



## 2023 Strategic Research Grant: Hypopnea Scoring Criteria

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|--|---|
| <b>ISSUE DATE:</b>                             | September 19, 2022  |
| <b>LETTER OF INTENT DUE DATE:</b>              | October 24, 2022 by 11:59 pm ET   |
| <b>INVITATIONS TO SUBMIT FULL APPLICATION:</b> | By January 27, 2023   |
| <b>APPLICATION DUE DATE:</b>                   | March 13, 2023 by 11:59 pm ET   |
| <b>GRANT SELECTION NOTIFICATION</b>            | By July 28, 2023  |
| <b>PERIOD OF PERFORMANCE:</b>                  | Category I: 1-3 years<br>Category II: 1-2 years<br>Category III: 1-2 years  |
| <b>AMOUNT OF GRANT:</b>                        | Category I: Up to \$250,000<br>Category II: Up to \$100,000<br>Category III: Up to \$50,000   |
| <b>LINK TO LETTER OF INTENT:</b>               | <a href="https://www.GrantRequest.com/SID_5880?SA=SNA&amp;FID=35130">https://www.GrantRequest.com/SID_5880?SA=SNA&amp;FID=35130</a>                         |
| <b>CONTACT:</b>                                | AASM Foundation<br>2510 N. Frontage Road<br>Darien, IL 60561<br>Phone: 630-737-9724<br>E-mail: <a href="mailto:foundation@aasm.org">foundation@aasm.org</a> |

The AASM Foundation is committed to improving patient-centered diagnosis and care for people with sleep disorders. To ensure that there is a continued advancement in effective diagnosis and care of people with sleep disorders, the AASM Foundation provides research funding through the Strategic Research Grant. This grant is investigator-initiated and supports high-impact research projects aimed at addressing gaps in knowledge that impact the ability to provide optimal, patient-centered, cost-effective diagnosis and care for people with sleep disorders.

This AASM Foundation research grant is supported by the American Academy of Sleep Medicine.

## RESEARCH FOCUS

This is a focused request for applications (RFA) open to projects that will **retrospectively** analyze data to evaluate the impact of diagnosis and treatment of obstructive sleep apnea (OSA) based on the hypopnea scoring criteria utilized in adult patients. Currently, the AASM Scoring Manual includes two rules for scoring hypopneas in adults:

### ***Recommended Rule***

Score a respiratory event as a hypopnea if ALL of the following criteria are met:

- a. The peak signal excursions drop by  $\geq 30\%$  of pre-event baseline using nasal pressure (diagnostic study), PAP device flow (titration study), or an *alternative* hypopnea sensor (diagnostic study).
- b. The duration of the  $\geq 30\%$  drop in signal excursion is  $\geq 10$  seconds.
- c. There is a  $\geq 3\%$  oxygen desaturation from pre-event baseline or the event is associated with an arousal.

### ***Acceptable Rule\****

Score a respiratory event as a hypopnea if ALL of the following criteria are met:

- a. The peak signal excursions drop by  $\geq 30\%$  of pre-event baseline using nasal pressure (diagnostic study), PAP device flow (titration study), or an *alternative* hypopnea sensor (diagnostic study).
- b. The duration of the  $\geq 30\%$  drop in signal excursion is  $\geq 10$  seconds.
- c. There is a  $\geq 4\%$  oxygen desaturation from pre-event baseline.

\*Currently, the rule required in Medicare coverage determinations.

Using different criteria for scoring hypopnea can change the determinations made about diagnosis when assessing patients suspected to have OSA. In 2018, the AASM published a position statement, titled [\*Polysomnography for Obstructive Sleep Apnea Should Include Arousal-Based Scoring\*](#), which asserts the importance of recognizing respiratory

events leading to arousal. Accounting for both oxygen desaturations and arousals, can help more definitively rule out the presence of OSA in patients with symptoms of excessive daytime sleepiness, fatigue, insomnia, or other neurocognitive symptoms. Not accounting for arousal-based scoring may lead to a lack of proper diagnosis of OSA, misclassification of OSA severity, or misidentification of another sleep disorder or medical disorder.

The AASM Hypopnea Scoring Rule Task Force held a series of meetings to help identify gaps in research that would strengthen the evidence base for how outcomes are impacted when utilizing the AASM *Recommended* hypopnea scoring criteria in adults compared to other hypopnea scoring criteria. It was determined that assessing the benefit of treatment in patients diagnosed with OSA based on the *Recommended* hypopnea scoring rule, but not diagnosed using the *Acceptable* hypopnea scoring rule, is important.

There are several data sets available from previous large OSA studies performed, patient registries, and large health systems that have potential to be reanalyzed to provide additional information. This request for applications is specifically for projects that will perform retrospective analysis of existing data sets to assess the impact of treatment in patients with OSA who qualify for treatment using the *Recommended* hypopnea scoring criteria but not the *Acceptable* scoring criteria. Analyses of interest in this OSA population include:

- Studies that assess differences in outcomes of interest, including sleepiness, quality of life, daytime function, excess mortality as well as neurocognitive, metabolic, and/or cardiovascular outcomes.
- Studies that assess and compare outcomes in subpopulations of patients (e.g., sex, age, race/ethnicity).
- Studies that evaluate the association between untreated OSA and comorbidities (e.g., depression, hypertension).

## **FUNDING INFORMATION**

The Strategic Research Grant program is organized into three categories to allow flexibility and a range of funding opportunities to potential applicants:

- Category I is for those applicants seeking funding for projects up to \$250,000 and covers a project period of up to three years.
- Category II is for those applicants seeking funding for projects up to \$100,000 and covers a project period of up to two years.
- Category III is for those applicants seeking funding for projects up to \$50,000 and covers a project period of up to one year.

The funds can be used for research expenses such as salary support (commensurate with current stipends or salaries), supplies, participant costs and institutional overhead. There are no restrictions on the distribution of expenses, however, indirect costs are capped at 8%. The grant is executed as a contract between the AASM Foundation and the grantee's institution.

## ELIGIBILITY

The following individuals are eligible to apply:

- Individuals with the following education and training are eligible to apply:
  - Master's level degree or higher.
- Individuals may apply for multiple AASM Foundation grants, however, the same proposal (i.e., projects with budgetary and scientific overlap) may not be submitted for multiple requests for applications in a given cycle.
- Individuals who are the Principal Investigator on an open or previous AASM Foundation research grant at the time of the application deadline are eligible to apply if they can demonstrate that there is no budgetary or scientific overlap between their open grant and the new project they are applying for funding. If there is budgetary and/or scientific overlap between projects, the applicant must indicate their plan to close their open grant in the event their new application is selected for funding (e.g., relinquish the current grant or complete the current grant to start the new grant).
- International individuals who meet all the eligibility criteria are eligible to apply; however, payment of grant funds must be accepted by the institution in US dollars.

## INELIGIBILITY

The following individuals are not eligible to apply:

- Individuals who have a financial conflict of interest or have the potential to incur significant financial benefit from the proposed work and beyond the work itself are not eligible to apply.
- Individuals who are seeking funding from AASM Foundation research grants to support ongoing projects that are currently funded by another granting body or supplement ongoing work (e.g., enrolling additional subjects into an ongoing trial) are not eligible to apply.

**Note:** *The principal investigator will be required to make a statement to this effect prior to execution of the contract.*

## LETTER OF INTENT REQUIREMENT

This grant is a two-stage application process, in which a letter of intent (LOI) is required prior to submission of a full application. Applicants will then be notified whether they

will be invited to submit a full application. If the LOI is not approved, the applicant may not apply for the grant.

Please note that the information submitted in the LOI (e.g., grant category, key personnel, research domain) is final and those invited to submit a full application will be bound by the content of their approved LOI unless a modification was specifically requested or approved by the AASM Foundation.

For an overview on how to write an effective LOI and Application for the AASM Foundation Strategic Research Grant, please view the following resources:

[Strategic Research Grant Letter of Intent Guide](#)

[Strategic Research Grant: How to Submit a Competitive Letter of Intent and Application Webinar](#)

### **LOI REVIEW CRITERIA**

For applicants who voluntarily submit a LOI, the AASM Foundation Executive Committee will review all submitted LOIs. The following criteria will be considered in determining whether the applicant will be invited to submit a full application for consideration:

- 1. Responsiveness:** Responsiveness to the one of the topic areas being requested as part of this RFA.
- 2. Significance:** Potential significance of the planned research in addressing important problems or critical barriers needed to progress the sleep medicine field.
- 3. Strategic Goal Alignment:** Alignment with the AASM Foundation's strategic goal of improving patient-centered care through high impact research.

### **APPLICATION GRANT REVIEW CRITERIA AND PROCESS**

Once LOIs are reviewed, invitations will be sent out to applicants who have a favorably reviewed LOI so a full application may be submitted. For invited applicants who submit a full application, a grant review committee, appointed by the AASM Foundation Executive Committee, will evaluate and score all submitted applications. Factors that will be taken into consideration include:

- 1. Significance:** Strong scientific premise of planned research in addressing important problems or critical barriers needed to progress the sleep medicine field.

- 2. Investigators:** Experience, training, and ongoing record of accomplishments of the principal investigator(s) and key personnel.
- 3. Innovation:** Use of novel theoretical concepts, approaches or methodologies, instrumentation, or interventions that challenge and seek to shift current research or clinical practice paradigms.
- 4. Approach:** Strategies to ensure a robust and unbiased approach, methodology, analyses, and benchmarks for success are well-reasoned and appropriate for the specific aims of the planned research.
- 5. Environment:** Institutional support, availability of equipment and other physical resources that contribute to the probability of success of the planned research.

Only materials submitted within the application will be used in the evaluation of applications. The AASM Foundation Executive Committee will submit funding recommendations to the AASM Foundation Board of Directors based on the Grant Review Committee scores and consideration of the AASM Foundation’s strategic priorities. The AASM Foundation Board of Directors will make the final funding decisions.

#### **APPLICATION RESUBMISSION POLICY**

Past applicants of the 2022 Strategic Research Grant: Hypopnea Scoring Criteria RFA, who went unfunded, are allowed a single resubmission within 12 months of receipt of the original application notification.

If resubmitting an original and unfunded application, the applicant must still meet all eligibility criteria listed under the Eligibility section of this request for applications. The resubmission must include a response to the reviewers of the original application; resubmissions that do not include this response will not be reviewed. Additionally, the applicant may bypass the LOI submission stage, however, must notify the AASM Foundation of their intent to resubmit an unfunded application by the LOI deadline.

**Note:** Resubmission of an original application for one grant program across another grant program is not permitted.

#### **PAYMENT SCHEDULE**

| <b>Category I Grants</b>  |     |
|---|-----|
| <b>Payment #1</b> – Upon execution of contract                            | 50% |
| <b>Payment #2</b> – At project midpoint after approval of Progress Report | 40% |
| <b>Payment #3</b> – Upon receipt and approval of Final Report             | 10% |

## Category II and Category III Grants

|   |     |
|---|-----|
| <b>Payment #1</b> – Upon execution of contract                | 90% |
| <b>Payment #2</b> – Upon receipt and approval of Final Report | 10% |

If unique circumstances are explained in the budget justification of the applicant's proposal, the Board of Directors will consider requests for an alternate payment schedule, with a maximum variance of 10%.

***Note:** Once a contract is executed for the grant, reallocation of funds of <10% do not require approval.*

### DELIVERABLES AND EXPECTED OUTCOMES

The AASM Foundation Strategic Research Grant supports high-impact research which will advance the diagnosis, treatment, and delivery of patient-centered care across the healthcare continuum for patients with sleep disorders. The AASM Foundation intends that the research funded by this grant will lead to the publication of original research in peer-reviewed journals.

Applicants are expected to address the specific aims as described in the application. Major modification of the proposed aims requires AASM Foundation Board of Directors or Executive Committee approval.

The expected results and deliverables should be clearly stated in the application. The applicant must submit progress and final reports during the project period, describing project activities and results, as outlined below. Failure to meet the deliverables or submit progress or final reports may result in termination of project funding.

### REPORTING SCHEDULE

|                         |                                    |
|-------------------------|------------------------------------|
| <b>Progress Reports</b> | Every six months                   |
| <b>Final Report</b>     | Within 90 days of grant completion |

Outcomes evaluation is an essential component of this grant. All proposals must identify the goals and appropriate outcomes measures of the research. The outcomes should align with the goals and objectives stated in the applicant's proposal for this grant.

### HUMAN/ANIMAL SUBJECT PROTECTION PLAN

If using human or animal subjects, the applicant will be responsible for obtaining Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) approval. The IRB or IACUC letter of approval for the specified project must be on file with the AASM Foundation office prior to the execution of the contract. No funds

will be released for the project without receipt of written approval by an IRB or IACUC. Failure to obtain IRB or IACUC approval will result in retraction of the grant.

## LOI AND APPLICATION

### **Step 1: AASM Foundation Grant Request registration**

To apply for this grant, you must register on [AASM Foundation Grant Request](#). Please refer to the [AASM Foundation Grant Request User Access Guide](#) for guidance on setting-up an account.

### **Step 2: Complete LOI Submission**

## **[ACCESS THE 2023 STRATEGIC RESEARCH GRANT: HYPOPNEA SCORING CRITERIA LETTER OF INTENT](#)**

The LOI Checklist below shows required attachments to be uploaded. For an overview of the information that is requested on the LOI form, please download the [2023 Strategic Research Grant Letter of Intent Outline and Guide](#).

### LOI CHECKLIST

| Form   | Page/Word Limit  |
|--|--|
| <input type="checkbox"/> <b>Face page</b><br>A. Principal investigator<br>B. Sponsoring organization<br>C. Project information and alignment with RFA            | C. 300 words, max  |
| <input type="checkbox"/> <b>Project Personnel</b><br>A. Principal Investigator biosketch and other support page<br>B. Key Personnel: Biosketch and other support | Biosketch: 5 pages per individual<br>Other support page: No page limit |
| <input type="checkbox"/> <b>Letter of Intent</b>   | 3 pages, excluding references  |

### **Step 3: Complete Application (invited applicants only)**

For invited applicants, full applications must be completed and submitted through [AASM Foundation Grant Request](#). A special link for submitting the full application will be sent to invited applicants. Instructions for required forms are available via the online submission system. The Application Checklist below shows required attachments to be uploaded. The Application Checklist below shows required attachments to be uploaded.



For an overview of the information that is requested on the application form, please download the [2023 Strategic Research Grant Application Outline](#).

### APPLICATION CHECKLIST (INVITED APPLICANTS ONLY)

| Form  | Page/Word Limit                                      |
|---|--|
| <input type="checkbox"/> <b>Face Page</b><br>A. Sponsoring organization page<br><i>Note: The principal investigator, sponsoring organization, and project information will be pre-populated in the face page form. Any changes require prior approval from the AASM Foundation.</i> |  |
| <input type="checkbox"/> <b>Research Plan and Goals</b><br>A. Abstract<br>B. Research plan and goals  | A. 200 words, max<br>B. 6 pages, excluding citations |
| <input type="checkbox"/> <b>Project Personnel</b><br><i>Note: The principal investigator and key personnel biosketches and other support pages will be pre-populated in the project personnel form. Any changes require prior approval from the AASM Foundation.</i>                |  |
| <input type="checkbox"/> <b>Letters of Support</b>  | 1 page each  |
| <input type="checkbox"/> <b>Budget and Budget Justification</b><br>A. Budget<br>B. Budget justification   | B. 2 pages   |
| <input type="checkbox"/> <b>Human Subjects/Animal Research Protection Plan</b>  | 3 pages  |

### CHECKLIST FOR RESUBMISSION APPLICATIONS (BY INVITATION ONLY)

| Form   | Page/Word Limit  |
|--|--|
| <input type="checkbox"/> <b>Face page</b><br>D. Principal investigator<br>E. Sponsoring organization<br>F. Project information and alignment with RFA            | C. 300 words, max  |
| <input type="checkbox"/> <b>Response to Reviews</b><br>Response letter to critiques  | 1 page   |
| <input type="checkbox"/> <b>Project Personnel</b><br>B. Principal Investigator biosketch and other support page<br>B. Key Personnel: Biosketch and other support | Biosketch: 5 pages per individual<br>Other support page: No page limit |

|   |   |
|---|---|
| <input type="checkbox"/> <b>Research Plan and Goals</b><br>C. Abstract<br>D. Research plan and goals    | A. 200 words, max<br>B. 6 pages,<br>excluding citations |
| <input type="checkbox"/> <b>Letters of Support</b>  | 1 page each   |
| <input type="checkbox"/> <b>Budget and Budget Justification</b><br>C. Budget<br>D. Budget justification | B. 2 pages  |
| <input type="checkbox"/> <b>Human Subjects/Animal Research Protection Plan</b>                          | 3 pages   |

### APPLICATION QUESTIONS

We encourage potential applicants to contact us early in the application process with questions. Eligibility questions may need to be reviewed by a member of the AASM Foundation Executive Committee, so please allow for at least a 1-week response time for eligibility questions. For all other inquiries, please allow a minimum of two business days for a response. Please note that questions received within 48 hours of an application deadline may not be answered before the deadline.