### Educational Objectives:
Discuss new areas of respiratory research that offer new inroads to effective therapies; List key components to include in respiratory basic science/clinical research; Describe research designs that may improve on current approaches to respiratory research; Identify strengths and weaknesses of the research presented; Describe key strategies to effective research in respiratory disease/to develop a career in academic medicine; Summarize grant application and implementation process and obtaining uninterrupted time for research and financial support; Describe how the program intends to create changes in behavior that will lead to better patient care.

### Intended Audience:
Pulmonary, allergy and immunology fellows and junior faculty who are beginning their research careers.

### Actual Reach:
28 junior faculty/fellows; 9 expert faculty

### Modality/# Activities:
Three day live forum consisting of junior faculty/fellow presentations, expert faculty panel, and structured feedback

### Program Location:
Denver, CO

### Dates (Live Activity):
October 12-14, 2017

### Relevant Links:
N/A

### Outcomes Levels:
Level 1, 2, 3 and 4

### Outcomes Planning:
Pre-test and post-test; program evaluation

### Summary:
The 13th Annual Respiratory Disease Young Investigators’ Forum aimed to connect young investigators with expert faculty and peers in the respiratory disease field to improve research methodologies, enhance presentation and communication skills, and stimulate an academic career in respiratory disease and allergy research. The meeting was successfully implemented from October 12-14, 2017, with 96% of participants reporting that they would recommend this program to their colleagues.
Respiratory Disease Young Investigators’ Forum

Overview

The 13th Annual Respiratory Disease Young Investigators’ Forum, a live independent medical education activity accredited by National Jewish Health (NJH), took place October 12-14, 2017 in Denver, CO. The Forum is designed to enable pulmonary, allergy and immunology fellows and junior faculty to present their research and interact with expert faculty in order to improve research methodologies and presentation skills, enhance communication in the field of respiratory disease and allergy, develop relationships with faculty mentors, assist in translating laboratory research into useful bedside application, and stimulate an academic career in respiratory disease and allergy research. In its 13th year, the Forum continues to prove to be a valuable and impactful annual event for fellows and junior faculty who are beginning their research careers.
Program Design

The content of the program was based on basic science and clinical research in the field of respiratory disease submitted by young investigators, who compete for acceptance into the program and then serve as the program presenting faculty. The program enabled 28 fellows enrolled in fellowship programs such as allergy, respiratory tract disease, or pulmonary medicine, to present the results of their basic science or clinical research to an experienced expert faculty panel.

The program consisted of:

- Clinical and scientific junior faculty presentations
- One-on-one mentoring
- Networking with peer leaders and expert faculty
- An expert faculty panel providing real time feedback
- Q&A
Learning Objectives

Upon completion of this activity, participants will be able to:

- Discuss new areas of respiratory research that offer new inroads to effective therapies
- List key components to be included in respiratory basic science and clinical research
- Describe research study designs that may improve on current approaches to respiratory research
- Identify strengths and weaknesses of the research presented
- Describe key strategies to effective research in respiratory disease and to develop a career in academic medicine
- Summarize the grant application and implementation process and obtaining uninterrupted time for research and financial support to carry out research
- Describe how the program intends to create changes in behavior that will lead to better patient care
“This is my new favorite conference. As a young investigator, I frequently feel like a bystander at large conferences. It was refreshing and immensely educational to participate in a conference focused on my stage of training and composed of my peers.”

- Would recommend this program to their colleagues: 96%
- Activity positively influenced interest in pursuing career as a physician scientist: 89%

28 Fellows/Junior Faculty
9 Expert Faculty
Participation

Respiratory Disease Young Investigators’ Forum

24.3% Fellow/Junior Faculty (N=28)
75.7% Expert Faculty (N=9)
**Pre to Post Activity Evaluation** - Young Investigators rate their confidence in:

- Presenting scientific research to expert faculty

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Pre-Activity (n=27)</th>
<th>Post-Activity (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>3.7%</td>
<td>20.00%</td>
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<tr>
<td>Comfortable</td>
<td></td>
<td>37.0%</td>
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<tr>
<td>Neutral</td>
<td>11.1%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>8.00%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Not Comfortable</td>
<td>0.00%</td>
<td>14.8%</td>
</tr>
</tbody>
</table>
## Pre to Post Activity Evaluation

Young Investigators rate their confidence in: Identifying study designs that improve current approaches to respiratory care and research

<table>
<thead>
<tr>
<th>Confidence Level</th>
<th>Pre-Activity (n=27)</th>
<th>Post-Activity (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>3.7%</td>
<td>16.00%</td>
</tr>
<tr>
<td>Comfortable</td>
<td></td>
<td>22.2%</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td>12.00%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>12.00%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Not Comfortable</td>
<td>0.00%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>
Pre to Post Activity Evaluation - Young Investigators rate their confidence in:

Confidently articulating the strengths and weaknesses of my research

- Very Comfortable: 3.7% Pre-Activity (n=27), 16.00% Post-Activity (n=25)
- Comfortable: 22.2% Pre-Activity, 44.4% Post-Activity
- Neutral: 20.00% Pre-Activity, 20.00% Post-Activity
- Somewhat Comfortable: 18.5% Pre-Activity, 8.00% Post-Activity
- Not Comfortable: 11.1% Pre-Activity, 11.1% Post-Activity
Pre to Post Activity Evaluation - Young Investigators rate their confidence in: Networking with peer researchers

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Pre-Activity (n=27)</th>
<th>Post-Activity (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>3.7%</td>
<td>36.00%</td>
</tr>
<tr>
<td>Comfortable</td>
<td>29.6%</td>
<td>44.00%</td>
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<tr>
<td>Neutral</td>
<td>25.9%</td>
<td>16.00%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>33.3%</td>
<td>4.00%</td>
</tr>
<tr>
<td>Not Comfortable</td>
<td>0.00%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>
Pre to Post Activity Evaluation - Young Investigators rate their confidence in:
Seeking input/advice from senior scientists in the field

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Pre-Activity (n=26)</th>
<th>Post-Activity (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>7.7%</td>
<td>40.00%</td>
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<tr>
<td>Comfortable</td>
<td>19.2%</td>
<td>44.00%</td>
</tr>
<tr>
<td>Neutral</td>
<td>8.00%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>8.00%</td>
<td>26.9%</td>
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<tr>
<td>Not Comfortable</td>
<td>0.0%</td>
<td>0.00%</td>
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</tbody>
</table>
Pre to Post Activity Evaluation - Young Investigators rate their confidence in:
Conducting effective respiratory research to pursue a career in academic medicine

<table>
<thead>
<tr>
<th>Level</th>
<th>Pre-Activity (n=27)</th>
<th>Post-Activity (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>3.7%</td>
<td>16.00%</td>
</tr>
<tr>
<td>Comfortable</td>
<td></td>
<td>4.00%</td>
</tr>
<tr>
<td>Neutral</td>
<td>18.5%</td>
<td>56.00%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>24.00%</td>
<td>40.7%</td>
</tr>
<tr>
<td>Not Comfortable</td>
<td>16.00%</td>
<td>22.2%</td>
</tr>
<tr>
<td></td>
<td>14.8%</td>
<td>4.00%</td>
</tr>
</tbody>
</table>
Pre to Post Activity Evaluation - Young Investigators rate their confidence in:
Identifying the strengths and weaknesses of respiratory research

<table>
<thead>
<tr>
<th>Level</th>
<th>Pre-Activity (n=27)</th>
<th>Post-Activity (n=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>7.4%</td>
<td>20.00%</td>
</tr>
<tr>
<td>Comfortable</td>
<td>14.8%</td>
<td>40.00%</td>
</tr>
<tr>
<td>Neutral</td>
<td>28.00%</td>
<td>28.00%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>12.00%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Not Comfortable</td>
<td>0.00%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>
Pre to Post Activity Evaluation – Young Investigators rate their confidence in: Preparing, submitting and revising K-award grant applications

<table>
<thead>
<tr>
<th>Level</th>
<th>Pre-Activity (n=27)</th>
<th>Post-Activity (n=24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>0.0%</td>
<td>16.67%</td>
</tr>
<tr>
<td>Comfortable</td>
<td>3.7%</td>
<td>29.17%</td>
</tr>
<tr>
<td>Neutral</td>
<td>18.5%</td>
<td>37.50%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>12.50%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Not Comfortable</td>
<td>51.9%</td>
<td>4.17%</td>
</tr>
</tbody>
</table>
Post-Test and Evaluation

Young investigators indicate the extent that the following components helped meet their expectations:

**Rehearsal Sessions**

- Not Helpful: 3.6%
- Somewhat Helpful: 0.0%
- Helpful: 10.7%
- Very Helpful: 21.4%
- Extremely Helpful: 64.3%

**Opportunity to refine presentation skills**

- Not Helpful: 3.6%
- Somewhat Helpful: 0.0%
- Helpful: 10.7%
- Very Helpful: 21.4%
- Extremely Helpful: 64.3%

N=28
Young investigators indicate the extent that the following components helped meet their expectations:

**Expert faculty questions and feedback**

- Not Helpful: 7.1%
- Somewhat Helpful: 3.6%
- Helpful: 10.7%
- Very Helpful: 17.9%
- Extremely Helpful: 60.7%

**Expert faculty lectures**

- Not Helpful: 3.6%
- Somewhat Helpful: 10.7%
- Helpful: 10.7%
- Very Helpful: 25.0%
- Extremely Helpful: 50.0%

N=28
Young investigators indicate the extent that the following components helped meet their expectations:

- Networking with peers: 78.6% Extremely Helpful, 10.7% Very Helpful, 7.1% Helpful, 3.6% Somewhat Helpful, 0.0% Not Helpful

N=28
Post-Test and Evaluation:
Young Investigators rank expert faculty topics from most helpful (1) to least helpful (5)

Transitioning from fellow to junior faculty

- 12.5% ranked topic 1
- 33.3% ranked topic 2
- 33.3% ranked topic 3
- 4.2% ranked topic 4
- 16.7% ranked topic 5

K-Awards: Preparing, Submitting, the Review Process, Revising

- 56.0% ranked topic 1
- 16.0% ranked topic 2
- 4.0% ranked topic 3
- 0.0% ranked topic 4
- 24.0% ranked topic 5

N=24
N=25
Post-Test and Evaluation:
Young Investigators rank expert faculty topics from most helpful (1) to least helpful (5)

The Physician Scientist: Evolution, Revolution, and Revelation

Career Development/ Finding a Mentor

N=24

N=25
Post-Test and Evaluation:
Young Investigators rank expert faculty topics from most helpful (1) to least helpful (5)

![Bar Chart: Work/Life Integration](chart)

- 15.4% for ranking 1
- 15.4% for ranking 2
- 11.5% for ranking 3
- 30.8% for ranking 4
- 26.9% for ranking 5

N=26
Evaluation

- 100% reported the material was presented in an objective manner and free of commercial bias.
- 96% report that the educational content of the activity was “Excellent” or “Good” at meeting the learning objectives.
- 96% report that they would recommend this program to their colleagues.
- 89% report that their expectations for this forum were met or exceeded.
- 50% report that the feedback received during this activity will be used to modify their ATS abstract submission.

**How would you rate:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Fair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeliness of communications</td>
<td>7.69%</td>
<td></td>
<td>92.31%</td>
<td></td>
</tr>
<tr>
<td>Organization of meeting</td>
<td>3.85%</td>
<td></td>
<td>96.15%</td>
<td></td>
</tr>
<tr>
<td>Program workbook</td>
<td>19.23%</td>
<td></td>
<td>80.77%</td>
<td></td>
</tr>
<tr>
<td>Fellow presentations</td>
<td>11.54%</td>
<td>3.85%</td>
<td>84.62%</td>
<td></td>
</tr>
<tr>
<td>Expert faculty presentations</td>
<td>11.54%</td>
<td>15.38%</td>
<td>73.08%</td>
<td></td>
</tr>
<tr>
<td>Program length</td>
<td>26.92%</td>
<td>3.85%</td>
<td>69.23%</td>
<td></td>
</tr>
<tr>
<td>Program location</td>
<td>3.85%</td>
<td>3.85%</td>
<td>92.31%</td>
<td></td>
</tr>
</tbody>
</table>

N=26
Participant Takeaways:

Young Investigators report changes they may make in their career trajectory as a result of program

“I am more dedicated to the physician scientist track than ever before. I am so inspired to hear and see how others have persevered to continue doing this path even when it seems difficult.”

“New input to incorporate into future experiments and I will likely take more time as a clinical instructor rather than rushing into a faculty position in order to maximize my protected time for research.”

“Will be more focused on obtaining publications. Understand what is needed in order to successfully compete for a career development grant.”

“More confident in the pursuit of a research career.”
Respiratory Disease Young Investigators’ Forum

Participant Takeaways:
Young investigators report the biggest benefit of participating

“The most rewarding part of this conference was the amount of time we spent with the senior investigators, discussing career paths and trajectories and why pursuing being a physician-scientist is a noble and needed goal.”

“Time with faculty mentors.”

“Networking with colleagues and seeing the research being done by our next generation of Academics.”

“Learning about the great research other fellows are doing. The expert talks were good.”

“I also enjoyed networking with other research focused fellows.”

“The opportunity to present to expert faculty outside of my institution in a low pressure environment.”

“Opportunity to network with colleagues and physician scientists from all over the country and the ability to get perspective from these faculty on the road to becoming a physician scientist.”
Educational Needs:
Young Investigators recommend topics for future expert faculty presentations

- Skill session on negotiating
- How to find your first faculty position
- Finding a job and negotiating
- Being a woman physician scientist
- Faculty experience on own individual career paths and development
- Foundational grants and recommendations for international medical graduates pursuing an academic career
- Scientific writing
The Thirteenth Annual Respiratory Disease Young Investigators’ Forum Program Newsletter is currently in development. The newsletter will be distributed as soon as it is finalized.
NJH is accredited with commendation by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The NJH Office of Professional Education produced and accredited this program and adhered to the updated ACCME guidelines.

NJH designated this activity for **11 AMA PRA Category 1 Credits™**.
About National Jewish Health

✓ Largest pulmonary division in the world and the only hospital whose principal focus is respiratory and related diseases.
✓ #1 or #2 ranking in Pulmonology category by U.S. News & World Report (since category was added in 1997).
✓ Top 7 percent of institutions funded by the National Institutes of Health, an extraordinary achievement for an institution of NJH’s size.
✓ Designated as a Specialized Center of Research for ILD by The National Institute of Health.
✓ 30 doctors named to “America’s Top Doctors” in 2015.
✓ The NJH COPD clinic is the largest single COPD clinic in the nation and was recently recognized by U.S. News and World Report for its expertise in treating COPD, receiving a “high-performing” designation.