



Molecular & Cellular Biosciences (MCB)

- **Supports fundamental understanding of life processes at the molecular, sub-cellular, and cellular levels.**
- **Three clusters:**
 - **Biomolecular Systems**
 - **Cellular System**
 - **Genes and Genomes**



Molecular & Cellular Biosciences (MCB)

Biomolecular Systems

- **Structure, function, dynamics, interactions, and interconversions of biological molecules**
- **Metabolic and energetic processes**
- **Cutting-edge technologies**
- **Enzymes and RNA: regulation, catalysis**
- **Energy acquisition, transformation, use**



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Cellular Systems

- **Structure, function, and regulation of plant, animal and microbial cells and their interactions with the environment and with one another**
- **Structure, function, and assembly of cellular elements**
- **Signal transduction mechanisms and cell-cell signaling processes**



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Genes & Genome Systems

- **Organization, evolution and maintenance of genetic information including genome replication, recombination and repair; vertical and lateral transmission of heritable information**
- **Mechanisms and regulation of gene expression including genetic and epigenetic phenomena encompassing all levels of complexity from non-living systems to multi-cellular organisms, including genetic networks**



Research Initiation Grants to Broaden Participation In Biology

- **Broaden participation of scientists from under-represented groups**
- **Mentoring component should be addressed for postdocs**
- **Assist awardees to engage as independent investigators**
- **Improve competitiveness for research funds, acquire new skills/tools for contemporary research**