2023 Strategic Research Grant:
AASM Strategic Plan Goals

ISSUE DATE:	September 19, 2022
LETTER OF INTENT DUE DATE:	October 24, 2022 by 11:59 pm ET
INVITATIONS TO SUBMIT FULL APPLICATION:	By January 27, 2023
APPLICATION DUE DATE:	March 13, 2023 by 11:59 pm ET
GRANT SELECTION NOTIFICATION	By July 28, 2023
PERIOD OF PERFORMANCE:	Category I: 1-3 years Category II: 1-2 years Category III: Up to 1 year
AMOUNT OF GRANT:	Category I: Up to $250,000 Category II: Up to $100,000 Category III: Up to $50,000
LINK TO LETTER OF INTENT:	https://www.GrantRequest.com/SID_5880?SA=SNA&FID=35127
CONTACT:	AASM Foundation 2510 N. Frontage Road Darien, IL 60561 Phone: 630-737-9724 E-mail: foundation@aasm.org

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 topic areas related to the following American Academy of Sleep Medicine (AASM) Strategic Plan Goals: Advocacy to Improve Patient Care, Public Awareness, Technology Innovation, and Workforce Development. Topic areas that address the AASM Strategic Plan Goals must advance the field of sleep medicine and population sleep health. Details and examples for each of these specific research domains and topic areas of interest are provided below. Only applications that fit into one of these research domains will be considered.

1. **Advocacy to Improve Patient Care** - Positively influence clinical practice for providers and their patients.

   Research that can be shared with payers and government decision-makers to increase recognition of the value of services provided by sleep physicians and the sleep team and that can provide evidence-based support for various sleep medicine advocacy initiatives would be valuable in moving the sleep field forward. Research domains and topics that fall under the strategic goal of improving patient care include, but are not limited to:
   - Central Sleep Apnea
   - Circadian Rhythm Sleep-Wake Disorders
   - COVID-19
   - Education and Training
   - Insomnia
   - Obstructive Sleep Apnea
   - Parasomnias
   - Sleep Health[1]
   - Special Populations
   - Translational Science

2. **Public Awareness** - Promote greater public recognition that sleep is essential to health.

Insufficient sleep has major health consequences across the lifespan and to public safety. Lack of sleep is associated with injuries, chronic diseases, mental illnesses, poor quality of life and well-being, increased health care costs, and lost work productivity. There is an urgent need to increase awareness of the benefits of healthy sleep and bring sleep to the forefront of public health. Research domains and topics that fall under the strategic goal of increasing public awareness include, but are not limited to:
- Sleep Health[1]
- Special Populations

3. **Technology Innovation** - Positively influence the impact of technology on patients and the sleep team.

Research on emerging technologies and their impact on the sleep field and understanding how additional information from current sleep medicine procedures can be utilized to personalize patient care, would help strengthen knowledge on how best to harness new technology, and the data from it, to provide high quality patient-centered care. Research domains and topics that fall under the strategic goal of technology innovation include, but are not limited to:
- Circadian Rhythm Sleep-Wake Disorders
- Insomnia
- Obstructive Sleep Apnea
- Sleep Health[1]
- Technology and Big Data in Sleep

[1] Sleep health is defined as a multidimensional pattern of sleep-wakefulness, adapted to individual, social, and environmental demands, that promotes physical and mental well-being. Good sleep health is characterized by subjective satisfaction, appropriate timing, adequate duration, high efficiency, and sustained alertness during waking hours.
Definition from: Buysse DJ. Sleep health: can we define it? Does it matter? Sleep. 2014 Jan 1;37(1):9-17.

4. **Workforce Development** - Expand the sleep team workforce of the future to improve access to high-quality sleep care.

A team-based approach, relying on providers from multiple disciplines, is increasingly encouraged in health care, health research, health education, and health policy. Within sleep medicine, there is a call for sleep specialists to develop

comprehensive and innovative models for long-term care and management of people with sleep disorders. Research will help determine which strategies will expand the sleep workforce and best allow the sleep team to provide high quality, cost-effective, patient-centered care for adults and children with sleep disorders. Research domains and topics that fall under the strategic goal of workforce development include, but are not limited to:

- Education and Training
- Insomnia

The AASM Foundation collected a list of high-impact sleep research topics that fall under each of the research domains above as examples of what would be considered responsive to this RFA. Applicants are encouraged to review the following list of examples of high-impact sleep research topics before drafting a letter of intent:

2023 Strategic Research Grant: AASM Strategic Plan Goals High Impact Sleep Research Topics

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:
  o 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 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.

PAYMENT SCHEDULE

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

Category II and Category III Grants	
Payment #1 – Upon execution of contract	90%
Payment #2 – 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 people 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

Progress Reports	Every six months
Final Report	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: AASM STRATEGIC PLAN GOALS 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

☐ **Face page**
   A. Principal investigator
   B. Sponsoring organization
   C. Project information and alignment with RFA
	C. 300 words, max

Form	Page/Word Limit

☐ **Project Personnel**
    A. Principal Investigator biosketch and other support page
    B. Key Personnel: Biosketch and other support
	Biosketch: 5 pages per individual
	Other support page: No page limit

☐ **Letter of Intent**	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. 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
☐ **Face Page** A. Sponsoring organization page *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.*	

☐ **Research Plan and Goals**
    A. Abstract
    B. Research plan and goals
	A. 200 words, max
	
	B. 6 pages, excluding citations

☐ **Project Personnel** *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.*	
☐ **Letters of Support**	1 page each

☐ **Budget and Budget Justification**
    A. Budget
    B. Budget justification
	B. 2 pages

☐ **Human Subjects/Animal Research Protection Plan**	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.

2023 Strategic Research Grant: AASM Strategic Plan Goals
High-Impact Sleep Research Topics

1. Advocacy to Improve Patient Care

Central Sleep Apnea
- Clinical trials of treatment modalities for central sleep apnea.

Circadian Rhythm Sleep-Wake Disorders
- Impact of circadian phase assessments on treatment interventions for delayed sleep-wake phase disorder.
- Research on serotonergic-induced REM sleep behavior disorder (5-HT RBD) as a possible prodromal neurodegenerative syndrome.

COVID-19
- Management of sleep apnea in people with COVID-19.
- Health disparities in sleep disorders in people recovering from COVID-19.

Education and Training
- Better understand what information primary care physicians would want included in sleep education programs and sleep treatment algorithms to simplify use in every-day practice.

Insomnia
- Identify reliable markers of the adverse consequences of chronic insomnia for daily functioning and cognition.

- Identifying subtypes and characteristics of chronic insomnia and their associated health risks.
- Research to improve insomnia patient care in primary care settings.
- Impact of adding consistent insomnia assessment and management during routine primary care visits.
- Assessment of whether screening and follow-up improves patient outcomes in insomnia and/or other comorbidities.
- Differentiate benefit to risk ratios and safety profiles of different pharmacotherapy options for people with insomnia across the lifespan.
- Identification, evaluation and/or validation of clinical treatment response differentiation and personalized medicine approaches with medications with different mechanisms.
- Research to address different responses to combination treatment to achieve insomnia remission.

Obstructive Sleep Apnea
- Impact of providing education about non-PAP treatment modalities to increase the number of people seeking care and treatment adherence.
- Novel measures of sleep apnea.
- OSA and cardiovascular translational research.
- Utility of screening for OSA.
- Hypoxic burden as a predictor of cardiovascular outcomes.
- Role of clinical and physiologic phenotyping of sleep apnea in OSA management decisions.
- New therapeutic strategies for OSA (e.g., alternative to PAP therapy)

Parasomnias
- More research in NREM parasomnias, as these conditions are not as prevalent, and treatment options are limited.

Sleep Health[1]
- Development and validation of an easy-to-use sleep disorder screening tool for the public with information on how to follow-up with a board-certified sleep physician.

Special Populations
- Characterize the phenomenon of "brain fog," frequently reported by people with sleep disorders or other medical conditions, impacting sleep and wakefulness.
- Outcomes related to sleep disorders in people with traumatic brain injury.
- RBD in veteran populations.

- Sleep disorders in pediatric populations with developmental delays and/or other comorbidities.
- Defining the role of advanced sleep-wake phase in the development of sleep maintenance insomnia among the elderly.
- Data on the use of medications to treat sleep disorders during pregnancy.
- Distinction between ADHD in both adults and children vs daytime manifestations of sleep disorders.
- Identifying sex-specific differences in sleep disorders, potential mechanisms, and therapies.
- Sleep in Native American populations.
- Sleep in overlap conditions, including the overlap between sleep and physiology and /or pathology.
- Tailoring and adapting established sleep disorders therapies for other populations.

Translational Science
- The role of hypocretin/orexin hyperactivity in sleep fragmentation in the elderly population with neurodegenerative disorders.
- PSG signatures as predictive biomarkers of normal and abnormal aging, comorbid disorders, and/or adherence to sleep therapies.

Public Awareness
Sleep Health[1]
- Public awareness to improve patient care that involve collaborations with developing nations.
- Compare strategies for promotion of sleep health in the population.
- Evaluate the effectiveness of a public health intervention to increase awareness of sleep disorders.
- Research on how different "Sleep is essential to health" educational campaigns and/or analogies motivate people with sleep problems to make sleep their first topic of discussion with their primary care providers.
- Qualitative research comparing different sleep health education campaigns.
- Compare the impact of campaigns with or without the stories of people with sleep disorders.

Special Populations
- Determine how to optimize athletic performance through better sleep and circadian health.
- Study the role of sleep extension in improving performance in mission critical situations that depend on reaction time and judgement.

2. Technology Innovation

Circadian Rhythm Sleep-Wake Disorders
- Innovations to improve diagnosis and management of circadian rhythm disorders.
- Develop and preliminarily validate circadian assessment and/or utilize circadian assessment in treatment of sleep disorders.

Insomnia
- Utilizing telemedicine for treatment of insomnia.
- Utilizing technology for the management of insomnia.
- Innovations to improve delivery of insomnia treatments.
- Correlation between polysomnogram data and insomnia.
- Incorporation of insomnia assessments into electronic health records.
- Investigate the effectiveness of current apps or development of new apps for insomnia management.

Obstructive Sleep Apnea
- Use of wearables to determine cardiovascular outcomes in people whose sleep apnea is treated and not treated.
- Use of artificial intelligence and big data to predict risk factors for chronic heart failure and COPD-related hospitalizations in people with sleep apnea.
- Utilization of technology to enhance PAP adherence.

Sleep Health[1]
- Utilization of natural language processing to understand public perception of sleep health as seen in social media activity.

Technology and Big Data in Sleep
- Technology that enhances efficiency and accuracy of scoring sleep studies and that provide clinical risk stratification from sleep study data.
- Use of artificial intelligence for automatic scoring of slow wave sleep.
- Creation of large training datasets and development of algorithms to determine meaningful outcomes for wearables including using existing tools, or ways to harmonize data from existing tools.
- Effectiveness of telemonitoring for home sleep studies.
- Utilization of untapped polysomnogram data to determine cardiovascular risk.
- Explore how data derived from the PSG can be used to improve or personalize patient care.

- Processes, tests or technology that offer new means to assess excessive daytime sleepiness.
- Further research into practical validation standards for evaluation of sleep technology.

3. Workforce Development

Education and Training
- Development and implementation of a sleep medicine training program including a curriculum for allied health professionals.
- Research strategies to increase adoption of courses on circadian science, sleep physiology, sleep apnea pathophysiology in health professionals curriculum.
- Evaluate effectiveness of different pedagogic approaches to sleep medicine education.
- Research the feasibility and effectiveness of a combining sleep medicine training with residency training, or development of primary-care specific sleep medicine training.

Insomnia
- Developing and testing innovative models of care for diagnosis and management of sleep-disordered breathing and insomnia.