

Molecular Basis of Endocrine-related Disorders



Identifying the genetic and molecular basis of disease is a crucial step towards effectively managing and treating endocrine-related disorders. In the 1980s, advances in the field of recombinant DNA technology facilitated the use of a molecular and genetic approach towards understanding the cellular, biochemical, and molecular basis of disease. In the past decade, the precipitous progress in the development of genome-editing and omics-based technologies provided tools for the rapid identification of molecular determinants that drive and contribute to endocrine-related health issues.

This special issue of JAFES includes articles that utilize molecular techniques and genome-wide association studies that broaden our understanding on: (1) the contribution of endocrine disrupting chemicals in cancer-related cellular hallmarks; (2) the effect of stress hormones on dysregulation of transcription associated with neurodegenerative disorders; (3) genetic determinants diabetes and response to therapy; and (4) molecular markers involved in signaling cascade induced by exercise.

This special issue highlights the importance of molecular and omics-based approaches in identifying the underlying molecular underpinnings of endocrine-related diseases and how this knowledge can be used for disease prevention, rapid diagnosis and effective disease management. As the appreciation for the utility and application of molecular studies continues to expand in the clinics, we hope that this will be followed by more molecular endocrinology-focused articles featured in JAFES.

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