

Contents

Preface, 3rd edition	XVII
Preface, 1st edition	XVIII
Notes for the Use of this Book	1
Autoantibodies – Definitions and Characteristics	3
Autoantibodies in the Diagnosis of Autoimmune Diseases	4

Part 1

Autoantibodies in Systemic Autoimmune Diseases

ACPA	12
Alanyl-tRNA (tRNA ^{Ala}) Synthetase Antibodies	12
Alpha-Actinin Antibodies	12
Alpha-Enolase Antibodies	12
Alpha-Fodrin Antibodies	14
Aminoacyl-tRNA Synthetase Antibodies	16
Annexin V Antibodies	18
Antineutrophil Cytoplasmic Antibodies (ANCA)	20
Antinuclear Antibodies (ANA)	23
ASE-1 Antibodies	25
Asparaginyl-tRNA (tRNA ^{Asp}) Synthetase (ARS) Antibodies	26
Assemblysome Antibodies	26
AT1R Antibodies	26
AUF1 Antibodies	27
Azurocidin Antibodies	27
Beta-Fodrin Antibodies	29
Beta2 Glycoprotein I (β 2-GPI) Antibodies	29
BPI Antibodies	33
BRAF Antibodies	35
C1D Antibodies	35
C1q Antibodies	35

CADM-140 Antibodies	37
Calpastatin Antibodies	37
Calreticulin Antibodies	38
cANCA (C-ANCA)	39
Cardiolipin Antibodies	41
CarP Antibodies	44
Cathepsin G Antibodies	45
CCP Antibodies	45
CD16 Antibodies	47
CD74 Antibodies	47
CENP-A Antibodies	48
CENP-B Antibodies	48
CENP-C Antibodies	49
CENP-E Antibodies	49
CENP-F Antibodies	50
CENP-H Antibodies	52
CENP-O Antibodies	52
Centriole Antibodies	53
Centromere Antibodies	53
Centrophilin Antibodies	56
Centrosome Antibodies	56
CEP-1 Antibodies	58
Chromatin Antibodies	59
Chromo Antibodies	59
Citrullinated Protein/Peptide Antibodies	60
CLIP Antibodies	62
Coilin Antibodies	62
Collagen Antibodies	63
CRP Antibodies	65
Cryoglobulins	66
Cytoplasmic Linker Protein170 (CLIP-170) Antibodies	67
DEK Antibodies	67
DFS70 Antibodies	68
Double-Stranded DNA (dsDNA) Antibodies	70
EEA-1 Antibodies	74
EF1A Antibodies	75
EJ Antibodies	76
Elastase Antibodies	76
ENA Antibodies	76
Endothelial Cell Antibodies	77
EPCR Antibodies	79
ET _A R Antibodies	79

Exosome Antibodies	79
Fer Antibodies	80
Ferritin Antibodies	80
Fibrillarin Antibodies	80
Fibrillin 1 Antibodies	82
Fibroblast Antibodies	83
Filaggrin Antibodies	83
Galectin Antibodies	84
Galectin-1 Antibodies	84
Galectin-2 Antibodies	85
Glutaminyl-tRNA (tRNA ^{Glu}) Synthetase Antibodies	85
Glycyl-tRNA (tRNA ^{Gly}) Synthetase Antibodies	85
GM1 Antibodies	85
Golgi Apparatus Antibodies	86
Gu Antibodies	88
GWB Antibodies	88
Heat Shock Protein (Hsp) Antibodies	90
Histidyl-tRNA (tRNA ^{His}) Synthetase (HRS) Antibodies	91
Histone Antibodies	91
HMG Antibodies	94
HMGB1 Antibodies	95
HMGCR Antibodies	95
hnRNP Antibodies	96
hnRNP-A2 Antibodies	99
hnRNP-D Antibodies	99
HsEg5 Antibodies	99
5-HT4 Receptor Antibodies	100
Human Neutrophil Elastase (HNE) Antibodies	101
IFI 16 Antibodies	101
IgA Autoantibodies	103
Isoleucyl-tRNA (tRNA ^{Ile}) Synthetase Antibodies	104
Ja Antibodies	104
Jo-1 Antibodies	104
Keratin Antibodies (AKA)	106
Ki Antibodies	107
Kinectin Antibodies	108
KJ Antibodies	108
KS Antibodies	109
Ku Antibodies	110
L5/5S Antibodies	113
L7 Antibodies	113
L12 Antibodies	114

Lactoferrin Antibodies	114
Lamin Antibodies	114
LAMP-2 Antibodies	115
La/SS-B Antibodies	116
LE Cell Factor	118
LEDGF Antibodies	120
Leucyl-tRNA (tRNA ^{Leu}) Synthetase Antibodies	120
Lipoprotein Lipase (LPL) Antibodies	120
Lupus Anticoagulant (LA)	121
Lysobisphosphatidic Acid (LBPA) Antibodies	124
Lysosome Antibodies	124
Lysozyme Antibodies	125
Lysyl-tRNA (tRNA ^{Lys}) Synthetase Antibodies	125
M3R Antibodies	125
Mas Antibodies	127
MBL Antibodies	127
MCV Antibodies	128
MDA5 Antibodies	129
Mi-2 Antibodies	131
Midbody Antibodies	133
MJ Antibodies	135
MMP Antibodies	135
MMP1 Antibodies	136
MMP3 Antibodies	136
Mpp1 Antibodies	136
Mpp10 Antibodies	137
MSA Antibodies	138
Myeloperoxidase Antibodies	140
Myosin Antibodies	142
Nedd5 Antibodies	142
Neutrophil Specific Antibodies	143
NMDAR Antibodies	144
NOR-90 Antibodies	146
NR2 Antibodies	148
Nucleolar Antibodies	148
Nucleolin Antibodies	149
Nucleophosmin Antibodies	150
Nucleosome Antibodies	151
NuMA Antibodies	153
NXP2 Antibodies	155
OJ Antibodies	156
oxLDL Antibodies	157
PAD3 Antibodies	158

PAD4 Antibodies	159
pANCA (P-ANCA)	159
PCNA Antibodies	161
PDGF Receptor (PDGFR) Antibodies	163
Pentraxin-3 Antibodies	163
Perinuclear Factors (PNF)	163
Phosphatidic Acid (PA) Antibodies	164
Phosphatidylcholine (PC) Antibodies	165
Phosphatidylethanolamine (PE) Antibodies	165
Phosphatidylinositol (PI) Antibodies	167
Phosphatidylserine (PS) Antibodies	168
Phospholipid (PL) Antibodies	169
PL-7 Antibodies	173
PL-12 Antibodies	174
PLA2R Antibodies	176
PM-1 Antibodies	176
PMS1 Antibodies	176
PM/Sci Antibodies	177
PM/Sci-75 Antibodies	180
PM/Sci-100 Antibodies	180
Poly (ADP-Ribose) Polymerase (PARP) Antibodies	181
Proteasome Antibodies	182
Proteinase 3 Antibodies	183
Protein C Antibodies	185
Protein S Antibodies	186
Prothrombin Antibodies	187
RA33 Antibodies	189
Replication Protein A (RPA) Antibodies	191
Rheumatoid Factors (RF)	192
Ribosomal Antibodies	194
Ribosomal P Protein (RPP) Antibodies	196
Ribosomal RNA Processing (Rrp) Protein Antibodies	198
RNA Antibodies	198
RNA Helicase II Antibodies	199
RNA Helicase A (RHA) Antibodies	199
RNAP-I Antibodies	200
RNAP-II Antibodies	200
RNAP-III Antibodies	201
RNA Polymerase (RNAP) Antibodies	201
Ro52/TRIM21 Antibodies	203
Ro60 Antibodies	205
Ro/SS-A Antibodies	206

28S rRNA Antibodies	210
Rrp Antibodies	210
S10 Antibodies	211
Sa Antibodies	211
SAE Antibodies	212
SAP Antibodies	212
SC Antibodies	212
Scl-70 Antibodies	212
Single-Stranded DNA (ssDNA) Antibodies	215
Sip1 Antibodies	216
Sm Antibodies	217
snoRNP Antibodies	219
snRNP Antibodies	219
SR Protein Antibodies	221
SRP Antibodies	222
SS-56 Antibodies	224
SS-A Antibodies	224
SS-B Antibodies	224
ssDNA Antibodies	224
Threonyl-tRNA (tRNA ^{Thr}) Synthetase Antibodies	225
Thrombomodulin Antibodies	225
Th/To Antibodies	225
TIF-1 Antibodies	227
Topoisomerase I Antibodies	228
Topoisomerase II Antibodies	229
TRIM21 Antibodies	229
Trimethylguanosine Antibodies	229
U1-RNP Antibodies	230
U2-RNP Antibodies	231
U4/U6-RNP Antibodies	231
U5-RNP Antibodies	231
U7-RNP Antibodies	232
U11-RNP Antibodies	232
U11/U12-RNP Antibodies	232

Part 2**Systemic Autoimmune Diseases – Syndromes, Diagnostic Criteria,
Symptoms**

Abortion, spontaneous	234
Acidosis, renal-tubular	234
Acro-osteolysis	234
Addison's disease	234
Adrenocortical failure	234
Alopecia	234
Alveolitis	235
Amaurosis fugax	235
Amyopathic dermatomyositis	235
ANCA-associated vasculitis	236
Anemia	236
Ankylosing spondylitis (AS)	237
Anti-GBM-Disease	238
Anti-Jo-1 syndrome	238
Antiphospholipid syndrome (APS)	238
Anti-SRP syndrome	241
Antisynthetase syndrome	242
Anti-TNF-induced lupus (ATIL)	242
Arteriitis temporalis	243
Arthralgia	243
Arthritis	244
Autoimmune myositis	244
Behçet disease	244
Bronchial asthma	246
Budd-Chiari syndrome	246
Butterfly rash	246
Calcinosis cutis	246
Cardiomyopathy	246
"Catastrophic" APS	247
Cavernous sinus thrombosis	248
Cerebral infarction	248
Cerebral ischemia	249
Chorea	249
Churg-Strauss syndrome (CSS)	249
Claudication of extremities	249
Claudication of masticatory muscles	249
Cogan's syndrome	249
Congenital heart block	250
Conjunctivitis	250

Connective tissue diseases	250
Creatine kinase	251
CREST syndrome	251
Cryoglobulinemia	251
Cryoglobulinemic nephropathy	252
Cryoglobulinemic purpura	252
Cryoglobulinemic vasculitis	252
Cutaneous leukocytoclastic vasculitis	253
Dementia, multi-infarct	253
Dermatomyositis (DM)	253
Diffuse alveolar hemorrhage (DAH)	254
Diffuse parenchymal lung disease	256
Discoid lupus erythematosus (DLE)	256
Drug-induced lupus (DIL)	256
Encephalopathy	257
Eosinophilia	257
Eosinophilic granulomatosis with polyangiitis (EGPA)	258
Epilepsy	258
Episcleritis	258
Erythema	259
Esophageal dysfunction	259
Evans syndrome	259
Facial paresis	259
Felty's syndrome	259
Fibrosing alveolitis	260
Fingertip necrosis	260
Giant cell arteritis	260
Glomerulonephritis	261
Glomerulosclerosis	261
Goodpasture's disease	262
Gottron's sign	262
Granulomatosis with polyangiitis (GPA)	262
Guillain-Barré syndrome	264
Headache	265
Hemianopia	265
Hemophagocytic lymphohistiocytosis (HLH)	265
Hemorrhagic alveolitis	265
Henoch-Schönlein purpura	266
Hepatic infarction	266
Hepatomegaly	266
Horton's disease	266
Hypereosinophilia	266
Hyperferritinemia	266

Hypergammaglobulinemia	267
Hypersensitivity vasculitis	267
Hypertension	267
Hypocomplementemic urticarial vasculitis syndrome (HUVS)	268
Idiopathic inflammatory myopathies (IIM)	268
Idiopathic interstitial pneumonia (IIP)	270
Idiopathic myositis	271
Idiopathic pulmonary fibrosis (IPF)	271
IgA nephropathy	272
IgA vasculitis	272
IgG4-related disease	273
Interstitial lung disease (ILD)	274
Intestinal necrosis	275
Intracardiac thrombus	275
Juvenile chronic arthritis (JCA)	275
Juvenile dermatomyositis	278
Juvenile idiopathic arthritis (JIA)	279
Juvenile rheumatoid arthritis (JRA)	279
Juvenile scleromyositis	279
Kawasaki disease	280
Leukocytopenia	281
Leukocytosis	281
Libman-Sacks endocarditis	281
Lilac rings	281
Livedo reticularis/racemosa	281
Lymphadenopathy	282
Lymphocytopenia	282
Macrophage activation syndrome (MAS)	282
Malabsorption	284
Mechanic's hands	284
Membranous nephritis/nephropathy (MN)	284
Meningitis, aseptic	285
Mesenteric infarction	285
Microscopic polyangiitis (MPA)	285
Microstomia	285
Migraine, atypical	286
Mixed connective tissue disease (MCTD)	286
Moschkowitz's syndrome	289
Mucocutaneous lymph node syndrome	289
Muscle weakness	289
Muscular atrophy	289
Myalgia	289
Myocardial infarction	290

Myoglobin	290
Myositis overlap syndromes	290
Necrotizing autoimmune myopathy (NAM) ..	290
Neonatal lupus erythematosus (NLE)	292
Neonatal lupus syndromes	292
Nephritis	292
Neuropathy	293
Organic brain syndrome	293
Otitis externa	293
Otitis media	293
Overlap syndromes	294
Pancreatic infarction	294
Pancreatitis	294
Panniculitis	294
Parotitis	294
Pericardial effusion	294
Pericarditis	295
Peritonitis	295
Photosensitivity	295
Pleuritis	295
Polyarteritis nodosa	295
Polymyalgia rheumatica (PMR)	296
Polymyositis (PM)/dermatomyositis (DM) ..	298
Polymyositis/scleroderma overlap	300
Polyneuritis, cranial	300
Posterior reversible encephalopathy syndrome (PRES)	300
Primary Sjögren's syndrome	301
Proteinuria	301
Pseudocaverns	301
Psychosis	301
Ptosis	302
Pulmonary arterial hypertension (PAH)	302
Pulmonary fibrosis	302
Pulmonary hemorrhage	302
Pulmonary infiltrates	303
Pulselessness	303
Purpura	303
Raynaud's phenomenon	303
Relapsing polychondritis	304
Retinal ischemia	304
Retinitis	305
Rheumatoid arthritis	305
Rheumatoid nodules	307

Rhinitis	307
Rhupus	308
Saddle nose	308
Scleritis/episcleritis	308
Sclerodactyly	308
Scleroderma	308
Scleroderma/myositis overlap	308
Scleroderma renal crisis (SRC)	309
Scleroderma spectrum disorder	309
Secondary Sjögren's syndrome	309
Sensorineural hearing loss	309
Sharp syndrome	310
Sine syndromes	310
Sinusitis	311
Sinus vein thrombosis	311
Sjögren's syndrome (SjS)	312
Sneddon's syndrome	315
Spinal infarction	316
Splenomegaly	316
Spondyloarthritis (SpA)	316
Spondyloarthropathies (SpA)	318
Statin related myopathy	319
Still's disease	319
Stroke	319
Subacute cutaneous lupus erythematosus (SCLE)	319
Systemic autoimmune rheumatic diseases (SARD)	320
Systemic lupus erythematosus (SLE)	320
Systemic sclerosis (SSc)	325
Systemic sclerosis sine scleroderma (ssSSc)	329
Takayasu arteritis	331
Telangiectasia	331
Temporal arteritis	332
Thrombocytopenia	332
Thrombocytosis	332
Thrombosis	332
Thrombotic thrombocytopenic purpura (TTP)	332
Thyroiditis	333
Tolosa-Hunt syndrome	333
Transitory ischemic attacks (TIA)	333
Transverse myelitis	333
Ulcers	333
Undifferentiated connective tissue disease (UCTD)	334
Urticaria	335

Valvular heart disease	335
Vasculitides	335
Vertigo	337
Wegener's granulomatosis (WG)	337
Xerostomia	337
Abbreviations	339
Appendices	343