Insmed is committed to improving the lives of patients with serious rare lung diseases through funding independent education programs that advance clinical knowledge, competence, and performance among healthcare providers. This may ultimately lead to improved health outcomes in patients with these diseases and a better overall health status in the patient community.

Insmed issues Calls for Grant Applications (CGA) as an additional method to notify organizations that grant funding is available for specific programs and focus areas where Insmed has identified an unmet need addressable through education. Insmed CGAs are publicly posted on the following websites:

- Alliance for Continuing Education in the Health Professions
- Society for Academic CME

Please refer to [www.insmed.com/grants-giving/](http://www.insmed.com/grants-giving/) for grant submission requirements. For additional questions about this CGA funding availability or general questions about grant processes please contact Insmed Medical Education at grants@insmed.com.

Insmed has funding available to support independent education that reaches national audiences through Medical Society conferences (not limited to symposia), other live regional meetings, and/or enduring programs.

**Insmed is interested in receiving grant requests that align with the specifications outlined below.**

<table>
<thead>
<tr>
<th>Therapeutic Area</th>
<th>Non-Cystic Fibrosis Nontuberculous Mycobacterial Lung Disease (NTM-LD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational format &amp; scope</td>
<td>Independent education (symposia or other appropriate activity) that reaches clinicians who attend pulmonary and infectious disease conferences including:</td>
</tr>
<tr>
<td></td>
<td>• 2018 IDWeek (Oct 3-7 San Francisco)</td>
</tr>
<tr>
<td></td>
<td>• 2018 CHEST Annual Meeting (October 6-10 San Antonio)</td>
</tr>
<tr>
<td></td>
<td>• Other identified by Education Provider</td>
</tr>
<tr>
<td></td>
<td>Not limited to symposia, and can include live, enduring, or multiple components</td>
</tr>
</tbody>
</table>

**Submission deadline**

Note: Medical Society conferences may require review of proposals prior to submission to Insmed, or may require an executed LOA prior to a specific deadline.

<table>
<thead>
<tr>
<th>Focus</th>
<th>Insmed Submission deadline</th>
<th>Important congress deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDWeek</td>
<td>Jan 15, 2017</td>
<td>Est March 2018 symposia applications open</td>
</tr>
<tr>
<td>CHEST</td>
<td>March 15, 2018</td>
<td>Est May/June 2018 symposia applications open</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Ensure submission at least 60 days before funding commitment is needed</td>
</tr>
</tbody>
</table>

If your organization plans on submitting requests for more than one activity (live and/or enduring), please structure the proposal(s) to ensure:

- Congress deadlines can be met
- Cost efficiencies are clear –budget summaries should be included for each activity
- Rationale/justification is clear, including relevance to potentially different audiences
### INSMED CALL FOR GRANT APPLICATIONS (CGA):
NONTUBERCULOUS MYCOBACTERIAL LUNG DISEASE (NTM-LD)

<table>
<thead>
<tr>
<th>Accreditation</th>
<th>Grant requests must adhere to Medical Society requirements regarding accreditation, if applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgets</td>
<td>When submitting budgets please clearly differentiate out of pocket costs from management fee, and note optional costs. Organizations may use their own template or request one from Insmed.</td>
</tr>
<tr>
<td>Intended audience</td>
<td>Education should address the needs of clinicians who have a role in the diagnosis and treatment of patients with NTM-LD, including pulmonologists and infectious disease specialists.</td>
</tr>
</tbody>
</table>
| Areas of Education Focus | 1. Awareness of NTM-LD, associated patient risk factors, and approaches to reduce time to diagnosis and initiation of guidelines and evidence based treatment.  
2. Discussion of development of individualized treatment goals based on patient factors.  
3. Examination of evidence and guidelines based strategies to managing medication adverse events, adherence, and completion to improve treatment outcomes.  
5. Evaluation of recent or emerging data on NTM-LD burden of illness and treatment with discussion on relevance to practice (e.g., new/revised guidelines, registry output, and/or research from epidemiology, health outcomes, or clinical studies). |
| Outcomes measures      | Moore’s Level 4 (competence) outcomes will be the minimum expected. (Moore et al. Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities. JCEHP. 2009; 29 (1):1-15.) |

### Needs Assessment and Healthcare Gap

**Note:** It is expected that any education provider submitting a grant application conduct their own independent needs assessment when identifying gaps in patient care and learning objectives that aim to reduce those gaps.

Nontuberculous mycobacteria (NTM) are opportunistic environmental pathogens that may lead to chronic and progressive lung disease (NTM-LD) in susceptible patients with certain underlying conditions such as structural lung disease, immune deficiencies, and other host characteristics (e.g., Lady Windermere syndrome) (Prevots 2015; Park 2016). While the virulence and geographic distribution of NTM species is highly variable, Mycobacterium avium complex (MAC) is most commonly associated with NTM-LD (Prevots 2015; Adjemian 2012). Epidemiologic studies have reported a rise in the prevalence of NTM-LD globally, raising public health concerns (Adjemian 2012; Prevots 2015).

NTM-LD is associated with significant clinical burden including impaired quality of life, as well as increased morbidity and mortality (Yeh 2014; Marras 2017; Mehta 2011). Most patients have moderate to severe disease at the time of diagnosis and it is not uncommon for patients to experience significant delays in diagnosis due to a low recognition of risk factors (Khan 2010; Kotilainen 2015). Low index of suspicion, and delays in diagnosis and initiation of treatment may lead to a cycle of worsening structural lung disease and further susceptibility to destruction of lung tissue by NTM (Faverio 2016; Park 2016; Yeh 2014).

The 2007 ATS/IDSA guidelines established the current standards of diagnosis, management, and treatment of NTM-LD (Griffith 2007). Diagnosis is confirmed through clinical, radiographic, and microbiologic criteria that distinguishes colonization from infection. Once diagnosed, the decision to treat is complex and is dependent on clinical burden, patient factors, and disease severity (Griffith 2007).
INSMED CALL FOR GRANT APPLICATIONS (CGA):
NONTUBERCULOUS MYCOBACTERIAL LUNG DISEASE (NTM-LD)

There are limited clinical trial data in NTM-LD, and as there are no FDA approved drugs indicated for NTM-LD the
treatment guidelines are extrapolated primarily from trials in other mycobacterial diseases (e.g. tuberculosis) and
expert opinion (Griffith 2007). Guideline based treatment includes a complex and resource intensive multidrug
regimen that requires patients to remain on therapy for 12 months after culture conversion (Griffith 2007). Both the
antibiotic susceptibility profile of the specific pathogen causing infection, as well as the individual patient’s tolerability
for medications with known toxicity profiles, require clinical consideration and potentially medication adjustments to
maximize clinical outcomes (Griffith 2007; Griffith 2012).

Even with good adherence to guidelines based therapy, a significant number of patients have refractory disease or
recurrence of NTM following sputum conversion (Wallace 2014, Miwa 2014). Real world evidence indicates that a
majority of patients receive non-guidelines based therapy or require medication adjustments due to toxicity, putting
them at risk for refractory and/or antibiotic resistant disease (Adjemian 2014; Wallace 2014). Ultimately, patients
with NTM-LD who fail treatment have limited options (Griffith 2012) and are at greater risk for rapid decline in lung
function and higher mortality compared with those who achieve culture conversion (Griffith 2012; Park 2016; Jenkins
2008; Griffith 2012). Patient-centered research priorities to improve screening and diagnosis of NTM-LD, and improve
patient outcomes have been identified by clinical experts and the FDA (Henkle 2016; CDER 2016).

Selection Criteria

Grant requests are reviewed and prioritized for funding based on the following:

- Educational need and plan to deliver the educational activity to the intended audience
- Learning objectives that are achievable and align with the educational need
- Experience in designing educational programs and assessing the effectiveness of the activity
- Requested budget
- Accreditation and compliance with ACCME Standards for Commercial Support
- Alignment with educational focus areas

References

Adjemian J et al. Prevalence of Nontuberculous Mycobacterial Lung Disease in U.S. Medicare Beneficiaries. Am J Respir Crit

Adjemian J et al. Lack of Adherence to Evidence-based Treatment Guidelines for Nontuberculous Mycobacterial Lung

Center for Drug Evaluation and Research (CDER), U.S. Food and Drug Administration (FDA). The Voice of the Patient. Non-

1925.


Henkle E et al. Patient-centered research priorities for pulmonary nontuberculous mycobacterial (NTM) infection. An NTM

Jenkins PA et al. Clarithromycin vs ciprofloxacin as adjuncts to rifampicin and ethambutol in treating opportunistic
Khan Z et al. Mycobacterium Avium Complex (MAC) Lung Disease in Two Inner City Community Hospitals: Recognition, Prevalence, Co-Infection with Mycobacterium Tuberculosis (MTB) and Pulmonary Function (PF) Improvements After Treatment Open Respir Med J. 2010;4:76-8


