



International Journal of Genomics

Special Issue on
**Inroads into Precision Medicine: From Molecular
Signature to Individual Phenotype**

CALL FOR PAPERS

Precision medicine, also referred to as personalized medicine, aims at individually tailored disease risk assessment, prevention, and medical treatment. Achieving this challenging goal requires uncovering the complex interplay between the genetic and environmental factors that result in individual phenotypes, such as predisposition to or protection from certain disease conditions and response to drugs.

Recent advances in genomics research played a key role in developing genotype-specific cancer treatments and dosage determining algorithms for many different types of medications. In spite of these major successes, the majority of genomic information remains underutilized. One of the major road blocks to exploiting the genomic information is the highly complex nature of genotype-phenotype relationships.

We are at the cusp of being able to translate the complex molecular signature of an individual's genome into its phenotypic manifestation, thanks to the accelerating accumulation of human genome sequence data, the expanding epigenetic data base, and rapid advances in genome engineering technologies applicable to model organisms as well as inducible pluripotent stem cells.

To contribute to this rapidly expanding knowledge base, reviews and original papers are currently being solicited that discuss recent advances in deciphering the phenotypic expression of molecular signature in humans.

Potential topics include, but are not limited to:

- ▶ Sequence variations in human population and assessment of their phenotypic outcomes, how data at the population level are utilized for analyses of individual phenotypes
- ▶ Models and tools for genotype-phenotype analyses
- ▶ The emerging role of regulatory sequences in human diseases, emerging pathogenicity of regulatory sequences
- ▶ Epigenetic signatures and human disease, acquired and inherited epigenetic modifications affecting human health
- ▶ Application of model organisms to understand complex diseases in humans
- ▶ Recent developments in genome engineering

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ijg/irpm/>.

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First Round of Reviews

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