



# **Diversifying the MB&B Faculty**

July 1, 2021

# Composition of MB&B Faculty

## Current

19 Men (16 tenured)  
7 Women (3 tenured)

2 URM (1 is tenured and Chair)

## 2010

20 Men (15 tenured)  
4 Women (3 tenured)

1 URM (1 tenured)

Clearly, we have a problem (and we have for a while).

# Many factors contribute to “Scientific Excellence”

## Anonymize & Place DEI at the Center of Every Decision:

1. Search Committee Composition
2. Job Ad
3. Expanding and Diversifying the Pool
4. Application Review
5. Zoom Interviews
6. Full Interviews
7. Departmental Vote

This was an experiment and the conditions mattered.

# Search Committee Composition



Enrique M. De La Cruz, PhD

Chair and Professor of  
Molecular Biophysics and  
Biochemistry



Andrew Miranker, PhD

Professor of Molecular  
Biophysics and Biochemistry  
and of Chemical and  
Environmental Engineering



Wendy Gilbert, Ph.D.

Associate Professor of  
Molecular Biophysics &  
Biochemistry



Donald Engelman, PhD

Eugene Higgins Professor of  
Molecular Biophysics and  
Biochemistry



Franziska Bleichert, PhD

Assistant Professor of  
Molecular Biophysics and  
Biochemistry

Every committee member played a critical role.

# Start with the right message: Job Ad

## ASSISTANT PROFESSOR, MOLECULAR BIOPHYSICS & BIOCHEMISTRY

The Department of Molecular Biophysics & Biochemistry (<http://mbb.yale.edu/>) at Yale University invites applications for tenure-track Assistant Professor positions. We seek new colleagues who will direct vibrant research programs in any area of molecular biosciences and who have an established interest in promoting equity and inclusion among diverse scientists at any level. We welcome applicants who use any approach to advance understanding of the molecular basis of life.

The opening paragraph made DEI front and center.

# Start with the right message: Job Ad

## DOCUMENT REQUIREMENTS

We will review applications in two stages, with the first round using an anonymous application procedure. Please submit all requested documents together; the non-anonymous information will be administratively separated before any documents are seen by the search committee.

We ask you to submit anonymized statements to mitigate unconscious biases that might compromise a fair assessment of the strengths of your application. Initial rounds of review will be conducted using only this anonymized content. Documents will be reviewed administratively to ensure that non-anonymized content is not seen by the search committee. To be clear, “anonymized” does not mean that the applicant in any way obscures the specific scientific content of their work and plans. Rather, the omission of lab name, institution, and journal names facilitates evaluation of scientific merit. \*See examples below for anonymized vs. traditional statements.

**Applying demanded an ‘investment’ from candidates.**

# Start with the right message: Job Ad

Traditional, non-anonymized: "As a [Named Fellowship] postdoc in [Famous Professor X's lab] at [Elite University Z], I designed and built a new instrument that can [do something amazing]. I used this to discover [important finding].  
Reference: J. Doe et al. "Article title", JBC, 2020.

Anonymized: "As a postdoc I designed and built a new instrument that can [do something amazing]. I used this to discover [important finding]. Reference: Applicant et al. "Article title", 2020.



Racial/Ethnic Bias



Homophily



Availability Bias



Halo Effect

**Anonymization eliminated many biases (and self-doubt).**

# Actively Expanding and Diversifying the Pool

## Undergraduates were trained and paid to scour the market

9	<a href="https://www.aacr.org/professionals/meetings/aacr-travel-grants/aacr-minority-scholar-in-cancer-rese">https://www.aacr.org/professionals/meetings/aacr-travel-grants/aacr-minority-scholar-in-cancer-rese</a>		Mehana
10	<a href="https://dicp.hms.harvard.edu/The%20Dean%27s%20Postdoctoral%20Fellowship%20%7C%20Fell">https://dicp.hms.harvard.edu/The%20Dean%27s%20Postdoctoral%20Fellowship%20%7C%20Fell</a>		Raquel
11	<a href="https://www.hhmi.org/programs/hanna-h-gray-fellows-program#Fellows">https://www.hhmi.org/programs/hanna-h-gray-fellows-program#Fellows</a>		Mehana
12	<a href="https://www.hhmi.org/news/hhmi-selects-15-hanna-gray-fellows-support-diversity-science">https://www.hhmi.org/news/hhmi-selects-15-hanna-gray-fellows-support-diversity-science</a>	2017	Raquel
13	<a href="https://www.hhmi.org/news/hhmi-awards-hanna-gray-fellowships-to-15-early-career-scientists">https://www.hhmi.org/news/hhmi-awards-hanna-gray-fellowships-to-15-early-career-scientists</a>	2018	Raquel

Each was personally contacted by the Chair – zoomed with several

**Every member in our community could contribute.**

# Statistics: Comparison with 2020 search

## Last Search 2020

Total Applicant Pool:	169
Applicants self identifying as URM	3
Women Applicants	31

## This Search 2021

Total Applicant Pool:	194
Applicants self identifying as URM	22
Women Applicants	62

**Dramatic change to pool demographics observed**

# Application review – Process

4 anonymized statements – Research (2), DEI, and Teaching

Graduate students were paid to quality-control anonymization, redacting and occasionally returning applications to applicants for correction

Every member of our community contributed.

# Application review – Implementation of Rubrics

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- Rubrics ensured consistency and equity.
- In future, evaluation criteria will be shared with candidates before applying.

# Application review – Research Rubrics

## Research past and plans were scored first.

**Significance of the scientific problem:** Which specific questions does the candidate seek to answer? If the hypothesis is tested, do we care about the answer? Are the questions fundamental to the field or incremental? Are the questions relevant to the larger scientific community?

	3 (Exceptional)	2 (Solid)	1 (Weak)	0
Importance of problem	Clearly articulates the importance of the larger problem. Seeks a biological insight and/or technological advance that has broad significance to the scientific community.	Describes an important problem and offers convincing justification.	Either describes an insignificant problem or only vaguely justifies the problem's significance.	Not addressed
Potential to advance field	Clearly articulates research questions and why they are fundamental to the field. Questions are deep and challenging to answer.	Good likelihood that research will be fundamental to the field	Incremental to the field	Not addressed

# Application review – DEI Rubrics

**Knowledge of DEI and commitment to promoting DEI:** Does the candidate demonstrate knowledge and awareness of DEI issues in higher education? Does the candidate address the importance of promoting DEI and convincingly express their commitment to doing so?

	3 (Exceptional)	2 (Solid)	1 (Weak)	0
DEI Knowledge	Clear knowledge of DEI issues; understands specific challenges faced by underrepresented minorities and consequences for higher education	Shows some understanding of challenges faced by underrepresented individuals; acknowledges importance of DEI	Only vaguely defines diversity in terms of different areas of study or nationalities but neglects race, ethnicity, gender etc.	No knowledge or awareness about DEI issues concerning gender, ethnicity, race, sexual orientation, disabilities, or cultural differences
DEI Commitment	Demonstrates strong interest in contributing to promoting DEI in teaching, research, and service; describes promoting DEI as a core value	Shows commitment to promoting DEI in some but not all categories (i.e. research but not teaching)	Vaguely states commitment without specifics	Not addressed or does not feel personal responsibility for helping to create an equitable and inclusive environment

# Three topics scored for teaching

**Goals:** Which educational experiences got you interested in your discipline? What do you most hope to teach students about your discipline?

**Teaching Methods:** Which approaches do you see as most effective in engaging and educating students in your discipline? How are your teaching methods attentive to students with different backgrounds, expectations and needs? How do you make best use of your personal characteristics and values in your teaching methods?

**Assessment of teaching:** Which kinds of teaching assessments do you think may be useful in improving your approaches? If you have experienced such assessments, how do they guide your teaching? How will you improve students' achievement of their learning goals?

# First Cut Used Only Anonymized Statements

Total Applicant Pool:	194
Women applicants before cut:	62 (32%)
Members of UR groups before cut:	22 (11%)
Total candidates passing first cut:	32
Women passing first cut:	15 (47%)
Members of UR groups after cut:	7-8 (22-25 %)

Anonymization enriched the # of women and URMs on the short list

Only then did we de-anonymize and read letters/CVs

# Zoom Interviews and Seminar Visits

Short (20 minutes each) scripted interview w/ 14 candidates

- 7 men and 7 women

- 6-7 of these interviewees were members of UR group

Full interviews and seminar 'visits' granted to 5 individuals

- 3 women and 2 men

- 2-3 of these individuals were members of UR group

The new search process appears to be working (n=1)

# Outcome

- Made 2 offers:
  - Both women
  - One is a POC
- One was an individual our undergraduate committee identified and was proactively contacted by Chair

Fingers crossed!

## Changes we would make for next time

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- DEI statements should not have been anonymized. The alternative we will try next time is to ask a third party to code the statements so that the committee can not associate the DEI statement to the application during the blinded scoring phase.
- Distribute scoring rubrics to applicants at time of job posting so they know how they will be evaluated and can prepare their application accordingly.