



**ARO
MIDWINTER
MEETING
EXECUTIVE
SUMMARY**

2024

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

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SCIENCE OF THE MEETING EVALUATION:

Attendees were given the opportunity to complete a post-meeting survey, which yielded the following conclusions regarding educational value, quality of content, and speakers. There were 574 respondents to the evaluation resulting in a response rate of 33.2%. Of those that responded to the meeting evaluation, 88.8 % were current ARO members with 36% being international members.

RESPONDENT BREAK DOWN

2023 Total Respondents = 655 (37.3% of all attendees responded to the evaluation)

2024 Total Respondents = 574 (33.2% of all attendees responded to the evaluation)

2024 Location Only Total Respondents = 181 (7.6% of all non-attendees responded to the Location Only survey)

ATTENDANCE BY REGISTRATION CATEGORY:

Registration Type	2023 Total- 1755	Rate	2024 Total- 1731	Rate
Regular Member Registration- Early Bird	595	\$345	610	\$445
Regular Member Registration- Standard	110	\$395	140	\$495
Non-Member Registration- Early Bird	91	\$565	127	\$665
Non-Member Registration- Standard	38	\$665	51	\$765
Senior Registration	27	\$100	25	\$150
Student/PostDoc & Resident Member Registration- Early Bird	572	\$150	544	\$200
Student/PostDoc & Resident Member Registration- Standard	86	\$175	104	\$225
Student/PostDoc & Resident Non-Member Registration- Early Bird	107	\$250	90	\$300
Student/PostDoc & Resident Non-Member Registration- Standard	17	\$295	19	\$345
Main Session Video Recordings	38	\$150	21	\$200

ATTENDANCE BY COUNTRY: Top 5 Countries:

- United States – 1199
- South Korea – 115
- Germany – 60
- Japan – 47
- Canada – 4

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

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Country	2023	2024
Argentina	3	3
Armenia	1	0
Australia	10	18
Austria	9	12
Belgium	12	13
Canada	38	43
Chile	1	2
China	9	41
Colombia	4	0
Czech Republic	3	3
Denmark	13	14
Finland	4	3
France	42	35
Germany	100	60
Hong Kong	1	1
India	3	0
Ireland	2	3
Israel	16	3
Italy	3	4
Japan	28	47
Mexico	0	1
Netherlands	27	7
New Zealand	2	1
Philippines	0	1
Poland	3	2
Portugal	2	0
Qatar	1	1
Saudi Arabia	2	0
Singapore	2	0
Slovakia	1	2
South Africa	0	1
South Korea	75	115
Spain	16	15
Sweden	14	6
Switzerland	8	15
Taiwan	4	8
United Kingdom	56	42
United States	1231	1199

THE 47TH ANNUAL MIDWINTER MEETING

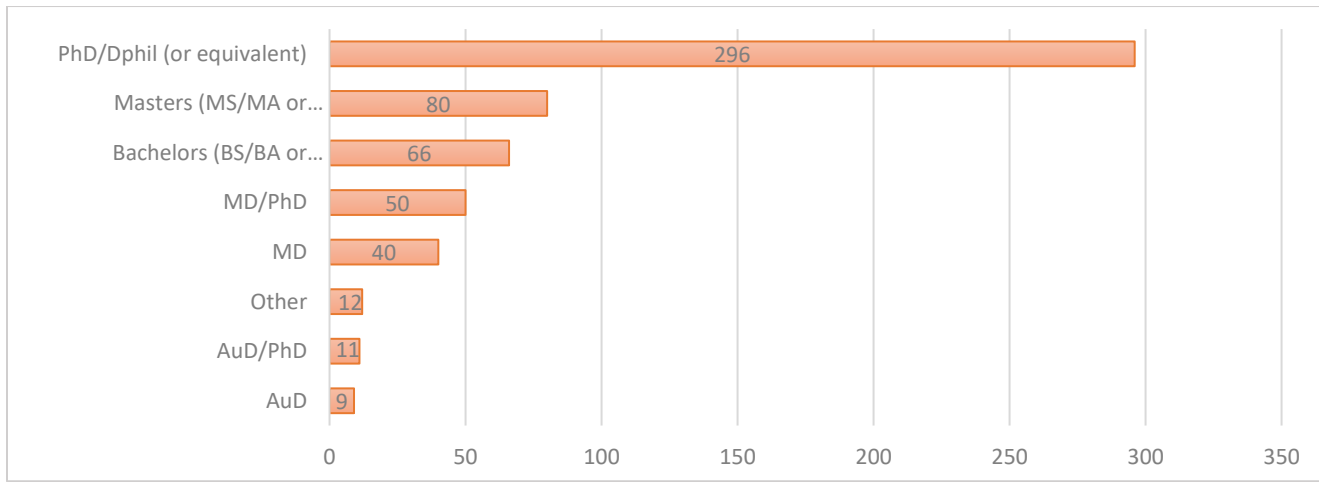
February 3-7, 2024

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Attendee Demographics

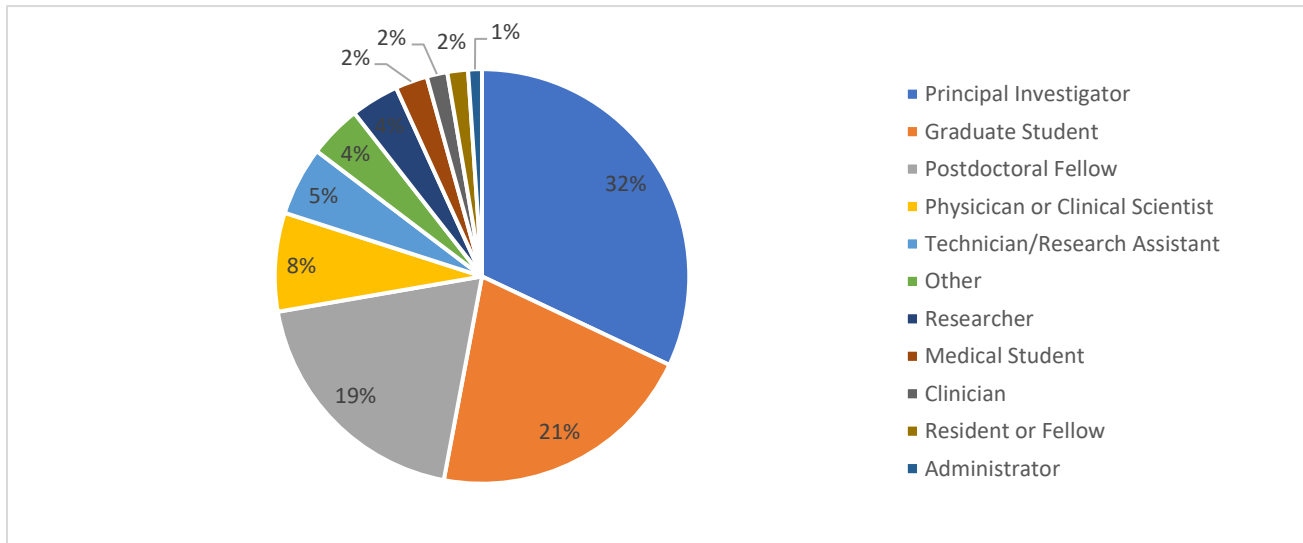
Degree Breakdown by Attendee: 2024



*Other:

- Currently an undergraduate (x5)
- DVM
- Associate degree
- MBA
- DVM/PhD
- PhD candidate
- MD degree from Bolivia

Attendee Occupation: 2024



THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

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*Other:

- Undergraduate Student (x4)
- Senior Research Scientist (x2)
- Scientist (x2)
- Research Assistant Professor
- Research Staff
- Research Assistant (Undergraduate Student) (x2)
- Biotechnology Representative
- Postbaccalaureate Researcher
- Research Associate
- Retired administrator
- Marketing and communications for research funder
- Research Scientist
- PhD student
- Research Fellow
- Industry C-level
- Staff Scientist

Previous ARO Meetings:

	2023	2024
How many ARO Meetings have you attended in the past?	0 Meetings = 100 1 Meeting = 136 2 Meetings = 99 3 Meetings = 76 4 Meetings = 58 5+ Meetings = 158	0 Meetings = 45 1 Meeting = 132 2 Meetings = 99 3 Meetings = 75 4 Meetings = 64 5+ Meetings = 147

Rate the success of the Audio Visual and Closed Captioning Technology for the following sessions:

** Based on respondents who answered and attended/utilized

	2023	2024
Podium Presentations and Symposia	69.6% Rated Good or Excellent	63.0% Rated Good or Excellent
Mentoring Sessions	27.5% Rated Good or Excellent	83.9% Rated Good or Excellent
Workshops	29.3% Rated Good or Excellent	83.5% Rated Good or Excellent
ARO Town Hall (formerly Business Meeting)	15.2% Rated Good or Excellent	76.6% Rated Good or Excellent
Awards ceremony	34.7% Rated Good or Excellent	77.2 % Rated Good or Excellent

Do you plan to access the recorded materials after the MidWinter Meeting?	72.7%- Yes 27.3%- No
If you were to give an oral presentation at future ARO events including the MWM, would you be willing to provide a rough transcript of an oral presentation prior to the meeting or to edit a transcript for accuracy of captioned recorded talks, to improve closed captioning accuracy?	69.9 % - Yes 30.1% - No

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



Please rate your satisfaction with the year-round ARO virtual content outside of ARO MWM	74.0% rated Strongly Satisfied or Satisfied
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Rate the scientific content of the MWM with respect to the following topics:

** Based on respondents who answered and attended/utilized

	2023	2024
Aging	81.3% of Attendees rated Good or Excellent	88.1% of Attendees rated Good or Excellent
Auditory Brainstem	86.6% of Attendees rated Good or Excellent	82.9% Respondents Rated Good or Excellent
Auditory Cortex and Thalamus	86.3% of Attendees rated Good or Excellent	88.2% Respondents Rated Good or Excellent
Auditory Midbrain	80.5% of Attendees rated Good or Excellent	82.9% Respondents Rated Good or Excellent
Auditory Nerve	88.2% of Attendees rated Good or Excellent	90.8% Respondents Rated Good or Excellent
Clinical Otolaryngology and Audiology	76.8% of Attendees rated Good or Excellent	67.7% of Attendees rated Good or Excellent
Cochlear /Vestibular Implants, Prostheses	83.6% of Attendees rated Good or Excellent	85.5% Respondents rated Good or Excellent
Development	90.6% of Attendees rated Good or Excellent	82.1% Respondents Rated Good or Excellent
Drug Delivery	88.3% of Attendees rated Good or Excellent	83.9% of Attendees rated Good or Excellent
Gene Therapy	86.4% of Attendees rated Good or Excellent	90.3% of Attendees rated Good or Excellent
Genetics	82.9% of Attendees rated Good or Excellent	89.2% of Attendees rated Good or Excellent
Hair Cell Physiology	91.2% of Attendees rated Good or Excellent	91.2% Respondents Rated Good or Excellent
Hearing Loss	88.7% of Attendees rated Good or Excellent	95.6% Respondents Rated Good or Excellent
Inner Ear	88.1% of Attendees rated Good or Excellent	92.0% Respondents Rated Good or Excellent
Middle Ear	79.8% of Attendees rated Good or Excellent	72.9% Respondents Rated Good or Excellent
Outer Ear	N/A	67.6% Respondents Rated Good or Excellent
Repair and Regeneration	86.2% of Attendees rated Good or Excellent	91.2% Respondents Rated Good or Excellent
Speech Perception/Psychophysics	86.9% of Attendees rated Good or Excellent	86.2% Respondents Rated Good or Excellent

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

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Synapses	N/A	85.3% Respondents Rated Good or Excellent
Tinnitus	79.2% of Attendees rated Good or Excellent	74.2% of Attendees rated Good or Excellent
Vestibular	69% of Attendees rated Good or Excellent	77.4% of Attendees rated Good or Excellent
Other	N/A	60.4% of Attendees rated Good or Excellent

Rate the content of the MWM with respect to the following sessions:

** Based on respondents who answered and attended/utilized

	2023	2024
Presidential Symposia	89.4% of Attendees rated Good or Excellent	89.1% of Attendees rated Good or Excellent
Podium Sessions (selected from abstracts)	88% of Attendees rated Good or Excellent	82.6% of Attendees rated Good or Excellent
Symposium Sessions	90% of Attendees rated Good or Excellent	93.5% of Attendees rated Good or Excellent
Posters	75.1% of Attendees rated Good or Excellent	91.3% of Attendees rated Good or Excellent
Short Courses	87.4% of Attendees rated Good or Excellent	79.9% of Attendees rated Good or Excellent
Awards Presentations	84.8% of Attendees rated Good or Excellent	74.9% of Attendees rated Good or Excellent
Business Meeting	78.3% of Attendees rated Good or Excellent	62.6% of Attendees rated Good or Excellent

Overall Workshop Questions:

Rate the following workshops:

	2023	2024
gEAR Workshops (all)	86.0% of Attendees rated Good or Excellent	83.2% of Attendees rated Good or Excellent
ARO Diversity and Minority Affairs Workshop: Supportive Allyship in STEM	90.2% of Attendees rated Good or Excellent	83.5% of Attendees rated Good or Excellent

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



Overall spARO Questions:

Rate the following spARO sessions:

	2023	2024
Navigating the Grant Landscape	83.7% of Attendees rated Good or Excellent	74.1% of Attendees rated Good or Excellent
Careers in Industry	83.3% of Attendees rated Good or Excellent	70.0% of Attendees rated Good or Excellent
Careers in Academia	66.7% of Attendees rated Good or Excellent	70.4% of Attendees rated Good or Excellent
Town Hall	N/A	64.8% of Attendees rated Good or Excellent

spARO is the student, postdoc, and medical resident chapter of the Association for Research in Otolaryngology (https://www.aro.org/sparo-students-postdocs). Are you a trainee, and therefore automatically a member of spARO?	32.6%- Yes 67.4%- No
Did you receive information about spARO activities associated with the MidWinter Meeting including spARO Sessions, the Mentor-Mentee Meetup, Pre-MWM Virtual Sessions, and the LGBTQIA+ Social?	68.5%- Yes 31.5%- No
Did having non-overlapping spARO events before (rather than during) the MidWinter Meeting allow more freedom to attend spARO events?	61.1%- Yes 38.9%- No
Did you attend any spARO virtual coffee hours during 2024?	14.8%- Yes 85.2%- No

What is the most effective way for spARO to communicate their activities?

	2023	2024
Email	196 respondents selected this option	149 respondents selected this option
Facebook	15 respondents selected this option	8 respondents selected this option
Instagram	25 respondents selected this option	32 respondents selected this option
Twitter/X	41 respondents selected this option	23 respondents selected this option
ARO/spARO website	75 respondents selected this option	62 respondents selected this option
Slack	20 respondents selected this option	19 respondents selected this option
Reddit	8 respondents selected this option	5 respondents selected this option

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

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How would you rate the following mentoring sessions?

	2023	2024
Careers in Industry	65.6% of Attendees rated Good or Excellent	70.0% of Attendees rated Good or Excellent
Navigating the Grant Landscape	62.0% of Attendees rated Good or Excellent	74.1% of Attendees rated Good or Excellent
Careers in Academia	66.7% of Attendees rated Good or Excellent	77.2% of Attendees rated Good or Excellent
Mentor-Mentee Meetup	64.3% of Attendees rated Good or Excellent	66.3% of Attendees rated Good or Excellent

How would you rate the following Pre-MWM Virtual Sessions?

	2023	2024
Publishing	73.1% of Attendees rated Good or Excellent	75.4% of Attendees rated Good or Excellent
Clinician Scientist	73.4 of Attendees rated Good or Excellent	74.6% of Attendees rated Good or Excellent
Work-Life Balance	N/A	67.2% of Attendees rated Good or Excellent
Mentor-Mentee Communication	64.3% of Attendees rated Good or Excellent	62.5% of Attendees rated Good or Excellent

Overall Meeting Venue and Travel Questions:

How would you rate the following aspects of the meeting venue?

	2024
Poster Room	92.4% of Attendees rated Good or Excellent
Closed Captioning	73.8% of Attendees rated Good or Excellent
Audio Visual Services	86.9% of Attendees rated Good or Excellent
Speaker Ready Room	93.8% of Attendees rated Good or Excellent
Mobile App	53.8% of Attendees rated Good or Excellent
Exhibitors	73.4% of Attendees rated Good or Excellent

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



Hotel Accommodations	68.9% of Attendees rated Good or Excellent
Pre-arranged Small Meeting Spaces	76.9% of Attendees rated Good or Excellent
Informal Meeting Spaces	69.1% of Attendees rated Good or Excellent
Nursing/Pumping Accommodations	63.9% of Attendees rated Good or Excellent
Airport Accessibility	49.2% of Attendees rated Good or Excellent
Local Transportation	51.2% of Attendees rated Good or Excellent
Local Safety	79.1% of Attendees rated Good or Excellent
Local Food Availability	47.7% of Attendees rated Good or Excellent
Exercise Options	61.6% of Attendees rated Good or Excellent
Awards Reception	68.8% of Attendees rated Good or Excellent
Hair Ball	73.7% of Attendees rated Good or Excellent

Thinking back to the number of evenings you had fully booked with either ARO sponsored program events (such as the Hair Ball) or non-ARO sponsored program events (such as a lab dinner), would you have been able to attend an additional evening of ARO sponsored content?

	2024
Yes, I would have been able to attend another evening of ARO sponsored content.	175 respondents selected this option
Maybe, I'm not sure if I would have been available to attend another evening of ARO sponsored content.	223 respondents selected this option
No, I would not have been able to attend another evening of ARO sponsored content.	120 respondents selected this option

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



The ARO Membership Committee is charged with attracting and maintaining new members, especially young investigators, and those from the international community, as well as providing opportunities for the existing members to network, collaborate, and interact outside of the Midwinter Meeting. The committee has proposed initiatives to address these challenges. Which of these initiatives do you most strongly support?

	2024
The ARO should work toward offering free student membership to students for the first year.	279 respondents selected this option
The ARO website should inform members about small local, regional, or mini-ARO meetings.	273 respondents selected this option
The ARO membership directory should provide information about research interests, activities, and achievements of members.	261 respondents selected this option
The ARO should recruit more international members.	161 respondents selected this option
The ARO should work toward establishing partnerships with aligned groups to offer mutual member discounts or travel grants to attend other meetings.	159 respondents selected this option
The ARO should facilitate interactions between members at MWM or outside the MWM.	146 respondents selected this option
International vendors should sponsor fellowships or travel awards for new international ARO members.	143 respondents selected this option
The ARO should develop a welcome handbook, document, or video to introduce new members to the ARO.	142 respondents selected this option
The ARO should use social media more.	134 respondents selected this option
The ARO should recruit more international vendors to exhibit or sponsor at the MWM.	93 respondents selected this option

Future Meeting Location Priorities: The following questions were answered by 754 respondents (573 meeting attendees as well as 181 non attendees).

Historically, we have alternated between United States east coast and west coast meeting locations. What would your preference be moving forward?

	2024
Open to new locations, not on the coasts	411 respondents selected this option
Open to new locations, outside the US	373 respondents selected this option

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



Alternating between United States east coast and west coast	332 respondents selected this option
Same location all the time if a general favorite can be established	89 respondents selected this option
If the meeting location is outside of the United States, do you believe you would experience barriers such as obtaining a travel visa or institutional limitations on international travel, etc. that would prevent you from attending?	18.2%- Yes 81.8 %- No

Respondents who answered “yes” describe barriers [here](#).

The most important aspects among respondents:

- 1st choice - Walkable access to a variety of restaurants
- 2nd choice - Safety
- 3rd choice – Quality of meeting facilities
- 4th choice – Proximity to airport
- 5th choice - Cost and quality of hotel room
- 6th choice - Accommodation options for different budgets
- 7th choice - Warm weather
- 8th choice – Public Transportation accessible

At the in-person MWM, did you find barriers to fully engaging in the meeting? Please consider both scientific programming and other activities such as social events.	13.8%- Yes 86.2%- No
Would you pay a higher registration fee if lunches were provided to all attendees?	46.8%- Yes 53.2%- No

Which would you prefer in terms of the number of days and hours in a day during the MWM meeting?

	2024
I would prefer that the meeting stay the same number of days with the same number of hours each day	523 respondents selected this option
I would prefer fewer number of meeting days with no change in the number of hours per day	113 respondents selected this option
I would prefer more hours each day over a fewer number of meeting days	78 respondents selected this option

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



With the rising costs of meetings, ARO has a narrow range of venues that will accommodate our budget (e.g. many venues have a high required spend on food and beverage). Which of these options do you feel is an acceptable approach for ARO to consider?

	2024
Increasing the meeting budget through increased registration fees, to purchase more food and beverage provided by the meeting venue (e.g. provide lunches or add an evening banquet)	321 respondents selected this option
Reducing the meeting budget by reducing the overall length of the MWM meeting	288 respondents selected this option
Reducing the meeting budget by reducing expenditures on social events such as the Hair Ball	278 respondents selected this option
Reducing the meeting budget by reducing expenditures on invited speaker funding	263 respondents selected this option
Reducing meeting budget by reducing conference features such as coffee/tea/drinks	129 respondents selected this option
Reducing the meeting budget by reducing expenditures on travel awards	89 respondents selected this option

Session Room Counts

Session Name	Room Count
Presidential Symposium: The Clinician-Scientist Workforce in Otolaryngology: Strategies for the Future	508
Late Breaking Presidential Symposium: OTOF Gene Therapy Clinical Trial	850
Travel Awards Luncheon	85
gEAR 2.0 - Intro to gEAR	58
Poster Session 1	495
spARO Session - Careers in Academia	36
Inner Ear Course Roundtable	85
Symposium 1 - Good Data in, Big Data out	100
Podium Session 1 - Cochlear Mechanics: Physiology	182
Podium Session 2 - Primary Auditory Cortex	116
Poster Blitz	185
Young Investigator Symposium 2 - Emerging Perspectives on Misophonia	78
Podium Session 3 - Hair Cell Spiral Ganglia Synaptic Specializations in Normal and Pathological States	337
Podium Session 4 - Clinical Otology and Pathology: Human and Animal Studies	157
Young Investigator Symposium 3 - Multisensory Signals Along the Auditory Processing Pathway	210

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

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Podium Session 5 - Aging	266
Podium Session 6 - Vestibular, Hearing and Brain Dysfunction: Diseases, Drugs and Genes	156
gEAR: What's New?	19
spARO Session - Careers in Industry	26
Poster Session 2	463
Young Investigator Symposium 4 - New Approaches and Technologies in Auditory Neuroscience	75
Podium Session 7 - Regeneration	174
Podium Session 8 - Binaural Hearing & Sound Localization	88
Workshop: DMA Supportive Allyship & STEM	40
In Memoriam Symposium - Mechanics and Physiology of the Inner Ear Vestibular Organs: A Tribute to J. Wally Grant	112
Symposium 5 - Advanced Imaging Methods and Applications for Inner Ear Studies	309
Podium Session 9 - Auditory Research Insights: Ear Morphology, Hearing Tests, and Tinnitus Treatments in Animal Models	99
Podium Session 10 - Brainstem: Structure & Function	130
Symposium 6 - The Leaky Pipeline: How Can Mentors Better Support, Advocate, and Encourage Women and Underrepresented Minorities to Remain in the Sciences?	147
Podium Session 11 - Inner Ear: Ototoxicity and Otoprotection	267
Podium Session 12 - Hearing Loss: Implication for Cochlear Implantation and Cross-Modal Plasticity	140
gEAR Analysis Tools	21
ARO Mini-Grant Informational Session	13
Funding Your Scientific Genius!	36
Poster Session 3	583
Symposium 7 - What Can We Learn from Chicken, Fish, and Stem Cells for Regenerating Hair Cells?	148
Podium Session 13 - Emerging Gene Therapies in Mice, Monkeys, Men and Women	273
Podium Session 14 - Auditory Cortex: Human and Animal Studies	303
ARO Short Course – Spatial Transcriptomics	106
In Memoriam Symposium - Emotional Connections to Speech and Music Throughout Life: In Memory of Dr. Sandra Trehub	82
ARO Awards Ceremony	233
Symposium 8 - Insights into Regulation of Hair Cell Mechanotransduction Complex Composition and Environment	174
Podium Session 15 - Speech Perception: Hearing Loss, Noise and Other Challenges	181
Podium Session 16 - Inner Ear Development	182
Symposium 9 - Plasticity of the Central Auditory System During the Life-Time	186
Podium Session 17 - New Frontiers in Auditory Research: Exploring Middle Ear Dynamics and Tinnitus Pathophysiology	75
Podium Session 18 - Cochlear Mechanics: Modelling	117
spARO Session - Navigating the Grant Landscape	14
Behind the Scenes With Publication!	35

THE 47TH ANNUAL MIDWINTER MEETING

February 3-7, 2024

ANAHEIM, CA



Poster Session 4	430
Podium Session 19 - A Bundle of Mechanisms Contributing to Stereocilia Development and Function	115
Podium Session 20 - Innovations in Inner Ear Therapeutics: Nanoparticle Delivery, Drug Formulations, and Regenerative Strategies	152
Symposium 10 - Activity-Driven Mechanisms of Auditory Development, Regeneration, and Repair	122
Honorary Symposium - Mechanisms of Neural Encoding in the Inferior Colliculus and Beyond, A Symposium in Honor of George D. Pollak	124
Using gEAR in Publications	10



ARO 2024 Evaluation Comments

Please Note: All comments from attendees are left unedited.

2024 Evaluation Comments

- Please add any additional comments about the in-person meeting venue [here](#).
- Please write any additional comments about the scientific content of the MidWinter Meeting [here](#).
- Please write any additional comments about this year's workshops [here](#).
- For future ARO meetings, do you have any suggestions for improving accessibility for yourself or other attendees with disabilities or differences? Comment [here](#).
- Do you have any comments on spARO events at the 2024 MidWinter Meeting, or suggestions for future spARO activities? Comment [here](#).
- Please suggest any content you would like to see included in the year-round virtual sessions [here](#).
- Please suggest any short course topics you would be interested in attending at a future MWM meeting [here](#).
- Please provide any comments about the mentoring sessions [here](#).
- Are there any features of the meeting location that would prevent you or make you hesitant to attend the MWM meeting? Comment [here](#).
- Are there any features of the meeting location that would increase your likelihood of attending the MWM meeting? Comment [here](#).