



# Maximizing Investigators' Research Award (MIRA)

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# Motivation

- Funding **research programs** instead of individual projects
- Increase the **Stability of Funding**
  - Enhance investigators' willingness to take on ambitious scientific projects and approach problems creatively.
- Increase **Flexibility**
  - Allow investigators to follow important new research directions as opportunities arise.
- Improve the **Distribution of Funding**
  - Increase overall scientific productivity and the chances for important breakthroughs.
- Reduce time spent **Writing Grant Applications**
  - More time to conduct research.
- Reduce time spent **Reviewing Grant Applications.**

# Implementation

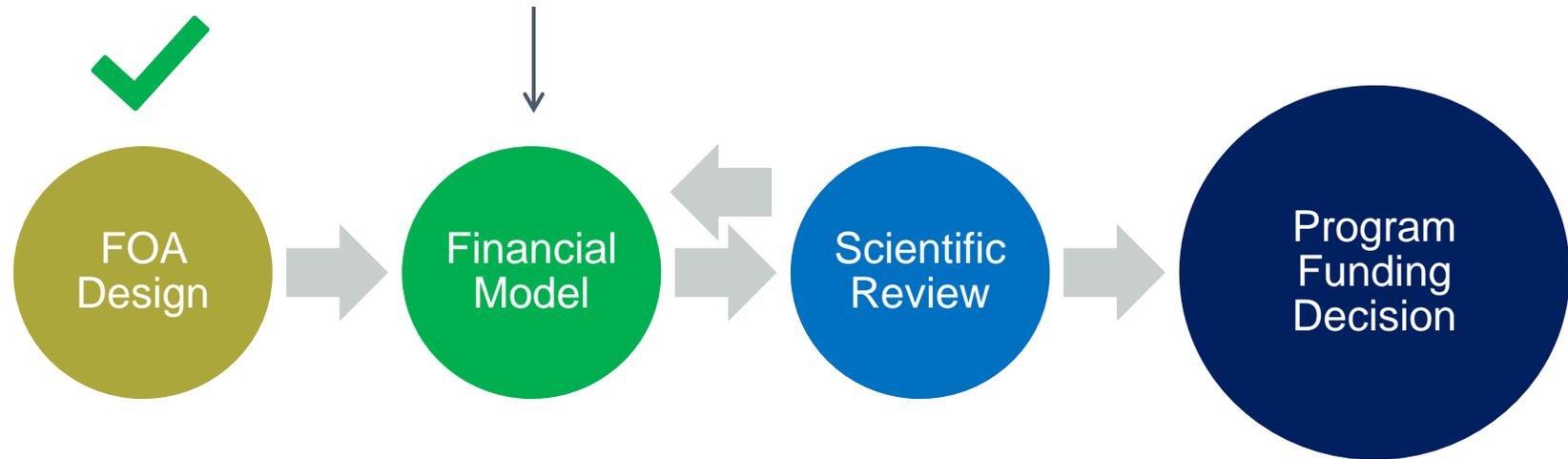
- One MIRA award will [replace all current NIGMS funding](#) of the PI's laboratory
- To be reviewed by Special Emphasis Panels
  - **Modified Focus**
    - Overall research program
    - Scientific questions
    - General strategies
    - Investigator productivity
    - Not experimental details
  - **Modified Criteria**
    - No separate criterion scores
    - All applications to be discussed
  - **Provide a budget recommendation**



# Modeling the Financial Impact of MIRA

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# Motivation and Objectives



## Two main objectives of the model

- Identify best scenarios for funding this new grant mechanism
- Initiate a shift from descriptive to predictive analytics

# Methodology

Three main sources of data:

1. Current Funding – FY2014 Award Commitments File for MIRA Applicants
2. Historical Funding – Last 10 years of NIGMS R01-equivalents
3. Requested Funding – MIRA application

10 Possible Funding Scenarios:

1. 3-year Average
2. 3-year Peak
3. 5-year Average
4. 5-year Peak
5. 10-year Average
6. 10-year Peak
7. Various Levels
8. Decrease from Current Funding
9. Decrease from Requested Funding
10. Variable Decrease from Requested Funding

## More Than Just a Model

- **A new way for decision makers to interact with data**
- **Components of the Tool**
  - **Front-end User Interface**
    - Input of user-provided parameters and assumptions
  - **Back-end Calculations and Data**
    - Dynamic based on user-provided parameters
  - **Output/Visualizations**
    - Aggregated and Distributional representations comparing impact of each funding scenario
    - Calculation of adjustments required to maintain budget neutrality

# Next Steps

## **Additional data to incorporate**

- FY2015 Actuals
- Insights/recommendations from Scientific Review

## **Build a model for New Investigator MIRA**

- Requires different data, parameters and assumptions
- Potentially a much larger pool of applicants

## **Apply this framework to other areas**

- Shift to investigator-based paradigm
- Working with IT to set up a system that will allow for more predictive analytics across the NIGMS portfolio
- Increase level of sophistication in data-driven decision-making