

Biomarkers

Part 1: Technologies & Applications

By

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A Jain PharmaBiotech Report

A U T H O R ' S B I O G R A P H Y

Professor K. K. Jain is a neurologist/neurosurgeon by training and has been working in the biotechnology/biopharmaceuticals industry for several years. He received graduate training in both Europe and USA, has held academic positions in several countries and is a Fellow of the Faculty of Pharmaceutical Medicine of the Royal College of Physicians of UK. Currently he is a consultant at Jain PharmaBiotech. Prof. Jain's 470 publications include 28 books (5 as editor+ 23 as author) and 50 special reports, which have covered important areas in biotechnology, gene therapy and biopharmaceuticals. The following Jain PharmaBiotech reports are relevant to biomarkers: proteomics, molecular diagnostics, nanobiotechnology, and personalized medicine. Recent books include "Handbook of Nanomedicine" (Springer 2008, Chinese edition by Peking University Press 2011, 3rd ed 2017), "Textbook of Personalized Medicine" (Springer 2009; Japanese ed 2012; 2nd ed Springer 2015), "Handbook of Biomarkers" (Springer 2010; Chinese ed, Chemical Industry Press 2016, 2nd ed 2017), "Handbook of Neuroprotection" (Springer 2011), "Applications of Biotechnology in Cardiovascular Therapeutics" (Springer 2011), "Applications of Biotechnology in Neurology" (Springer 2013), and "Applications of Biotechnology in Oncology" (Springer 2014). He has also edited "Applied Neurogenomics" (Springer 2015).

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Abbreviations

2D GE	2-dimensional gel electrophoresis
AD	Alzheimer's disease
BNP	B-type natriuretic peptide
CHD	coronary heart disease
CHF	congestive heart failure
CNS	central nervous system
CO	carbon monoxide
CRADA	cooperative research and development agreement (between a US federal laboratory and one or more non-federal parties)
CRP	C-reactive protein
CSF	cerebrospinal fluid
CT	computer tomography
CTC	circulating tumor cell
DT-MRI	diffusion-tensor MRI
EGFR	epithelial growth factor receptor
ELISA	Enzyme-linked immunosorbent assay
EST	expressed sequence tags
FDA	Food and Drug Administration, USA
FFPE	formalin-fixed paraffin-embedded
FISH	fluorescent in situ hybridization
fMRI	functional magnetic resonance imaging
GC	gas chromatography
GFAP	glial fibrillary acidic protein
GWAS	genome-wide association study
H ₂ S	hydrogen sulfide
Hs-CRP	high sensitivity C-reactive protein
IHC	Immunohistochemistry
IL	interleukin
KRAS	Kirsten rat sarcoma viral oncogene homolog
LC	liquid chromatography
LCM	laser capture microdissection
LDH	lactic dehydrogenase
LDT	Laboratory Developed Test