



NOVARTIS

4D Pharma

Pipeline • Products • Performance • Potential

CONTENTS

Latest Results	2
EXECUTIVE SUMMARY	5
Introduction	5
Current Financial Position	6
Company Performance 2008.....	6
Business Segment Performance	8
Geographic Segment Performance	12
Company Strategy	15
Mergers, Acquisitions and Divestitures	16
Key Agreements.....	19
Research and Development	21
Employees.....	22
Product Performance Forecasts	25
Pipeline Analysis	28
Discontinued Projects	29
Conclusions.....	30
THERAPEUTIC AREA FOCUS.....	33
R&D PIPELINE	35
CARDIOVASCULAR AND METABOLISM.....	38
Marketed Products	38
Diovan/Co-Diovan	38
Exforge	44
Galvus.....	47
Lescol.....	50
Lotrel	55
Rasilez/Tekturna.....	58
Trazec	64
R&D Projects.....	65
Canakinumab	65
HGH191	65
LCI699.....	65
LCZ696	65
SBR759	65
Tekturna FDC	65
VNP489	66
Growth Forecast.....	67
ONCOLOGY/HAEMATOLOGY	68
Marketed Products	68
Exjade.....	68
Femara.....	70
Glivec/Gleevec	74
Sandostatin	85
Tasigna	88
Zometa	90
Others	95
R&D Projects.....	97
AEE788	97
Affinitor.....	97
ASA404	98

AT9311	99
AUY922	100
BEZ235.....	100
BHQ880	100
Gimatecan (LBQ707)	100
HCD122.....	100
LBH589.....	100
LBQ707.....	101
LBY135.....	101
Midostaurin.....	101
Opaxio (formerly known as Xyotax)	101
Pasireotide (SOM230)	102
Patupilone	102
RAF265.....	102
TKI258	102
Growth Forecast.....	103
NEUROSCIENCE	105
Marketed Products	105
Comtan.....	105
Exelon	107
Extavia.....	112
Ritalin/Focalin	113
Stalevo	117
Trileptal.....	119
Others	123
R&D Projects.....	124
AFQ056.....	124
AQW051.....	124
ATI355.....	124
BAF312	124
BGG492.....	124
CAD106.....	124
Fingolimod	125
KRP203.....	129
SAB378.....	129
Valdoxan	129
Growth Forecast.....	132
OPHTHALMICS/DERMATOLOGY/ GASTROINTESTINAL/UROLOGY	133
Marketed Products	133
Elidel	133
Lamisil	136
Lucentis	139
Zelnorm/Zelmac	141
Others	144
R&D Projects.....	146
AIN457	147
BCT194.....	147
Canakinumab	147
DNK333.....	147
Rebamipide.....	147

SAD448.....	147	R&D Projects.....	198
Y39983.....	147	Canakinumab.....	198
Growth Forecast.....	148	Indacaterol.....	198
Ophthalmics.....	148	NIC002.....	200
Dermatology.....	148	NVA237.....	200
Gastrointestinal.....	148	QAE397.....	201
Urology.....	148	QAT370.....	201
INFECTIOUS DISEASES/TRANSPLANTATION/ IMMUNOLOGY.....	149	QAU145.....	201
Marketed Products.....	149	QAX028.....	202
Certican.....	149	QAX576.....	202
Coartem.....	154	QAX935.....	202
Ixiaro.....	156	VAK694.....	202
Sandimmun/Neoral.....	157	Growth Forecast.....	203
Sebivo/Tyzeka.....	160	APPENDIX 1 - FINANCIAL PERFORMANCE.....	207
Others.....	162	Full Year Results 2008.....	207
Celtura.....	163	APPENDIX 2 - KEY AGREEMENTS.....	210
R&D Projects.....	164	Ablynx.....	210
AEB071.....	164	Alfacell Corporation.....	210
Aflunov.....	164	Allergan.....	210
AHT956.....	165	Alnylam Pharmaceuticals.....	211
Albuzeron (ABF656).....	166	AlphaVax Inc.....	213
MenB.....	168	Anadys Pharmaceuticals Inc.....	213
Menveo.....	169	Antisoma plc.....	214
Mycograb.....	170	APT Pharmaceuticals.....	215
NIM811.....	170	Ardana plc.....	215
RSV604.....	170	Arrow Therapeutics Ltd.....	215
Tifacogin.....	171	Ascent Therapeutics Inc.....	215
Valopicitabine.....	171	Astex Therapeutics Ltd.....	216
Valtorcitabine.....	173	AstraZeneca.....	216
Growth Forecast.....	174	Avanir Pharmaceuticals Corporation.....	216
Infectious Diseases.....	174	Avalon Pharmaceuticals.....	217
Infectious Diseases.....	174	Avila Therapeutics.....	217
Transplantation/Immunology.....	174	Bausch & Lomb Inc.....	218
ARTHRITIS/BONE.....	176	Beijing Med-Pharm Corp.....	218
Marketed Products.....	176	Broad Institute / Harvard University.....	218
Aclasta/Reclast.....	176	Bayer Schering Pharma.....	218
Miacalcic/Miacalcin.....	182	Biovail Corporation.....	220
Voltaren/Cataflam.....	185	BTG.....	220
Others.....	187	Celgene Corporation.....	220
R&D Projects.....	188	Cell Therapeutics Inc.....	221
ATF936.....	188	Cerimon Pharmaceuticals Inc.....	222
Canakinumab.....	188	Clinical Data Inc.....	222
QAL964.....	190	CombinatoRx Inc.....	223
PTH (1-34).....	190	Conor Medsystems Inc.....	223
Growth Forecast.....	191	Cytos Biotechnology AG.....	224
RESPIRATORY.....	192	Cytopia Ltd.....	224
Marketed Products.....	192	Dynavax Technologies Corp.....	225
Foradil.....	192	Elan Corporation plc.....	225
Xolair.....	194	Elixir Medical Co.....	226
Others.....	197	Elixir Pharmaceuticals.....	226
		Emisphere Technologies Inc.....	227

Endo Pharmaceuticals	229	TopoTarget AS	256
Epistem Holdings PLC.....	229	Valley Forge Pharmaceuticals Inc	256
Evotec AG.....	229	Vectura Group plc/Arakis Ltd	256
FORMA Therapeutics Inc.....	230	Vernalis plc	257
Galapagos NV	230	Xenon Pharmaceuticals Inc	258
Genelabs Technologies	230	XOMA Ltd.....	258
Genentech	231	APPENDIX 3 - INFRASTRUCTURE.....	260
Gilead Sciences Inc	231	Research and Development Facilities	260
Human Genome Sciences (HGS).....	232	Manufacturing Facilities.....	261
Idenix Pharmaceuticals Inc	232	APPENDIX 4 - KEY PHARMACEUTICAL	
Idera Pharmaceuticals Inc	233	SUBSIDIARIES / JOINT VENTURES	263
Immusol Incorporated	234	Subsidiaries	263
Infinity Pharmaceuticals Inc	235	APPENDIX 5 - PRODUCT INDEX	266
Intercell AG	236		
IVAX Corporation	237		
Kyorin Pharmaceutical Co Ltd	237		
Lonza Group Ltd.....	238		
Meda AB.....	238		
Medarex Inc	238		
Medivir AB	239		
Merck KGaA.....	239		
Merck & Co	240		
MicroDose Technologies Inc	241		
Mitsubishi Tanabe Pharma Corporation	241		
Molecular Insight Pharmaceuticals Inc (MIP).....	242		
MorphoSys AG.....	242		
MDRNA Inc	244		
Nektar Therapeutics.....	244		
Nuevolution AS.....	244		
Portola Pharmaceuticals Inc	245		
Proteon Therapeutics Inc	245		
Ono Pharmaceutical Co Ltd	245		
Opexa Therapeutics.....	246		
Orexo AB	246		
Orion Corporation.....	246		
Otsuka.....	247		
Peptimmune Inc.....	247		
QLT Inc	248		
Radius Health Inc.....	249		
Regeneron Pharmaceuticals	249		
Reliant Pharmaceuticals Inc.....	249		
Saegis Pharmaceuticals Inc.....	250		
sanofi-aventis	250		
Senju Pharmaceutical Co Ltd	251		
Servier	251		
Sigma-Tau	252		
SGX Pharmaceuticals Inc	252		
SkyePharma PLC.....	253		
Takeda.....	254		
Tanox Biosystems Inc/Genentech Inc	254		
UCB.....	255		

INDEX OF TABLES

<i>Principal Operating Results</i>	1
<i>Capital Expenditure By Business Area</i>	6
<i>Capital Expenditure By Geographical Area</i>	7
<i>Research And Development Expenditure By Business Area</i>	8
<i>Sales By Business Area</i>	10
<i>Operating Income By Business Area</i>	11
<i>Total Assets By Business Area</i>	11
<i>Sales By Destination</i>	13
<i>Operating Income By Geographical Area</i>	14
<i>Total Assets By Destination</i>	14
<i>Employees By Business Area (Year End)</i>	23
<i>Employees By Geographical Area (Year End)</i>	24
<i>Recent Product Approvals</i>	27
<i>Major Products, Therapeutic Areas and Sales</i>	33
<i>Major Cardiovascular Products, 2008</i>	38
<i>Major Oncology/Haematology Products, 2008</i>	68
<i>Major Neuroscience Products, 2008</i>	105
<i>Major ODGU Products, 2008</i>	133
<i>Major IDTI Products, 2008</i>	149
<i>Major Arthritis/Bone Products, 2008</i>	176
<i>Major Respiratory Products, 2008</i>	192
<i>Foradil Sales (2004A-2014E)</i>	194
<i>Major Pharmaceutical Research & Development Facilities</i>	260
<i>Major Pharmaceutical Production Facilities</i>	261

INDEX OF CHARTS

<i>Capital Expenditure By Business Area, 2008</i>	6
<i>Capital Expenditure By Geographical Area, 2008</i>	7
<i>Research And Development Expenditure By Business Area, 2008</i>	8
<i>Sales By Business Area</i>	10
<i>Operating Income By Business Area</i>	11
<i>Sales By Destination</i>	13
<i>Operating Income by Geographic Area</i>	14
<i>Employees By Business Area, 2008</i>	23
<i>Employees By Geographical Area (Year End), 2008</i>	24
<i>Forecast Sales of Major Products (2003A-2013E)</i>	26
<i>Top Selling Products, 2008</i>	34
<i>Diovan/Co-Diovan Product Sales (2004A-2014E)</i>	42
<i>Exforge Sales (2007A - 2014E)</i>	46
<i>Galvus Sales (2008E - 2014E)</i>	49
<i>Lescol Sales (2004A-2014E)</i>	54
<i>Lotrel Sales (2004A-2014E)</i>	57
<i>Rasilez/Tekturna Sales (2007A - 2014E)</i>	60
<i>Exjade Sales (2006A-2014E)</i>	70
<i>Femara Sales (2004A-2014E)</i>	73
<i>Glivec/Gleevec Sales (2004A-2014E)</i>	80
<i>Sandostatin Sales (2004A-2014E)</i>	87
<i>Tasigna Sales (2008E - 2014E)</i>	89
<i>Zometa Sales (2004A-2014E)</i>	93
<i>Stalevo/Comtan Sales (2005A-2014E)</i>	107
<i>Exelon Sales (2004A-2014E)</i>	111
<i>Extavia Sales (2009E-2014E)</i>	112
<i>Ritalin Sales (2005A-2014E)</i>	116
<i>Stalevo/Comtan Sales (2005A-2014E)</i>	118
<i>Trileptal Sales (2004A-2014E)</i>	122
<i>Fingolimod (2009E - 2014E)</i>	126
<i>Valdoxan Sales (2009E-2014E)</i>	130
<i>Elidel Sales (2004A-2014E)</i>	136
<i>Lucentis Sales (2007A-2014E)</i>	140
<i>Sandimmun/Neoral Sales (2004A-2014E)</i>	160
<i>Tyzeka Sales (2008E-2014E)</i>	162
<i>Aclasta/Reclast Sales (2006A-2014E)</i>	179
<i>Miacalcin Sales (2004A-2014E)</i>	184
<i>Voltaren Sales (2004A-2014E)</i>	187
<i>Xolair Sales (2005A - 2014E)</i>	197
<i>Sales, Costs and Operating Income</i>	208
<i>Profitability and Research Ratios</i>	208
<i>R&D Expenditure and Capital Expenditure</i>	208
<i>Current Assets, Liabilities and Ratio</i>	209
<i>Assets, Cash and Liquidity</i>	209
<i>Employees and Productivity</i>	209