

# Biomedical Applications of Proteomics

*Edited by*

*Jean-Charles Sanchez*

*Garry L. Corthals*

*Denis F. Hochstrasser*



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To our families at home . . .

Anne-Catherine, Christiane and H  l  ne

Jule, Kevin, Lucile, Michael, Rory, Sandrine and Virginie

...and to our BPRG family.





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## Abbreviations

2-D LPE	two-dimensional liquid-phase electrophoresis
2-D PAGE	two-dimensional polyacrylamide gel electrophoresis
2-D	two-dimensional
2-DE	two-dimensional electrophoresis
$\beta$ -3AR	beta-3-adrenergic receptor
$\mu$ LC-ESI-MS/MS	microcapillary liquid chromatography-electrospray ionization tandem mass-spectrometry
B-CLL	chronic lymphocytic leukemia
bFGF	basic fibroblast growth factor
CAF-MALDI	chemically assisted fragmentation MALDI
CEA	carcinoembryonic antigen
CGAP	Cancer Genome Anatomy Project
CIMP	cytosine phosphoguanosine (CpG) island methylated phenotype
CIN	chromosomal instability
CRP	C-reactive protein
CT	computed tomography
CTL	cytotoxic T lymphocyte
DIGE	<b>d</b> ifferential <b>g</b> el electrophoresis
DPD	Differential Peptide Display <sup>TM</sup>
EC	endothelial cell
ECM	extracellular matrix
ESI	electrospray ionization
EST	expressed sequence tag
FABP	fatty acid-binding proteins
FABP2	fatty acid-binding protein
FACS	fluorescence-activated cell sorters
FAP	familial adenomatous polyposis
FDPs	fibrin-fibrinogen degradation products
FFE	free flow electrophoresis
FOBT	fecal occult blood test
FTD	frontotemporal dementia

FT-ICR	Fourier transform ion cyclotron
FTICR-MS	Fourier transform ion cyclotron resonance mass spectrometry
FT-MS	Fourier transform-MS
GLUT4	glucose transporter 4
HAP-HPLC	hydroxyapatite HPLC
HIF	hypoxia-inducible transcription factor
hK6	human kallikrein 6
HMG-CoA	3-hydroxy-3-methylglutaryl-coenzyme A
HNPPC	hereditary non-polyposis colon cancer
HRE	hypoxia-response element
IAPP	islet-amyloid polypeptide
ICAT	isotope-coded affinity tag
IEF	isoelectric focusing
IL-8	interleukin 8
IMT	intima-media thickness
IPG	immobilized pH gradients
LCM	laser-capture microdissection
LDS	lithium dodecyl sulfate
mAb	monoclonal antibodies
MALDI-TOF-MS	matrix-assisted laser desorption ionization/time-of-flight mass spectrometry
MBP	myelin basic protein
MDR	multidrug resistance
MIN	microsatellite instability
MMPs	matrix metalloproteinases
MMR	mismatch repair
NephGE	non-equilibrium pH gradient electrophoresis
NSE	neuron-specific enolase
PC-2	prohormone convertase 2
PCA	principal components analysis
PD-ECGF	platelet-derived endothelial cell growth factor
PDGF	platelet-derived growth factor
PGDS	prostaglandin D synthase
PGK	phosphoglycerate kinase
Pgp	P-glycoprotein
PLS	partial least squares analysis
PPAR $\gamma$	peroxisome proliferator-activated receptor gamma
PSD	post source decay
PSMA	prostate-specific membrane antigen
Q-IT	quadrupole ion trap
Q-TOF	quadrupole-TOF
RCC	renal cell carcinoma
RP-HPLC	reverse phase high-performance liquid chromatography
rtPA	recombinant tissue plasminogen activator
RT-PCR	reverse transcription-polymerase chain reaction

RXR	retinoid X receptor
SAGE	serial analysis of gene expression
SAX	strong anionic exchange
SDS-PAGE	sodium dodecyl sulfate-polyacrylamide gel electrophoresis
SELDI	surface-enhanced laser desorption ionization
SHRSP	spontaneously hypertensive stroke-prone rat
T1DM	type 1 diabetes mellitus
TAU	transabdominal ultrasound
TCC	transitional cell carcinoma
TGF $\alpha$	transforming growth factor $\alpha$
TIA $s$	transient ischemic attacks
TIMP	tissue inhibitor of metalloproteinases
Tm	thrombomodulin
TNF $\alpha$	tumor necrosis factor $\alpha$
TP	thymidine phosphorylase
TRAP	thrombin receptor-activating peptide
TVS	transvaginal sonography
VEGF	vascular endothelial growth factor
VRC $s$	viral replication compartments

