease, all cancers, or chronic diseases of national concern such as metabolic syndrome, obesity, etc. would also be appropriate. Research should focus on the beneficial effects of grapes as a food on health.

Grapes and Health Grant: up to four awards of \$35,000 each are anticipated.

To view a list of previously funded projects [click here](#). Where available, final reports and published papers associated with previous projects are accessible for the applicant's review and consideration in designing the new study to be proposed.

In addition to the grant monies, the commission will provide a sufficient quantity of the freeze-dried table grape powder to the Principal Investigator for completion of the proposed studies, which is of significant value at \$535/kg. Placebo will also be provided.

Funds Available

Up to four awards of \$35,000 each – grant amounts cover total costs (including direct and indirect costs) for one year and will be committed specifically to fund individual proposals submitted in response to this request for proposals (RFP). It is expected that competitive awards will not require overhead (indirect costs) in excess of 20% of total costs. It is anticipated that several awards will be made, however this level of support is dependent on the receipt of a sufficient number of proposals of interest and high scientific merit.

Deadline for Submission of Letter of Intent

Wednesday, December 1, 2021 by 5 p.m. Pacific Standard Time (PST). The letter should be submitted electronically, in a single PDF file, to healthresearch@grapesfromcalifornia.com.

Terms

Each research grant will provide funds for a one-year period. The year will start August 1, 2022 and end July 31, 2023. Grant recipients will receive 75% of the grant amount at the time of the award, and the other 25% upon completion of the study and delivery of the final report. A no-cost extension may be possible if needed. Funding is intended for direct application to conducting the research study, including funding for relevant laboratory supplies and technical personnel. Responsibility for the planning, direction, and execution of the proposed project within the established timeframe will be solely that of the Principal Investigator and the applicant organization. A written status report must be submitted by mid-year, January 10, 2023 and a final report on the research outcome by July 31, 2023. The commission reserves the

right to view research results prior to presentation or publication in whole or part (including abstracts). Additionally, grant awardee names, proposal title, and institution may be posted on the commission website.

Eligibility

Candidates must have a medical or other doctoral degree and be a faculty member or project leader at a college or university, teaching hospital, or established research institute or organization. Preference will be given to researchers with previous experience in related research. Prior grantees are eligible to apply for a new grant, but previous grantees must also submit a progress report on the state of their original commission-funded research, which should demonstrate results from that previously funded research and evidence of effort to extend that research through other funding resources.

Review Considerations: Letters of Intent must be received by December 1, 2021 at 5 p.m. (PST). The commission scientific advisory panel, which is comprised of distinguished researchers, will evaluate letters for scientific and technical merit. The scientific advisory panel will also examine the provisions made for the safety of the research environment including the protection of human subjects.

Review Criteria

- Scientific, technical, or medical significance and originality of proposed research.
- Appropriateness and adequacy of the experimental approach (including use of the freeze-dried grape powder in the test diet) and methodology proposed to carry out the research.
- Qualifications and research experience of the Principal Investigator and staff, particularly, but not exclusively, in the area of the proposed research.
- Availability of the resources necessary to perform the research.
- Appropriateness of projected budget in relation to scope and duration of proposed research.
- Although cost-matching is not required, if the research is going to be expanded with support from other sources, please describe.
- Statement of how successful results could be extended to further the proposed line of research beyond this grant.

Award Criteria

Scientific merit and programmatic priorities will be considered in selecting finalists to submit complete proposals. Finalists will be notified in December 2021 and invited to submit a full proposal. It is expected that final proposals will be due February 1, 2022. Awardees will be notified in May 2022. Disbursement of funds will occur when all approvals are granted for human subjects and a Material Transfer Agreement is signed by the recipient institution.

Letter of Intent Guidelines

Format and Size Limit: The entire narrative should be no more than three pages (two additional pages are allowed solely to highlight investigator qualifications), using an 11 or 12-point font.

Narratives exceeding the page limit will not be reviewed. Note: the exception to this page limit is for prior grantees, who must add a progress report (not to exceed three pages) on the state of their original funded research.

Topic: Your project must explore the link between consumption of grapes (freeze-dried grape powder) and protection of human health.

Please include:

1. Contact information that is clearly visible and that includes name, title, phone number, email address, and mailing address
2. Title for proposed research
3. Brief description of the topic to be addressed and its relevance/implications
4. Specific aims of the project
5. Description of the applicable research methodology
6. Brief description of how proposed research could be extended if successful results observed
7. Project limitations
8. Names and qualifications of Principal Investigator and key staff (up to two pages in addition to narrative)
9. Estimated timetable and abbreviated budget for completion of the project
10. Estimated quantity of grape powder needed for research

Submission of Letter

Complete Letter of Intent must be submitted electronically as a single PDF file to healthresearch@grapesfromcalifornia.com and received no later than Wednesday, December 1, 2021 at 5 p.m. (PST).

The California Table Grape Commission was created by the California legislature in 1967 to increase worldwide demand for fresh California grapes through a variety of research and promotional programs.