Michael B. Wolfson, Ph.D.

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Bethesda, MD

Biotech entrepreneur leading high-risk programs, solving the hardest problems with shoestring budgets. Successful at translating biomedical device research into product development to accelerate commercialization. Creating disruptive opportunities while maintaining a harmonious environment and fostering individual growth.

Accomplishments

Co-leads $1.5B RADx Tech program: brought > 10B over-the-counter COVID diagnostics to market
Oversight of $900M R&D projects: 26 programs over $10M, hundreds of smaller grants
Funds the best R&D: performed strategic analysis, secured funding, led 20 solicitations
Managed nine-person R&D Division: $150M annual budget, reported to Institute Director
Builds partnerships: coordinated across 14 US Government agencies for pandemic response
Negotiated $48M cost sharing with industry: saved US Government funds
Secured $28M for early-stage innovators: first-of-its-kind US Government neurotech incubator
Inventor: two new transducer technologies (7,425,749, 6,529,654, and two other patents)
Entrepreneur: founded two startups; consultant to industry, government, and non-profits
Highly recognized: ten awards from HHS Secretary and NIH Directors over eight years
Board Member: preschool, condo association, and ten academic centers

Experience

Strategic Advisor (ARPA-H)	2022-present
Program Director (NIH)	2016-present
Independent consultant (DARPA, GSK)	2007-2016
Senior Researcher (Sharp Electronics)	2004-2006
Three startups for microsystems	2000-2007

Skills

Multidisciplinary systems engineer
Scientific and technical leader
Programmatic risk management
Wrangles complexity
Strategic & tactical landscape analysis
Change management
R&D portfolio manager
Sought-after mentor
Published author (five chapters)
Persuasive public speaker

Primary Expertise

Neurotechnology
Wearables
In vitro diagnostics
Solid state sensors and actuators
Atomic-scale devices/nanotech

Secondary Expertise

Photonic devices
Bioinformatics, AI/ML
Display technology
Surgical tools

Awards and Honors

National Institutes of Health (NIH) 2024 Director's Award

For building a highly innovative trans-NIH program to accelerate the translation of technologies to diagnose and treat disorders of the nervous system

National Institutes of Health (NIH) 2024 Director's Award

For leveraging the RADx Tech Initiative to rapidly deliver point-of-care mpox diagnostics to address the mpox public health emergency

NIBIB Director's Award for Collaboration Achievement, 2024

In recognition of the Team's developing the Medical Imaging and Data Resource Center (MIDRC) into the National AI Ecosystem Initiatives

Presentations

BMES Annual Meeting, Baltimore, MD, October 24, 2024
"NIH-Sponsored Incubator-Style Programs"
https://www.bmes.org/bmes2024

64th Meeting of the National Advisory Council for Biomedical Imaging and Bioengineering
January 23, 2024. "Blueprint MedTech Update"
https://videocast.nih.gov/watch=52762&start=3065

Temin, T. (Host and Producer). (June 9, 2020). NIH Wants to Rapidly Accelerate Diagnostic Testing for Coronavirus [Radio program]. In *Federal Drive with Tom Temin*. Washington, DC: WFED.
https://federalnewsnetwork.com/technology-main/2020/06/nih-wants-help-taking-a-biomedical-approach-to-coronavirus-pandemic/

Publications

C. T. Gilliland, et al, **M. B. Wolfson**, B. J. Tromberg (2024). Accelerating Diagnostic Innovation for Pandemic Control. In: Sorenson, R.A. (eds) Principles and Practice of Emergency Research Response.
Pages 245-271. Springer, Cham.
https://doi.org/10.1007/978-3-031-48408-7_13

E. J. Wolf, et al, **M. B. Wolfson**, "Advanced Technologies for Intuitive Control and Sensation of Prosthetics" Biomedical Engineering Letters 10, 119–128 (2020)
https://doi.org/10.1007/s13534-019-00127-7

E. Mosier, **M. B. Wolfson**, E. Ross, J. Harris, D. Weber, K. Ludwig, Chapter 5 "The Brain Initiative—Implications for a Revolutionary Change in Clinical Medicine via Neuromodulation Technology", In *Neuromodulation (Second Edition)*, Academic Press, 2018, Pages 55-68, ISBN 9780128053539
https://doi.org/10.1016/B978-0-12-805353-9.00005-X

Programs

RADx Innovation Funnel 75N92022R0114, 75N92022R0113, 75N92022R0117, 75N92023R0158
https://www.embs.org/ojemb/special-issue-radx-tech

NIH HEAL Initiative RFA-EB-22-002
Translational Development of Diagnostic and Therapeutic Devices (R18)

NIH Blueprint MedTech PAR-21-314
https://neuroscienceblueprint.nih.gov/blueprint-medtech

Education

Cornell University: Ph.D. in Electrical Engineering
Dissertation: *On a MEMS-Based Parametrically Amplified Atomic Force Sensor*

Brown University: Sc.B. in Electrical Engineering, Magna cum Laude, with Honors
Thesis: *The Micro-Kernel and Software for the HMA Microphone Module Board*

Target Roles

Technology investment

CTO/CSO of small or mid-sized business

R&D strategy

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