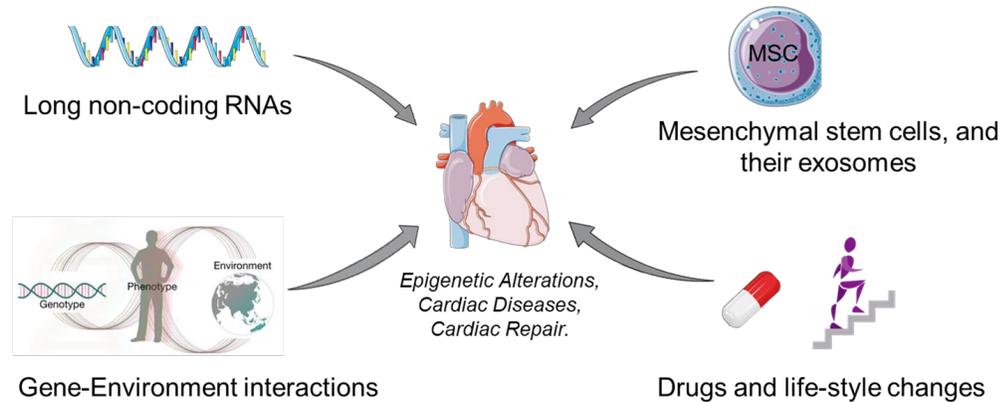


Cardiovascular and Environmental Epigenetics

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Objectives

- Investigate the role of **long non-coding RNAs** in the epigenetic regulation of cardiac diseases and repair.
- Examine the role of **induced mesenchymal stem cells** and their **exosomes** in mediating **cardioprotection**.
- Analyze the effect of **gene-environment interactions**, of diet and environmental toxins on the epigenetic alterations in **cardiac diseases**.
- Evaluate the **effectiveness** of pharmacological agents and lifestyle changes on epigenetic markers and disease outcomes.

Approach

- **In-vitro** (cell culture), **In-vivo** (animal models) and **Clinical Trials**
- **Molecular Biological Techniques:** PCR, Real-time quantitative PCR, Gel electrophoresis, Western immunoblotting.
- **Cell Biology Techniques:** Immunofluorescence, Immunohistochemical assays, ELISA, Flow cytometry, Fluorescence and confocal microscopic analysis.
- Analysis of **Genomic and Epigenomic Repositories** including NCBI Gene Expression Omnibus (GEO), Methylation Data Repositories and UCSC Genome Browser.
- **Collaborators** in USA and India

Accomplishments

- Recipient of various **research grants** including one from **American Heart Association** as principal investigator
- Published over **60 research articles**, 55 scientific abstracts, and **6 book chapters**
- Serves as **Grant Reviewer** for American Heart Association.
- **Associate Editor** for *Frontiers in Cardiovascular Medicine*
- Edited a Special Issue in *Cells* as a **Guest Editor**
- Serves as a reviewer for more than 40 journals and Editorial Board member for 5 journals
- A recipient of **Young Research Scientist Award** and several Travel Awards