

CHAPTER ONE: INTRODUCTION.....	1
STUDY GOALS AND OBJECTIVES.....	1
REASONS FOR DOING THE STUDY .....	1
INTENDED AUDIENCE.....	2
SCOPE OF REPORT .....	2
METHODOLOGY .....	3
INFORMATION SOURCES.....	3
RELATED BCC REPORTS .....	3
ANALYST CREDENTIALS.....	3
BCC ONLINE SERVICES.....	4
DISCLAIMER .....	4
 CHAPTER TWO: SUMMARY.....	 5
<i>SUMMARY TABLE GLOBAL VALUE OF NEXT GENERATION     CANCER DIAGNOSTICS BY ANALYSIS TYPE, THROUGH 2015 (\$     MILLIONS)</i> .....	  6
<i>SUMMARY FIGURE GLOBAL VALUE OF NEXT GENERATION     CANCER DIAGNOSTICS BY ANALYSIS TYPE, 2009-2015 (\$     MILLIONS)</i> .....	  6
SUMMARY (CONTINUED) .....	7
 CHAPTER THREE: OVERVIEW .....	 8
INTRODUCTION .....	8
<i>TABLE 1 SCOPE OF THIS REPORT</i> .....	8
MARKET POTENTIAL OF NEXT GENERATION CANCER DIAGNOSTICS.....	 9
<i>TABLE 2 GLOBAL VALUE OF NEXT GENERATION CANCER     DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	 9
<i>TABLE 2 (CONTINUED)</i> .....	10
FORCES DRIVING MARKET GROWTH .....	10
<i>TABLE 3 FORCES DRIVING CANCER DIAGNOSTICS GROWTH</i> .....	11
NEXT GENERATION CANCER DIAGNOSTICS PLATFORMS .....	12
<i>TABLE 4 GLOBAL VALUE OF NEXT GENERATION CANCER     DIAGNOSTICS BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$     MILLIONS)</i> .....	  12
NEXT GENERATION CANCER DIAGNOSTICS PRODUCT LIFECYCLE STATUS.....	 13
<i>TABLE 5 DIAGNOSTIC PRODUCT LIFECYCLE STATUS</i> .....	13
NEXT GENERATION CANCER DIAGNOSTICS INDUSTRY.....	14
<i>TABLE 6 NEXT GENERATION CANCER DIAGNOSTICS INDUSTRY</i> .....	14
NEXT GENERATION CANCER ... (CONTINUED).....	15
 CHAPTER FOUR: NEXT GENERATION CANCER DIAGNOSTIC TECHNOLOGIES .....	  16

DIAGNOSTICS OVERVIEW.....	16
TABLE 7 DIAGNOSTICS MARKET SEGMENTS .....	16
TABLE 8 NEXT GENERATION CANCER DIAGNOSTICS PLATFORMS.....	17
TECHNOLOGY OVERVIEW .....	17
TABLE 9 ANALYSIS PLATFORMS AND BIOMARKER TYPES .....	17
GENETIC ANALYSIS .....	18
FIGURE 1 DNA, MRNA, AND GENETIC VARIATION.....	19
GENETIC ANALYSIS TECHNOLOGIES .....	20
TABLE 10 SCOPE OF KEY GENOMIC ANALYSIS TECHNOLOGIES.....	20
Genetic Analysis Technologies (Continued) .....	21
Genetic Analysis Technologies (Continued) .....	22
TABLE 11 COMPARISON OF GENETIC ANALYSIS TECHNOLOGY PLATFORMS .....	23
EPIGENETIC ANALYSIS .....	24
Paradigm Change .....	24
TABLE 12 EPIGENETICS WITHIN THE MOLECULAR BIOLOGY PARADIGM.....	25
DNA Methylation Analysis .....	25
FIGURE 2 EPIGENETIC CHANGES TO DNA AFFECT GENE EXPRESSION.....	26
TABLE 13 CTC CAPTURE METHODS .....	27
TABLE 14 CTC IDENTIFICATION METHODS .....	28
PROTEOMIC ANALYSIS.....	28
NEXT GENERATION CANCER DIAGNOSTICS TECHNOLOGY PLATFORMS.....	29
DNA Microarrays.....	29
TABLE 15 DNA MICROARRAY TECHNOLOGIES.....	30
Protein Microarrays.....	31
TABLE 16 PROTEIN MICROARRAY PLATFORMS .....	31
Lab-on-a-chip (LOAC) .....	32
TABLE 17 LAB-ON-A-CHIP TYPES .....	33
In Vitro Proteomics .....	33
Electrophoresis on a Chip.....	33
Structural Proteomics.....	34
PCR on a Chip.....	34
Immunoassays on a Chip .....	35
RT-PCR.....	36
TABLE 18 PROBLEMS WITH CONVENTIONAL END POINT PCR DETECTION.....	37
TABLE 19 APPLICATIONS OF RT-PCR IN CANCER DIAGNOSTICS.....	37
DNA Sequencing.....	38
TABLE 20 COMPARISON OF DNA SEQUENCING TECHNOLOGY PLATFORMS .....	38
DNA Sequencing (Continued) .....	39

CHAPTER FIVE: NEXT GENERATION CANCER DIAGNOSTICS	
APPLICATIONS.....	40
INTRODUCTION .....	40
<i>TABLE 21 NEXT GENERATION DIAGNOSTICS PARADIGM SHIFT</i> .....	40
DIAGNOSTICS VERSUS RESEARCH TOOLS.....	41
<i>TABLE 22 REQUIREMENTS FOR AN EPIGENETICS BISULFITE</i>	
<i>DIAGNOSTIC ASSAY</i> .....	41
DISCOVERY OF CONTENT DRIVING GROWTH .....	42
<i>TABLE 23 COMMON BIOMARKERS USED IN NEXT GENERATION</i>	
<i>DIAGNOSTICS</i> .....	43
CLINICAL ACCEPTANCE OF BIOMARKER-BASED TESTS .....	44
<i>TABLE 24 RATE OF ADOPTION OF DNA MICROARRAY</i>	
<i>DIAGNOSTICS TESTS</i> .....	45
MOLECULAR DIAGNOSTICS .....	46
INTRODUCTION.....	46
MARKET PENETRATION CHALLENGES.....	47
<i>TABLE 25 COMPARISON OF DNA-BASED MDX PLATFORMS</i> .....	48
<i>TABLE 26 FACTORS AFFECTING PENETRATION OF NEXT</i>	
<i>GENERATION FORMATS INTO THE MDX MARKET</i> .....	49
Market Penetration Challenges (Continued) .....	50
MARKET SEGMENTS .....	51
TEST SENSITIVITY AND SPECIFICITY.....	52
<i>FIGURE 3 SENSITIVITY AND SPECIFICITY</i> .....	53
REGULATORY STATUS.....	54
STATUS OF NEXT GENERATION DX BY INDICATION .....	55
Cancer Overview.....	55
<i>TABLE 27 ESTIMATED U.S. INCIDENCE FOR SELECTED CANCERS,</i>	
<i>2010</i> .....	55
Bladder Cancer .....	56
<i>TABLE 28 STATUS OF BLADDER CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	57
Breast Cancer .....	58
Breast Cancer Screening .....	58
Prognosis and Pharmacogenetics Tests .....	59
<i>TABLE 29 ESTIMATED NUMBER OF ANNUAL BREAST CANCER</i>	
<i>TREATMENT DECISIONS IN THE U.S. BY CANCER</i>	
<i>CLASSIFICATION</i> .....	60
Breast Cancer MDx Platforms.....	60
<i>TABLE 30 BREAST CANCER MDX TECHNOLOGY PLATFORMS</i> .....	61
<i>TABLE 31 STATUS OF NEXT GENERATION BREAST CANCER</i>	
<i>TESTS</i> .....	62
<i>TABLE 31 (CONTINUED)</i> .....	63
Breast Cancer MDx ... (Continued) .....	64
Breast Cancer MDx ... (Continued) .....	65

Breast Cancer MDx ... (Continued) .....	66
Brain Cancer .....	67
<i>TABLE 32 STATUS OF BRAIN CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	68
Cervical Cancer.....	68
<i>TABLE 33 STATUS OF NEXT GENERATION HPV TESTS</i> .....	69
<i>TABLE 33 (CONTINUED)</i> .....	70
Cervical Cancer (Continued) .....	71
Colorectal Cancer.....	72
Conventional Colorectal Cancer Screening Tests.....	72
<i>TABLE 34 CURRENT SCREENING AND DIAGNOSTICS TESTS FOR</i>	
<i>COLORECTAL CANCER</i> .....	72
Next Generation Colorectal Cancer Diagnostics	
Tests .....	73
<i>TABLE 35 STATUS OF COLORECTAL CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	74
Next Generation ... (Continued).....	75
Next Generation ... (Continued).....	76
CUP .....	77
CUP (Continued).....	78
<i>TABLE 36 STATUS OF CUP NEXT GENERATION DIAGNOSTICS</i>	
<i>TESTS</i> .....	79
Gastric Cancer .....	80
<i>TABLE 37 STATUS OF GASTRIC/STOMACH CANCER NEXT</i>	
<i>GENERATION DIAGNOSTICS TESTS</i> .....	81
Kidney Cancer .....	82
<i>TABLE 38 STATUS OF KIDNEY CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	82
Leukemia .....	83
<i>TABLE 39 STATUS OF LEUKEMIA CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	83
<i>TABLE 39 (CONTINUED)</i> .....	84
Leukemia (Continued).....	85
Liver Cancer .....	86
<i>TABLE 40 STATUS OF LIVER CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	86
Lymphoma Cancers .....	87
<i>TABLE 41 STATUS OF LYMPHOMA CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	87
Lung Cancer.....	88
<i>TABLE 42 5-YEAR SURVIVAL RATES FOR NON-SMALL CELL LUNG</i>	
<i>CANCER (%)</i> .....	89
<i>TABLE 43 STATUS OF LUNG CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	90

<i>TABLE 43 (CONTINUED)</i> .....	91
Lung Cancer (Continued) .....	92
Melanoma.....	93
<i>TABLE 44 STATUS OF MELANOMA NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	94
Ovarian Cancer.....	95
<i>TABLE 45 EARLY SCREENING OVARIAN CANCER TESTS</i> .....	96
<i>TABLE 46 STATUS OF OVARIAN CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	97
Ovarian Cancer (Continued) .....	98
Pancreatic Cancer.....	99
<i>TABLE 47 STATUS OF PANCREATIC CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	99
Prostate Cancer .....	100
<i>TABLE 48 STATUS OF PROSTATE CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	101
<i>TABLE 48 (CONTINUED)</i> .....	102
Prostate Cancer (Continued).....	103
Thyroid Cancer .....	104
<i>TABLE 49 STATUS OF THYROID CANCER NEXT GENERATION</i>	
<i>DIAGNOSTICS TESTS</i> .....	105
SUMMARY OF NEXT GENERATION CANCER DIAGNOSTICS	
TESTS .....	105
<i>TABLE 50 NEXT GENERATION DIAGNOSTICS TEST SUMMARY BY</i>	
<i>INDICATION AND BY TECHNOLOGY</i> .....	106
SUMMARY OF NEXT GENERATION ... (CONTINUED).....	107
 CHAPTER SIX: INDUSTRY DYNAMICS.....	108
ACQUISITIONS.....	108
<i>TABLE 51 RECENT ACQUISITIONS IN NEXT GENERATION</i>	
<i>CANCER DIAGNOSTICS INDUSTRY 2008-2010</i> .....	108
<i>TABLE 51 (CONTINUED)</i> .....	109
ACQUISITIONS (CONTINUED) .....	110
STRATEGIC ALLIANCES .....	111
<i>TABLE 52 NEXT GENERATION CANCER DIAGNOSTICS STRATEGIC</i>	
<i>ALLIANCES, 2008-2010</i> .....	111
<i>TABLE 52 (CONTINUED)</i> .....	112
STRATEGIC ALLIANCES (CONTINUED).....	113
STRATEGIC ALLIANCES (CONTINUED).....	114
STRATEGIC ALLIANCES (CONTINUED).....	115
PROTEOMICS ADVANCED DIAGNOSTICS INDUSTRY .....	116
<i>TABLE 53 PROTEOMICS NEXT GENERATION CANCER</i>	
<i>DIAGNOSTICS INDUSTRY</i> .....	117
CIRCULATING TUMOR CELL DIAGNOSTICS INDUSTRY .....	118
<i>TABLE 54 CTC DIAGNOSTICS INDUSTRY</i> .....	119

CIRCULATING TUMOR CELL ...(CONTINUED).....	120
DNA MICROARRAYS ADVANCED DIAGNOSTICS INDUSTRY .....	121
TABLE 55 LEADING DNA MICROARRAY SUPPLIERS.....	121
NEXT GENERATION SEQUENCING DIAGNOSTICS INDUSTRY .....	122
TABLE 56 LABORATORIES DEVELOPING NEXT GENERATION	
SEQUENCING DIAGNOSTICS TESTS.....	123
LOAC NEXT GENERATION CANCER DIAGNOSTICS INDUSTRY .....	123
TABLE 57 LOAC NEXT GENERATION CANCER DIAGNOSTICS	
INDUSTRY .....	124
LOAC NEXT GENERATION CANCER ...(CONTINUED) .....	125
RT-PCR NEXT GENERATION CANCER DIAGNOSTICS INDUSTRY .....	126
TABLE 58 RT-PCR NEXT GENERATION CANCER DIAGNOSTICS	
INDUSTRY .....	126
RT-PCR NEXT GENERATION CANCER ...(CONTINUED) .....	127
CHAPTER SEVEN: NEXT GENERATION CANCER DX MARKETS.....	128
DRIVING FORCES OF NEXT GENERATION CANCER	
DIAGNOSTICS GROWTH.....	128
TABLE 59 FORCES DRIVING CANCER DIAGNOSTICS GROWTH .....	128
GROWTH IN LIFE SCIENCE R&D FUNDING .....	128
TABLE 60 STIMULUS FUNDING ALLOCATED TO U.S. SCIENCE	
SPENDING (\$ MILLIONS).....	129
DEVELOPMENT OF TARGETED MEDICINES.....	129
NEED FOR EARLY CANCER DETECTION .....	130
AGING POPULATION IN DEVELOPED REGIONS OF THE	
WORLD .....	130
NEED FOR MORE INNOVATIVE DIAGNOSTIC TESTING	
FORMATS.....	131
ONGOING DISCOVERIES IN GENOMICS AND	
PROTEOMICS .....	131
DISCOVERY OF GENE AND SNP DISEASE ASSOCIATIONS .....	131
GLOBAL IN VITRO DIAGNOSTICS MARKET .....	132
TABLE 61 GLOBAL VALUE OF IN VITRO DIAGNOSTICS BY	
APPLICATION, THROUGH 2015 (\$ MILLIONS).....	132
NEXT GENERATION CANCER GLOBAL DIAGNOSTICS MARKET	
SUMMARY .....	133
TABLE 62 GLOBAL VALUE OF NEXT GENERATION CANCER	
DIAGNOSTICS BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$	
MILLIONS).....	134
TABLE 63 GLOBAL VALUE OF NEXT GENERATION CANCER	
DIAGNOSTICS BY ANALYSIS TYPE, THROUGH 2015 (\$	
MILLIONS).....	135
TABLE 64 GLOBAL VALUE OF NEXT GENERATION CANCER	
DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS).....	136

<i>TABLE 65 GLOBAL VALUE OF NEXT GENERATION CANCER DIAGNOSTICS BY FUNCTION, THROUGH 2015 (\$ MILLIONS)</i> .....	137
MARKETS BY TECHNOLOGY FORMAT .....	137
DNA MICROARRAY MARKET.....	137
<i>TABLE 66 GLOBAL VALUE OF DNA MICROARRAY CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	138
PROTEIN MICROARRAY MARKET .....	139
<i>TABLE 67 GLOBAL VALUE OF PROTEIN MICROARRAY CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	140
LOAC MARKET .....	141
<i>TABLE 68 GLOBAL VALUE OF LOAC CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	141
RT-PCR MARKET.....	142
<i>TABLE 69 GLOBAL VALUE OF RT-PCR CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	143
DNA SEQUENCING MARKET .....	144
<i>TABLE 70 GLOBAL VALUE OF NEXT GENERATION SEQUENCING CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	145
CTC MARKET.....	146
<i>TABLE 71 GLOBAL VALUE OF CTC CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	147
MULTIPLEX CONVENTIONAL MARKET .....	148
<i>TABLE 72 GLOBAL VALUE OF MULTIPLEX CONVENTIONAL CANCER DIAGNOSTICS BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	148
MARKETS BY DIAGNOSTIC FUNCTION.....	149
SCREENING MARKET.....	149
<i>TABLE 73 GLOBAL VALUE OF NEXT GENERATION CANCER SCREENING MARKET BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	150
PROGNOSTICS MARKET .....	151
<i>TABLE 74 GLOBAL VALUE OF NEXT GENERATION CANCER PROGNOSTICS MARKET BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	152
MONITORING MARKET .....	153
<i>TABLE 75 GLOBAL VALUE OF NEXT GENERATION CANCER MONITORING MARKET BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	154
COMPANION DIAGNOSTICS MARKET .....	155
<i>TABLE 76 GLOBAL VALUE OF NEXT GENERATION CANCER COMPANION DIAGNOSTICS MARKET BY INDICATION, THROUGH 2015 (\$ MILLIONS)</i> .....	156

MARKETS FOR KEY INDICATIONS BY TECHNOLOGY PLATFORM .....	157
BREAST CANCER MARKET.....	157
TABLE 77 GLOBAL VALUE OF NEXT GENERATION BREAST CANCER DIAGNOSTICS MARKET BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$ MILLIONS).....	157
CERVICAL CANCER MARKET .....	158
TABLE 78 GLOBAL VALUE OF NEXT GENERATION CERVICAL CANCER DIAGNOSTICS MARKET BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$ MILLIONS).....	158
COLORECTAL CANCER MARKET .....	159
TABLE 79 GLOBAL VALUE OF NEXT GENERATION COLORECTAL CANCER DIAGNOSTICS MARKET BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$ MILLIONS).....	160
LEUKEMIA MARKET.....	160
TABLE 80 GLOBAL VALUE OF NEXT GENERATION LEUKEMIA DIAGNOSTICS MARKET BY TECHNOLOGY FORMAT, THROUGH 2015 (\$ MILLIONS).....	161
LUNG CANCER MARKET.....	161
TABLE 81 GLOBAL VALUE OF NEXT GENERATION LUNG CANCER DIAGNOSTICS MARKET BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$ MILLIONS).....	162
PROSTATE CANCER MARKET.....	162
TABLE 82 GLOBAL VALUE OF NEXT GENERATION PROSTATE CANCER DIAGNOSTICS MARKET BY TECHNOLOGY PLATFORM, THROUGH 2015 (\$ MILLIONS).....	163
NEXT GENERATION CANCER DIAGNOSTICS GEOGRAPHICAL MARKET.....	163
TABLE 83 GLOBAL VALUE OF NEXT GENERATION CANCER DIAGNOSTICS BY GEOGRAPHICAL REGION, THROUGH 2015 (\$ MILLIONS).....	164
CHAPTER EIGHT: PATENTS .....	165
DNA AND PROTEIN MICROARRAY AND LOAC PATENTS .....	165
TABLE 84 ISSUED DNA MICROARRAY PATENTS BY REGION, 2001–2010 .....	165
TABLE 85 ISSUED PROTEIN MICROARRAY PATENTS BY REGION, 2001–2010.....	166
TABLE 86 ISSUED LOAC PATENTS BY REGION, 2001–2010.....	166
TABLE 87 NUMBER OF PATENTS (APPLIED AND ISSUED) FOR SELECTED MICROARRAY COMPANIES.....	167
TABLE 88 PATENTS, ISSUED OR APPLIED, FOR SELECTED MICROARRAY COMPANIES.....	168
TABLE 89 NUMBER OF PATENTS (APPLIED AND ISSUED) FOR SELECTED LAB-ON-A-CHIP COMPANIES.....	169



<i>TABLE 90 PATENTS, ISSUED OR APPLIED, FOR SELECTED LAB- ON-A-CHIP COMPANIES, BY GEOGRAPHICAL REGION</i> .....	170
RT-PCR PATENTS .....	170
<i>TABLE 91 ISSUED RT-PCR PATENTS, BY GEOGRAPHICAL REGION, 2001-2010</i> .....	171
CTC PATENTS .....	171
<i>TABLE 92 ISSUED CTC PATENTS BY GEOGRAPHY, 2001-2010</i> .....	172
<i>TABLE 93 NUMBER OF PATENTS (APPLIED AND ISSUED) FOR SELECTED CTC COMPANIES</i> .....	172
SEQUENCING PATENTS .....	173
<i>TABLE 94 NEXT GENERATION SEQUENCING PATENTS, BY REGION, 2001-2010</i> .....	173
<i>TABLE 95 NUMBER OF SEQUENCING-RELATED PATENTS (APPLIED AND ISSUED) FOR SELECTED COMPANIES</i> .....	174
SEQUENCING PATENTS (CONTINUED).....	175
 CHAPTER NINE: COMPANY PROFILES .....	176
20/20 GENE SYSTEMS INC. ....	176
ABBOTT LABORATORIES.....	177
ABTECH SCIENTIFIC INC.....	178
AGNAGEN AG .....	179
ADVANCED CELL DIAGNOSTICS, INC.....	179
AFFYMETRIX, INC.....	180
AGENDIA BV.....	181
<i>TABLE 96 AGENDIA MICROARRAY-BASED DIAGNOSTICS PIPELINE</i> ....	182
AGENDIA BV (CONTINUED) .....	183
AGILENT TECHNOLOGIES, INC.....	184
ALLEGRO DIAGNOSTICS, INC. ....	184
ALMAC GROUP LTD.....	185
ALMAC GROUP LTD. (CONTINUED).....	186
AMBERGEN, INC. ....	187
ARRAYIT CORPORATION .....	187
ASSURANCE BIOSCIENCES .....	188
AUTOGENOMICS, INC. ....	188
AVIANA MOLECULAR TECHNOLOGIES .....	189
AXELA BIOSENSORS .....	189
AYANDA BIOSYSTEMS SA .....	190
BECKMAN COULTER INC.....	191
BECTON, DICKINSON AND CO. ....	191
BIOCARTIS SA.....	192
BIOCEPT.....	193
BIODESIX, INC. ....	193
BIONANOMATRIX, INC.....	194
BIOTHERANOSTICS.....	195
BODITECH MED INC.....	195

CALIPER LIFE SCIENCES .....	196
CAPITALBIO CORPORATION .....	197
CARIS MPI .....	198
CARIS LIFE SCIENCES .....	198
CELLIX LTD. ....	199
CEPHEID .....	199
CEPHEID (CONTINUED).....	200
<i>TABLE 97 COMMERCIAL STATUS OF CEPHEID CLINICAL DIAGNOSTIC TESTS BASED ON XPERT AND SMARTCYCLER PLATFORMS .....</i>	
CHIPDX LLC .....	202
CLAROS DIAGNOSTICS, INC. ....	203
COMBIMATRIX CORPORATION .....	203
<i>TABLE 98 COMBIMATRIX DNA MICROARRAY PLATFORMS.....</i>	
COMPANDX, LTD. ....	204
CVERGENX .....	205
CYTODESIGN, INC. ....	205
CYTOSCALE DIAGNOSTICS, LLC .....	205
DECODE GENETICS.....	206
DIAGENIC ASA.....	207
<i>TABLE 99 DIAGENIC PATENT PORTFOLIO .....</i>	
DIAGNOSWISS S.A.....	208
DNAMICROARRAY, INC.....	209
DYCONEX AG .....	209
EPIC SCIENCES, INC. ....	210
EXACT SCIENCES.....	210
<i>TABLE 100 EXACT SCIENCES STOOL-BASED COLORECTAL CANCER TEST VERSIONS .....</i>	
EXIQON A/S.....	212
EXONHIT THERAPEUTICS S.A. ....	213
<i>TABLE 101 EXONHIT'S SPLICE-ARRAY DIAGNOSTICS PIPELINE .....</i>	
FALCON GENOMICS .....	214
FEBIT BIOTECH GMBH .....	215
FLUIDIGM CORPORATION .....	215
GE HEALTHCARE LIFESCIENCES .....	216
GENALYTE.....	217
GENERA BIOSYSTEMS .....	217
GENETIC TECHNOLOGIES, LTD. ....	218
GENEWAVE S.A.S. ....	218
GENMARK DIAGNOSTICS.....	219
GEN-PROBE INC. ....	220
HEALTHLINX LIMITED .....	221
HELICOS BIOSCIENCES CORPORATION.....	221
HIGH THROUGHPUT GENOMICS, INC.....	222

HISTORX, INC.....	222
ILLUMINA, INC.....	223
ILLUMINA, INC. (CONTINUED).....	224
INSIGHT GENETICS.....	225
INTEGRAGEN.....	225
IPSOGEN SA.....	225
IRIS BIOTECHNOLOGIES.....	226
IRIS INTERNATIONAL, INC.....	227
JOHNSON & JOHNSON.....	227
KONINKLIJKE PHILIPS ELECTRONICS N.V.....	228
LIFE TECHNOLOGIES INC.....	229
LUMINEX.....	230
MAGARRAY, INC.....	231
MAINE MANUFACTURING.....	231
MAVEN BIOTECHNOLOGIES.....	232
MDX HEALTH S.A.....	232
<i>TABLE 102 MDXHEALTH DIAGNOSTICS FOCUS.....</i>	<i>233</i>
MED BIOGENE, INC.....	234
METAMARK GENETICS, INC.....	234
MIRA DX.....	235
MITOMICS, INC.....	235
MYRIAD GENETICS, INC.....	236
NANOIVD.....	236
NANOSPHERE.....	237
NANOSTRING TECHNOLOGIES.....	237
NATURALNANO, INC.....	238
NUVERA BIOSCIENCES.....	238
ONCOLYS BIOPHARMA INC.....	239
ON-Q-ITY.....	239
OXFORD GENE TECHNOLOGY.....	240
PATHWORK DIAGNOSTICS.....	240
PERKIN ELMER.....	241
PERKIN ELMER (CONTINUED).....	242
PREDICTIVE BIOSCIENCES.....	243
PROTAGEN AG BIOTECHNOLOGIE.....	243
PROTAGEN AG BIOTECHNOLOGIE (CONTINUED).....	244
QIAGEN.....	245
QUANTRX BIOMEDICAL CORPORATION.....	246
QUANTERIX CORPORATION.....	246
QUEST DIAGNOSTICS.....	247
RANDOX LABORATORIES LTD.....	248
<i>TABLE 103 RANDOX BIOCHIPS ASSAYS PORTFOLIO.....</i>	<i>249</i>
RHEONIX.....	249
ROCHE HOLDING AG.....	250

ROSETTA GENOMICS, LTD.....	251
ROSETTA GENOMICS, LTD. (CONTINUED) .....	252
SIEMENS AG.....	253
SIGNATURE DIAGNOSTICS AG .....	254
SKYLINE DIAGNOSTICS B.V. ....	254
SOMALOGIC, INC. ....	255
T-RAY SCIENCES, INC. ....	255
VERACYTE .....	256
VITATEX, INC. ....	256
XAGENIC .....	256