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Slates: How CSR selects members of standing study sections

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Introduction

- A slate is the list of nominees and the supporting documentation for proposed new members of a chartered study section. In 2023 CSR submitted, and had approved, 180 slates with 961 nominees.
- The standards for slates and the processes for evaluating them are thus critical determinants of who serves on chartered study sections.

CSR standards for selecting members derive from our mission—to provide fair, independent, expert scientific reviews-- and the critical importance of having well functioning review panels.

Nominees are not selected individually, but rather as a set to form a panel that will provide the fair and expert review NIH depends on.

Panels' central role in NIH peer review

- **All review outcomes are panel decisions.**
- NIH does not simply send applications to 3 individual reviewer
- Applications on related scientific topics are clustered together. A committee of scientists whose expertise covers those topics reviews them. Three assigned reviewers have the responsibility of carefully evaluating the application and explaining the strengths and weaknesses of the application to the entire committee.
- The overall impact score is the average of all votes. Everyone votes, all votes count the same.

Advantages of review panels

- From a measurement perspective, more measurements are better. Obtaining more measurements yields a more reliable and more accurate estimate.
- Positive power of social judgement: the requirement to present and defend one's views to one's peers motivates most to do a good job. Social context may restrain biases that are seen as socially unacceptable.
- Group culture can promote positive norms and consistency in practice
- Diverse perspectives are valuable, and groups are more diverse than individuals
- (Group effects are not always positive; setting the right expectations and norms is an important job of SROs and study section chairs)

Diverse panels promote better reviews

- **Importance of the research (*Significance & Innovation*):**
 - Judgements of significance require breadth of perspective
 - The views of “spot on” experts can be insular; scientists too far afield have no basis for judgements
 - The right breadth of scientific perspective allows informed ranking.
 - Different backgrounds and experience may lead to different judgments of significance
- **Rigor and Feasibility (*Approach*)**
 - Highly knowledgeable experts may hold passionate opinions on methodological points—that are not necessarily shared.
 - Multiple views are informative; Convergent views may amplify a concern, while divergent opinions can moderate the impact of an outlier view

Primary requirements for slates

1. Scientific expertise

- Members should collectively cover the topics and methods listed in the study section guidelines.
- Individuals with broad expertise are valuable

2. Multidimensional Diversity

- Scientific diversity (no single “pedigree” or perspective on a problem)
- Institutional
- Personal demographics: gender, race, ethnicity
- Career stage, review experience

Additional considerations

- **Rosters should be credible.** They are the public face of the study section and the panel should be seen as expert, respectable, and representative
- **Members should be good reviewers**
 - Able to evaluate, thoughtful
 - able to engage, communicate with colleagues, be open to input from others
- **Members should be fair minded and possess professional integrity**
- **Federal Advisory Committee Act (FACA)**
 - Must be geographically distributed
 - No dyads
 - No concurrent service

The Slate Package

- Information is assembled into a digital package. Elements include:
 - Study section's scientific description
 - Existing roster
 - Expertise analysis—what is needed, what is covered, where are the gaps
 - Diversity data
 - Proposed nominees
 - Scientific Expertise
 - Credentials
 - Review experience
 - External feedback
 - Recruitment plan for future membership

When complete, the slate package is submitted for review

Reviewer Recruitment & Selection: The Slate Journey



Vetting is a multilevel and bi-directional process

- The vetting process incorporates external feedback as well as internal CSR review.
- Every slate package is reviewed and approved at progressively higher levels of CSR.

- **Not a rubber stamp**—the process is very interactive. With multiple different people taking a fresh look, each from a slightly different perspective requests for additional information and discussion of alternatives are common. Each level of review, and the external feedback may result in changes.

Feedback from NIH program officials

- IC feedback is solicited from senior program officials at each IC that administers 10% or more of the applications in the study section. Information provided; the study section guidelines (scientific scope), the nominees and continuing members with a description of expertise.
- We ask two questions:
 - Do you see gaps in the expertise?
 - Do you have any concerns about a nominee?
- The feedback process promotes positive engagement with the ICs. Examples of useful feedback include perceived gaps in expertise and occasional concerns we were unaware of—scientific misconduct, integrity issue....
- IC feedback has resulted in removing nominees.
- More commonly it results in ICs suggesting scientists with needed expertise

External feedback process

- SROs identify 3-6 external scientists with broad expertise and experience in the science of the study section. Cannot be associates of nominees, cannot be recent study section members; typically, their standing is readily apparent.
- Info provided: The list of nominees, their areas of expertise, and professional webpages, the current membership roster, and the posted study section guidelines.

We ask one question: Do the nominees possess appropriate qualifications and expertise to review grant applications for [Study Section]?

All substantive concerns about nominees must be addressed by the Division Director before the slate goes to the Director.

External feedback in 2023

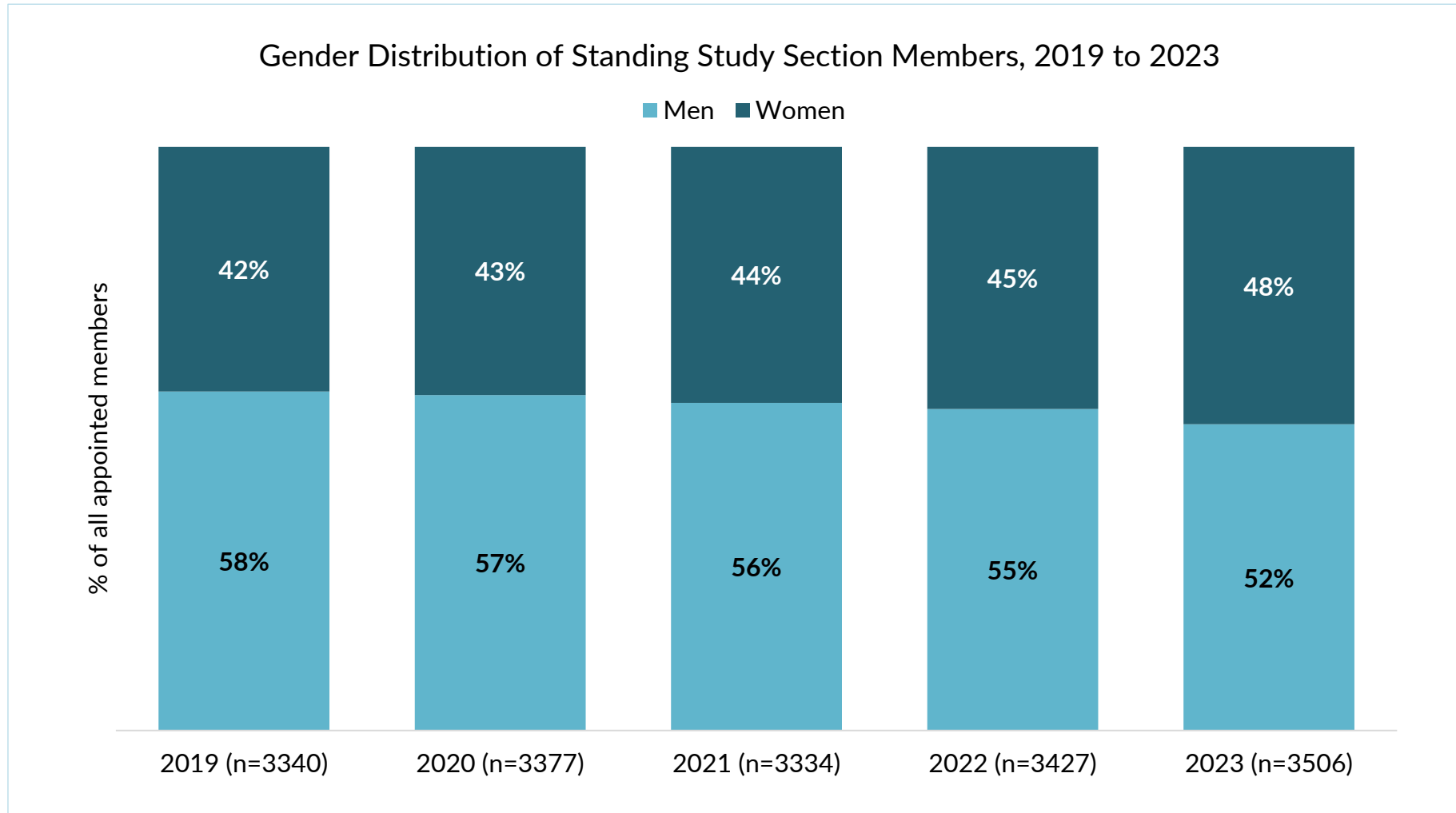
- **876 requests emailed, 576 responses. (66%)**
- **19% raised concerns about panel expertise**
 - A range of concerns, some spot-on. Others were misunderstandings of what the study section covers, or overestimates of a topic's frequency, etc.
- **9% raised concerns about a specific nominee.**
 - examples: scientific bias/ability to be fair, thin credentials, expertise misaligned with SRG,
 - ~10% of comments were concerns about having assistant profs serve
- **Impact:**
 - 4 nominees replaced.
 - External feedback contributed to a decision to substantially rearrange 3 scientifically related panels (multiple members moved)
 - In every case the issue was expertise and/or credentials.

5-year trends in study section rosters

Slate guidelines drive study section membership, but so do other CSR policies and practices. In the last few years CSR and NIH have taken multiple steps to strengthen study sections by improving diversity.

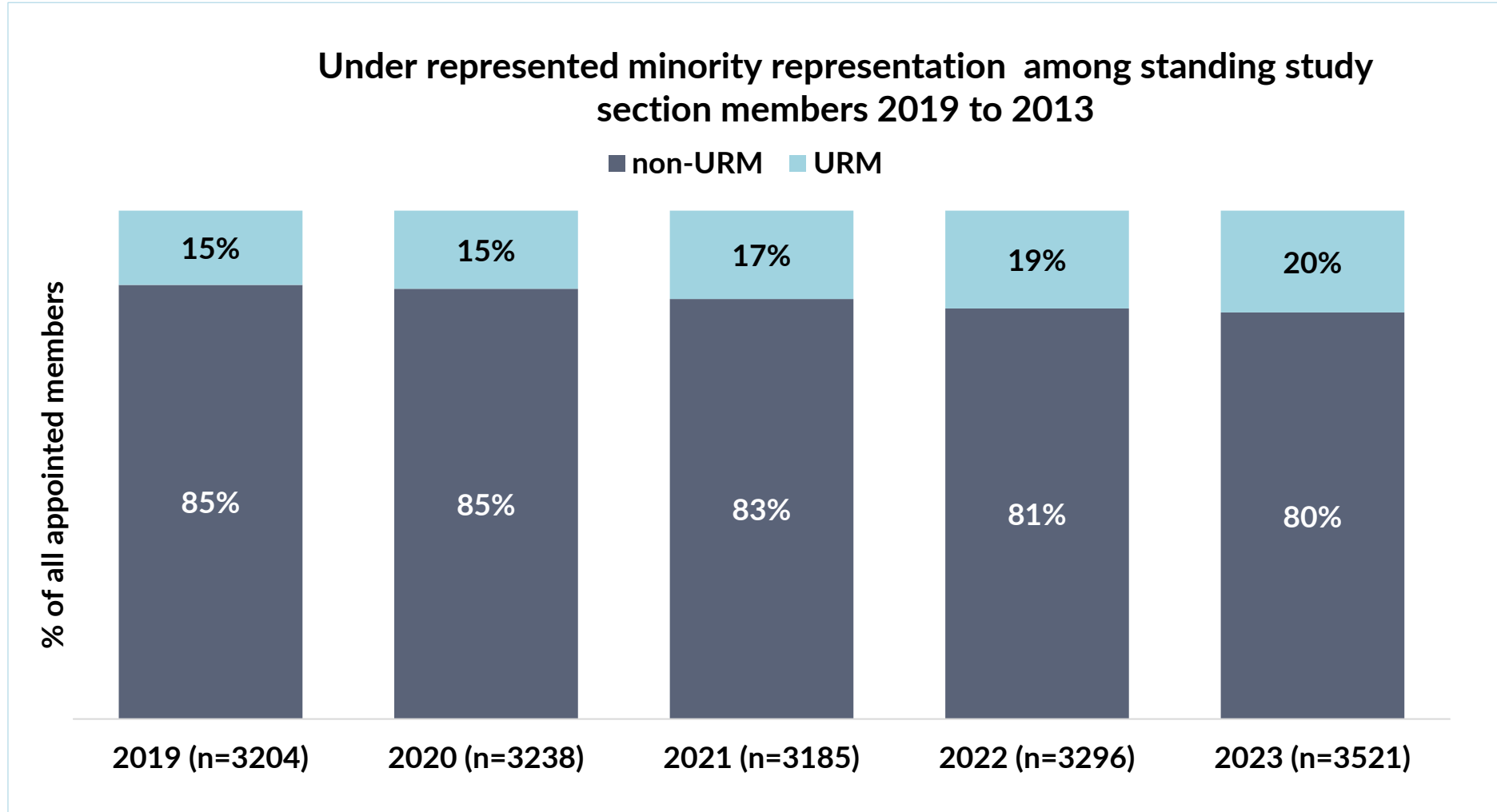
- Reducing excessive service—increases turnover
- Expanding the reviewer pool
 - NIH funding not required
 - Expanded Early Career Reviewer program
 - Making more use of associate and assistant professors
 - New reviewer finder tools

Representation of women on membership rosters increased



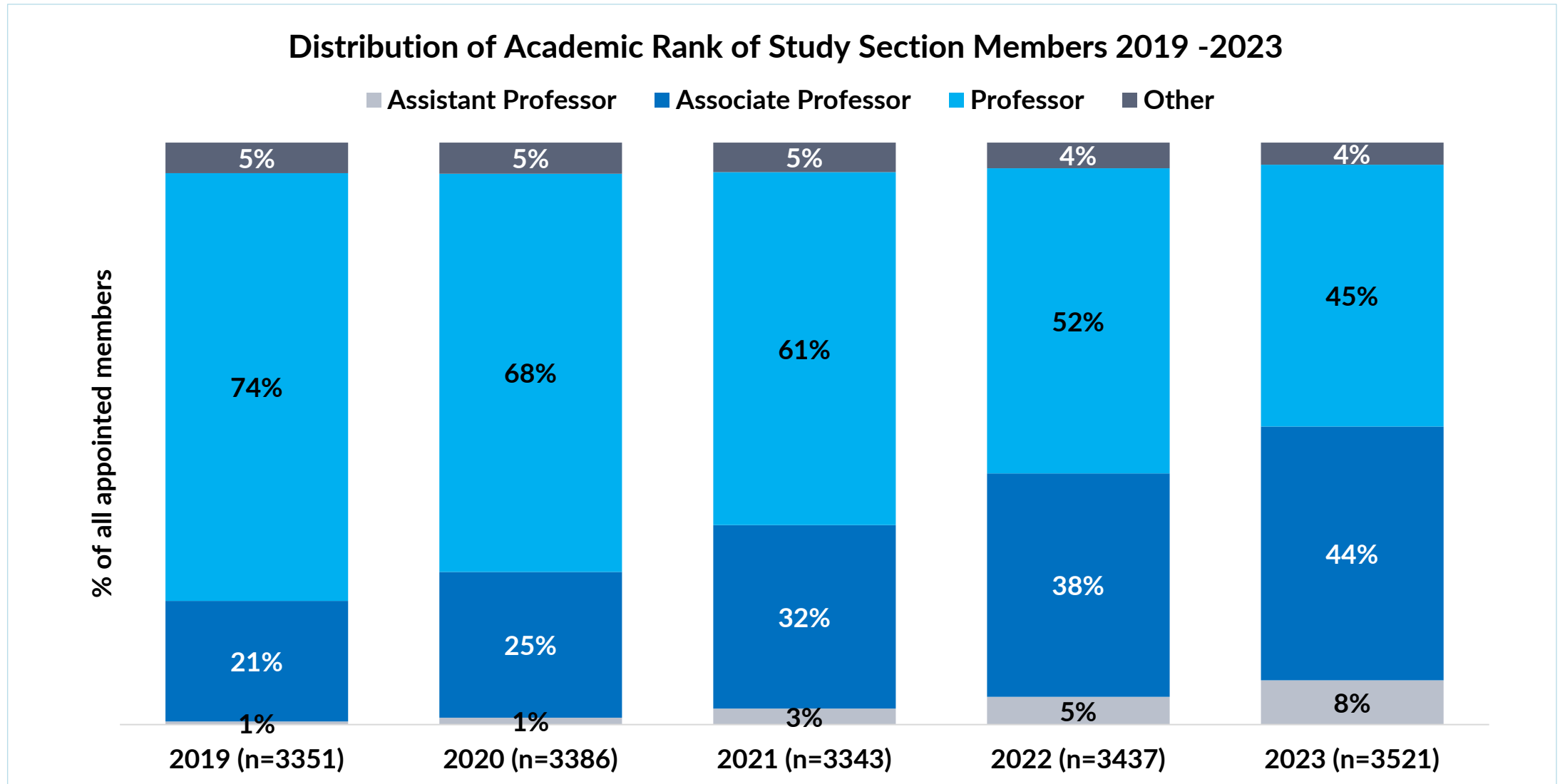
% women
PIs in CSR
R01/R21
applicant
pool
33.2%

Representation of URM scientists on membership rosters increased



% URM PIs
in CSR
R01/R21
applicant
pool
8.1%

Representation of assistant and associate professors on membership rosters increased



Summary

- Nominees are not selected individually, but rather as a set to form a panel that will provide fair and effective review of scientific merit.
- Good slates are built by the year-round planning and work of SROs to find appropriate reviewers. Slates are evaluated thoroughly at multiple levels of CSR in a process that includes external feedback, and which results in stronger slates.
- The slates process plus additional initiatives by CSR has resulted in more diversity in standing study section membership. The mix of study section members has improved, and we believe this will produce better review.

Discussion