



Disease Markers

Special Issue on

Omics Landscape in Disease Biomarkers Discovery

CALL FOR PAPERS

The accelerated domain of biomarker discovery is taking advantage of ever growing omics technologies. In the last years, we are facing an abundance of technologies that seek to discover the “golden biomarker.” The huge family of omics is constantly enlarging adding besides its old members, genomics, proteomics, and peptidomics, newer ones, epigenomics, transcriptomics, metabolomics, lipidomics, pharmacogenomics, interactomics, and chronomics, just to mention the most relevant newer members of the omics family.

Biomarker development relies on multidisciplinary efforts involving basic, translational, and clinical research. Multidisciplinary effort is crucial for rational discovery of protein/gene biomarkers that can cover complex processes such as tumorigenesis. Biomarker discovery goes through laborious individual phases, such as biomarker candidate identification, verification, and validation. In all these phases, various omics technologies take the lead. When characterizing thousands to tens of thousands of proteins, mass spectrometry, multiplexed assays, and protein microarrays are the key technological players. For genomic studies, technological platforms of gene microarrays, next-generation sequencing, and mass spectrometry generate tumor-associated genes and potential biomarkers. Complementary omics approaches for selection of biomarker candidates should focus on multiple proteomic/genomic/metabolomic targets. These multifaceted targets could better explain complex disease mechanisms.

We invite investigators to contribute review and original papers describing recent findings in omics field that are put in use for biomarkers discovery in cancer.

Potential topics include, but are not limited to:

- ▶ Proteomics in biomarker discovery in skin cancer, brain cancer, and other types of cancer
- ▶ Signaling events as biomarkers in cancer
- ▶ Advances in genomics for cancer biomarkers discovery
- ▶ Translational omics, reaching clinical laboratory tests
- ▶ Microarrays as high-throughput tools for biomarkers discovery
- ▶ Bioinformatics, main tool for advancing biomarker discovery
- ▶ Lab-on-a-chip in medical omics
- ▶ Overview of omics technology in drug testing and in personalized medicine
- ▶ Nanoparticles for biomarker discovery
- ▶ Proteomics in physiological and pathological conditions

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

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First Round of Reviews

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