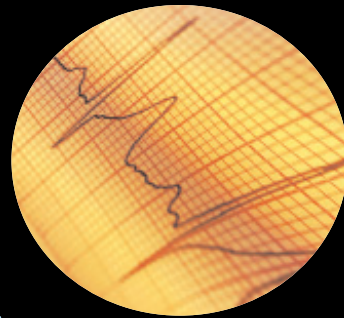
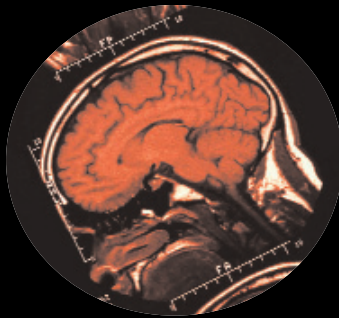


Details of
more than 250
therapeutics
and vaccines in
development,
including analyst
comments on
key products



PIPELINE 2007

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Cardiovascular

GENERATING BUZZ

Torcetrapib Pfizer

Expectations are high for torcetrapib. Pfizer is hoping this compound will come to the rescue of its \$12 billion-seller Lipitor, when its patent expires in 2010. "There's a huge market 25-27 billion worldwide dollars in terms of sales across the dyslipidemia marketplace and this marketplace is evolving," says Rob Delghiaccio, GfK Market Measures category business leader, cardiovascular. "Our data indicate that for physicians, it's not just a matter of getting patients' LDL lowered. It's a matter of lowering total cholesterol and raising the good cholesterol. Torcetrapib is focused on the mechanism of action to raise good cholesterol or HDL." Deutsche Bank pharmaceuticals analyst Barbara Ryan says, "There's no question that HDL as a separate risk factor is going to get increased attention and this may be the first major therapy."

Exforge (valsartan/amlodipine) Novartis

Novartis' Exforge aims to lower blood pressure through two different mechanisms of action—calcium channel blocker Norvasc (amlodipine) and angiotensin receptor blocker Diovan (valsartan)—both the number one prescribed medications in their respective classes.

Diovan is predicted to be a \$4 billion drug for 2006 while Norvasc sales are projected at \$5 billion. Norvasc goes off patent in 2007.

"From that perspective, Exforge seems to be a drug that is particularly a great opportunity out there considering the two components that make it up are received so well in the marketplace," says GfK's Delghiaccio. "We are talking about a hypertension marketplace affect-

ing upwards of 65 million Americans that's 20-25% of the adult population. So, when you combine the two products, Diovan and Norvasc to form Exforge, the opportunities are tremendous. Our data has shown us that physicians want to treat hypertension earlier in the process"

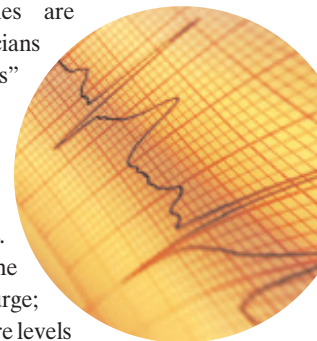
Tekturna (aliskiren) Novartis

Previously known as Rasilez, Tekturna blocks the activity of the rennin enzyme, one of the mechanisms by which hypertension occurs. Typically patients with hypertension have the propensity to wake up with a blood pressure surge; Tekturna is designed to maintain blood pressure levels over a 24-hour dosing period. Novartis could have a blockbuster on their hands as analysts predict sales of between \$1 billion to \$2 billion for this first-in-class drug. Merck is reportedly working on drugs similar to Tekturna. Tekturna has been submitted for FDA approval with a decision anticipated for sometime in early 2007.

Prasugrel Eli Lilly/Daiichi Sankyo

Early indications are that the drug is expected to file in 2007.

This platelet inhibitor is in a head-to-head studies against Bristol-Myers Squibb/Sanofi-Aventis' Plavix. Acute coronary syndrome would compete with Plavix, a \$4 billion a year drug. "This is clearly is a huge opportunity for Lilly, the most important in their pipeline," says Deutsche Bank's Ryan. Prasugrel could tap a massive market if it proves to reduce cardiovascular events better than Plavix.



OTHER KEY PRODUCTS IN THE CARDIOVASCULAR PIPELINE

AGI-1067 AstraZeneca/AtheroGenics
Atherosclerosis (Ph.III)

AZD6140 AstraZeneca
Arterial thrombosis (Ph.III)

AZD7009 AstraZeneca
Atrial fibrillation-conversion (Ph.II)

AZD9684 AstraZeneca
Thrombosis (Ph.II)

AZD0837 AstraZeneca
Thrombosis (Ph.II)

AZD2479 AstraZeneca
Dislipidemia (Ph.I)

AZD6610 AstraZeneca
Comb. dislipidaemia/diabetes (Ph.I)

BAY 68-4986 Bayer
Coronary heart disease (Ph. undisc.)

BAY 68-2521 Bayer
Pulmonary hypertension (Ph. undisc.)

BAY 60-5521 Bayer
Dislipidemia (Ph. undisc.)

BAY 58-2667 Bayer
Acute heart failure (Ph. undisc.)

Aviptadil Biogen Idec
Pulmonary arterial hypertension (Ph.III)

RSD-1235 Cardiome/Astellas
Atrial fibrillation (Ph.III)

DG031 DeCode Genetics
Artery inflammation (Ph.III)

Thelin Encysive Pharmaceuticals
Pulmonary hypertension (Ph.III)

Nebivolol Forest Pharmaceuticals
Hypertension (Ph.III)

480848 GlaxoSmithKline
Prevent arteriosclerosis and heart attack (Ph.III)

Reopro(abciximab) J&J
Facilitated percutaneous coronary intervention (Ph.III)

Rivaroxaban (Bay 59-7939) J&J
Prevents of venous thromboembolism in hip, knee replacement surg. (Ph.III)

PPAR alpha agonist Eli Lilly
Lowers triglycerides, may raise good cholesterol early stage

Prasugrel Eli Lilly
Acute coronary syndrome (Ph.III)

MK-0524A Merck
Atherosclerosis (Ph.III)

MK-0524B Merck
Atherosclerosis (Ph.III)

MK-0859 Merck
Atherosclerosis (Ph.II)

MK-0354 Merck
Atherosclerosis (Ph.II)

MK-0633 Merck
Atherosclerosis (Ph.I)

MK-8141 Merck
Cardiovascular (Ph.I)

MK-0448 Merck
Cardiovascular (Ph.I)

Alfimeprase Nuvel
Clot-buster (Ph.III)

ETC-216 Pfizer
Cholesterol removal (Ph.III)

R1593 Roche
Dyslipidemia (Ph.I)

R1658 Roche
Dyslipidemia (Ph.I)

R1663 Roche
Anticoagulant (Ph. undisc.)

R1664 Roche
Dislipidemia (Ph.I)

Thrombin receptor Schering-Plough
Arterial thrombosis antagonist (Ph.II)

Celacade Vasogen
Heart failure (Ph.III)

GAP-486 Wyeth
Ventricular arrhythmia (Ph.II)

GAP-134 Wyeth
Arrhythmias (Ph.I)

LXR-623 Wyeth
Atherosclerosis (Ph.I)

Diabetes

GENERATING BUZZ

Acomplia Sanofi-Aventis

Acomplia's mechanism of action helps to inhibit the endocannabinoid system, which creates hunger cravings in the brain.

Acomplia is currently available in Europe and Mexico as a combination treatment for patients with Type 2 diabetes and as a diet and exercise alternative for overweight patients not afflicted by diabetes.

"Diabetics are more likely than the general population to be obese," explains Dave Jacobsen, SVP of the Roper Global Diabetes Management Program, GfK. "So, the promise of helping patients control their appetite, reduce food intake and slow its absorption into the system could have a significant impact on people's ability to control blood sugar levels. (Acomplia) will have to be looked at as a combination treatment to be taken along with diabetes medications."

In February, Sanofi-Aventis received an approvable letter for use of Acomplia as an obesity treatment, but the FDA deemed the drug "non-approvable" as a smoking cessation treatment. Outright US approval is expected in early 2007. Analysts predict a blockbuster three times over, but, with an estimated price tag of \$100 for a month's supply, the drug may need a major marketing push to help it achieve its sales potential.

Galvus Novartis

Galvus, if approved, will face fierce competition in the growing diabetes treatment market, most likely from relative newcomers—Lilly's Byetta (approved in April), Pfizer's Exubera (approved in January) and the in-class rival Merck's Januvia (approved in October). Both Galvus and Januvia are DPP-4 (dipeptidyl-peptidase 4) inhibitors, which enhance the body's ability to lower elevated blood sugar. Januvia was approved by the FDA in October. Meanwhile Galvus is still awaiting an FDA nod. In November, Novartis asked the FDA to extend the review period for Galvus by three months to allow the agency to exam-

ine new clinical trials data. In other words, it's still too early to tell how this new market will shape up.

One thing is certain, according to Lehman Brothers large caps pharmaceutical analyst Tony Butler. "The DPP-4 inhibitors offer enhanced utility to Type 2 diabetics over some of the existing therapies," he says. "There may be some similar agents beyond these but they may be too early in development to make judgments right now."

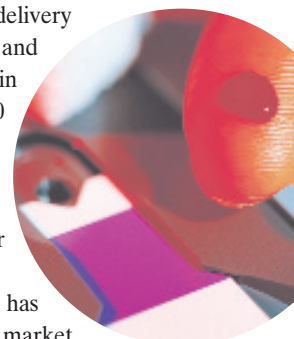
Dave Jacobsen, SVP of the Roper Global Diabetes Management Program, GfK, says, "This could become a very crowded marketplace. We see no abatement in the growth of Type 2 diabetes. That's the simplest answer. It's still an epidemic in this country. That said, there will be considerable potential for these products."

Technosphere MannKind

The approval in January of Pfizer's Exubera inhaled insulin was followed by reports that rival formulations are also seeing promising trials results. The Technosphere delivery system is rumored to work faster than Exubera and other inhaled insulins in development. With this in mind some analysts are predicting sales of \$500 million by 2015. To ring in these kinds of sales, MannKind must first find a suitable marketing partner, analysts say. Technosphere is currently in Phase III clinical and is expected to file for approval in 2008.

Meanwhile, Pfizer's first-to-market Exubera has had its share of delays and is not due to hit the market with force until January or February 2007. "When you look at the scripts for Exubera now, it's kind of pathetic," says Deutsche Bank's Ryan.

"Once we get into the first quarter of 2007 we will have something more representative (of what the market could look like)," she says.



OTHER KEY PRODUCTS IN THE DIABETES PIPELINE

AMG 221 Amgen

Type 2 diabetes (Ph.I)

AZD1175 AstraZeneca

Diabetes (pre-clinical)

AZD2207 AstraZeneca

Diabetes (pre-clinical)

PC-DAC:Exendin-4 (CJC-1134)

Conjuchem

Type 2 diabetes, (Ph.II)

PC-DAC:Insulin Conjuchem

Type 1 and 2 diabetes (Ph. undisc.)

AERx iDMS Novartis

Type 1 and 2 diabetes (Ph.I)

NN5401 Novartis

Type 1 and 2 diabetes (Ph.II)

Inhaled insulin Kos

Type 2 diabetes (Ph.II)

Inhaled insulin Eli Lilly

Type 2 diabetes (Ph.III)

625019 GlaxoSmithKline

Type 2 diabetes (Ph.II)

716155 GlaxoSmithKline

Type 2 diabetes (Ph.II)

189075 GlaxoSmithKline

Type 2 diabetes (Ph.II)

677954 GlaxoSmithKline

Type 2 diabetes (Ph.II)

denagliptin GlaxoSmithKline

Type 2 diabetes (Ph.II)

solabegron GlaxoSmithKline

Type 2 diabetes (Ph.II)

MK-3887 Merck

Diabetes (Ph.I)

MK-0533 Merck

Diabetes (Ph.II)

R1439 Roche

Type 2 diabetes (Ph.II)

R1440 Roche

Type 2 diabetes (Ph.II)

R1511 Roche

Type 2 diabetes (Ph.O)

R1579 Roche

Type 2 diabetes (Ph.I)

R1583 Roche

Type 2 diabetes (Ph.II)

R7089 Roche

Type 2 diabetes (Ph.O)

PPM-201 (oral) Wyeth

Type 2 diabetes (Ph.II)

PPM-202 (oral) Wyeth

Type 2 diabetes (Ph.II)

PPM-204 (oral) Wyeth

Type 2 diabetes (Ph.II)

Central nervous system

GENERATING BUZZ

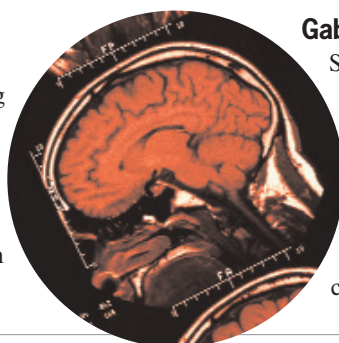
Alzhemed (tramiprosate) Neurochem

Flurizan MPC-7869 Myriad Genetics

A new cadre of compounds seeks to modify the brain processes that cause Alzheimer's disease. Alzhemed and Flurizan reduce amyloid deposits in the brain. Both compounds are in Phase III trials in the US. These so-called modifying drugs would offer an advantage over Aricept, Exelon, Razadyne and Namenda which relieve some symptoms and slow progression, but do not stop it. "So far this is an extremely unfulfilled marketplace," says Kim Lazarus, GfK Market Measures.

Frisium Ovation

About a quarter of neurologists report hearing about receptor antagonist Frisium, which, already approved in Canada, is in Phase II trials in the US. Competition will come from Eisai/Novartis rufinamide, which received an FDA approvable letter in September, and lacosamide from Schwarz, in Phase III trials.



Bifeprunox Solvay with Wyeth

Asenapine Akzo Nobel with Pfizer

Partial agonists can increase dopamine activity in one part of the brain while diminishing it in others, correcting chemical imbalances in patients suffering from schizophrenia and bipolar disorder. Bifeprunox and Asenapine are in Phase III trials. Products with new mechanisms of action can differentiate themselves in this market, says Geoff Penney, category business leader, psychiatry, GfK. Yet data indicate challenges. Akzo announced mixed results for schizophrenia patients taking Asenapine. Such issues could exacerbate problems with compliance and persistency.

Gaboxodol Lundbeck with Merck

Sleep aid gaboxodol touts a different mechanism of action from non-benzodiazepines like Ambien and Lunesta. That may give it less potential for addiction. But, warns Penney, it may not achieve the same efficacy, something that may hinder its success. "Less potential for addiction is important for this market but must be accompanied by equal efficiency to those non-benzodiazepines," he says.

OTHER KEY PRODUCTS IN THE CNS PIPELINE

ABT-089 Abbott/Astellas
Schizophrenia (Ph.II)

AZD3480 AstraZeneca
Cog. Dis., Alzheimer's (Ph.II)

AZD9272 AstraZeneca
Neuropathic pain/anxiety (Ph.I)

AZD2327 AstraZeneca
Anxiety/depression (Ph.I)

AZD5904 AstraZeneca
Multiple Sclerosis (Ph.I)

AZD1080 AstraZeneca
Alzheimer's (Ph.I)

CERE-120 Ceregene
Restless Leg Syndrome (Ph.II)

E2007 Eisai
Migraine prevention (Ph.II)

E2007 Eisai
Epilepsy (Ph.II)

Rufinamide Eisai/Novartis
Epilepsy (submitted)

Rosiglitazone GlaxoSmithKline
Alzheimer's (Ph.III)

Trexima GlaxoSmithKline/Pozen
Migraine (submitted)

Paliperidone ER OROS J&J
Schizophrenia/bipolar (submitted)

Paliperidone palmitate IM J&J
Schizophrenia (Ph.III)

Istradefyline (KW-6002) Kyowa
Restless Leg Syndrome (Ph.IIa)

MK-0657 Merck
Parkinson's (Ph.I)

MK-0249 Merck
Psychiatric disorders (Ph.I)

MK-3756 Merck
Psychiatric disorders (Ph.II)

MK-0759, MK-0974, MK-6721
Merck All pain (all Ph.II)

FTY720 (fingolimod) Novartis
Multiple Sclerosis (Ph.III)

Licarbazepine Novartis
Psychosis/bipolar (Ph.III)

R1450 Roche
Alzheimer's (Ph.I)

R1551 Roche
Schizophrenia (Ph.O)

R1647 Roche
Depression (Ph.O)

R1678 Roche
Schizophrenia (Ph.I)

R4996, R641 Roche
Both Alzheimer's (both Ph.O)

R7090 Roche
Anxiety (Ph.I)

R7118 Roche
Schizophrenia (Ph.O)

Lisuride Schering AG
Restless Leg Syndrome (Ph.III)

Adenosine 2a receptor antagonist
Schering-Plough Parkinson's (Ph.II)

Lacosamide Schwarz
Epilepsy (Ph.III)

Neupro (rotigotine) Schwarz
Restless Leg Syndrome (patch) (Ph.III)

AVE1625 Sanofi-Aventis
Alzheimer's, schizo (Ph.IIa)

AVE9897 Sanofi-Aventis
Multiple Sclerosis (Ph.I)

Eplivanserin (SR 46349) Sanofi-Aventis
Insomnia (Ph.III)

HP184 Sanofi-Aventis
Spinal cord injury (Ph.IIa)

M100907 Sanofi-Aventis
Insomnia (Ph.IIb)

Rimonabant Sanofi-Aventis
Smoking cessation (submitted)

Saredutant (SR 48968) Sanofi-Aventis
Depression (Ph.III)

SR 147778 Sanofi-Aventis
Smoking, alcohol dep. (Ph.I)

SR 57667 Sanofi-Aventis
Alzheimer/Parkinson's (Ph.IIb)

SR 58611 Sanofi-Aventis
Depression (anxiety) (Ph.III)

SSR 125543 Sanofi-Aventis
Depression, anxiety (Ph.I)

SSR 149415 Sanofi-Aventis
Depression, anxiety (Ph.IIa)

SSR 180575 Sanofi-Aventis
Neurodegenerative dis. (Ph.I)

SSR 411298 Sanofi-Aventis
Depression, anxiety (Ph.I)

SSR 504734 Sanofi-Aventis
Schizophrenia (Ph.I)

SSR 591813 Sanofi-Aventis
Smoking cessation (Ph.III)

Xaliproden (SR 57746) Sanofi-Aventis
Alzheimer's (Ph.III)

Teriflunomide (HMR1726) Sanofi-Aventis
Multiple sclerosis (Ph.III)

Safinamide (NW-1050) Seroxo/
Newron Restless Leg Synd. (Ph.III)

Bifeprunox Solvay/Wyeth
Bipolar, depression (Ph.III)

Bapineuzumab (AAB-001) Wyeth/
Elian Alzheimer's (Ph.II)

Desvenlafaxine Wyeth
Major depression (submitted),
Neuropathic pain (Ph.III)

Lecozotan/SRA 332 Wyeth
Alzheimer's (symp.) (Ph.II)

Vabicaserun Wyeth
Schizophrenia (Ph.II)

Oncology

GENERATING BUZZ

Provenge (sipuleucel-T) Dendreon

Targeted therapies are among the most promising in cancer. Provenge is actually a vaccine designed to stimulate the patient's own immune system to target a tumor antigen called PAP found in 95% of prostate cancers. "[Provenge] has the cachet of being a very scientific approach rather than your typical chemotherapy shotgun," says Michael Galvin, Ph.D., vice president, GfK V2. Submitted in August, the product is under fast-track review. Phase III trials showed a significant number of men with early and advanced stages of prostate cancer benefited. While not inexpensive, the infusion therapy has shown reasonable safety and efficacy in a disease with few options. The only approved therapy is Taxotere (docetaxel), which can keep people alive for months.

Tykerb (lapatinib) GlaxoSmithKline

Tyrosine kinase inhibitors are another targeted therapy. Lapatinib may block two different receptors, HER1 and HER2, which has a role in a subset of breast cancer. The promise of lapatinib is first, it's given orally once a day (Genentech's approved antibody

Herceptin is given intravenously every month). Second, it can help reduce the development of brain metastases, a problem with breast cancer. An international trial with oral chemo agent Xeloda worked so well that it was stopped early. Analysts say Tykerb, which is awaiting US and European approval, could bring in more than \$1 billion yearly.



CP-675,206 Pfizer

Ipilimumab/MDX-010 Medarex with Bristol-Myers Squibb

Nothing has been shown to adequately improve outcomes in melanoma in 30 years, so there's a great deal of excitement among doctors about these two monoclonal antibodies. They work by binding to CTLA-4, a molecule on T cells that is believed responsible for suppressing immune response. Both are in phase III, and responses have been encouraging: "People can live years, decades out, who normally have a life expectancy of about six months," says Galvin.

OTHER KEY PRODUCTS IN THE ONCOLOGY PIPELINE

AMG 102, AMG 386, AMG 479, AMG 655, AMG 951 Amgen
All cancer (all Ph.I)

AMG 706 Amgen
Breast, NSCL, GI stromal (Ph.II)

Denosumab Amgen Bone metastases in breast cancer (Ph.II)

Denosumab Amgen Prolonging bone metastases-free survival (Ph.III)

AP23573 Ariad
Soft-tissue, bone sarc. (Ph.II)

AZD2171 AstraZeneca
NSCL, colon (Ph.II/III)

AZD4054 AstraZeneca
Prostate (Ph.II)

AZD5896, AZD6244 AstraZeneca
Both solid tumors (both Ph.II)

AZD0530, AZD1152 AstraZeneca
Solid tumors, Hemato. maligs. (Ph.II)

AZD4769, AZD1689 AstraZeneca
Both solid tumors (both Ph.II)

AZD2281 AstraZeneca
Breast cancer (Ph.I)

Zactima AstraZeneca
NSCLC (Ph.III), Medullary thyroid (Ph.II)

Nexavar Bayer/Onyx Met. melan. (Ph.III); Hepatic, NSCL, Others (Ph.II)

E7080, E7974, E7820, E7389 Eisai All cancer (all Ph.I)

E7389 Eisai Breast cancer (Ph.II)

E7389 Eisai Prostate cancer (Ph.II)

Systemic hedgehog antagonist Genentech Solid tumors (Ph.O)

Trastuzumab-DM1 Genentech Metastatic breast (Ph.I)

Apo2L/TRAIL Genentech/Amgen Solid tumors (Ph.Ib)

PARP inhibitor Genentech/Inotek Mal. Melanoma (Ph.Ib)

MAGE-A3 immuno. vaccine GSK NSCL (Ph.III)

Pazopanib GSK Adv. RCC (Ph.II)

Acapodene GTx Prost. cancer prev (Ph.III)

Doxil (doxorubicin) J&J Mult. myeloma, breast cancer (Ph.III)

Yondelis (trabectedin) J&J Relapsed ovarian (Ph.III)

Zarnestra (tipifarnib) J&J Acute myeloid leuk. (Ph.III)

EPO906 (patupilone) Novartis Solid tumors (Ph.III)

LBQ707 (gimatecan) Novartis Solid tumors (Ph.II)

PTK787 (vatalanib) Novartis Colorectal (Ph.III)

RAD001 (everolimus) Novartis Solid tumors (Ph.II)

Tasigna (nilotinib) Novartis Leukemia (submitted)

R1492 Roche/Kosan Solid tumors (Ph.II)

R1454, R1507, R1530 Roche All solid tumors (all Ph.I)

R1594 (ocrelizumab) Roche/Genentech Hemato. malignancies (Ph.I)

R1645 Roche/Kosan Solid tumors (Ph.I)

R7159 Roche Non-hodkins lymph. (Ph.O)

R7204 Roche/Plexxikon Malig. Melanoma (Ph.O)

MK-0429, MK-0752, MK-4721, MK-0731, MK-0646, V930 Merck All cancer (all Ph.I)

MK-0822 Merck Cancer (Ph.II)

MK-0457 Merck Cancer (Ph.III)

Zolinza Merck Cutaneous T-cell lym (submitted)

PF-3512676 Pfizer/Coley NSCL (late stage)

Alvocidib (HMR 1275) Sanofi-Aventis CLL (Ph.III)

AVE0005 Sanofi-Aventis/Regeneron Solid tumors (Ph.IIa)

AVE8062 Sanofi-Aventis Solid tumors (Ph.I)

AVE9633 Sanofi-Aventis Acute Myeloid Leuk (Ph.I)

CEP 7055 Sanofi-Aventis/Cephalon Solid tumors (Ph.I)

SR 31747 Sanofi-Aventis Prostate (Ph.IIb)

Tirapazamine (SR 259075) Sanofi-Aventis H&N K (Ph.III)

Xaliproden (SR 57746) Sanofi-Aventis Chemo-induced neuro. (Ph.III)

XRP6258 Sanofi-Aventis Breast (Ph.IIa)

XRP9881 Sanofi-Aventis Breast K (Ph.III)

Peg-Intron Schering-Plough Malig. Melanoma (Ph.III)

Sarasar Schering-Plough Breast, solid tumors (Ph.II)

Telcyta/TLK286 Telik Ovarian, NSCL (Ph.III)

Bosutinib Wyeth Solid tumors (Ph.II)

HKI-272 Wyeth Breast cancer, NSCL (Ph.II)

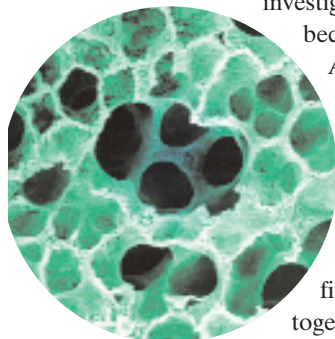
Temsirolimus Wyeth Mantle cell lympho. (Ph.III), RCC (Ph.III)

Torisel (temsirolimus) Wyeth RCC (submitted)

Respiratory

GENERATING BUZZ

Combo spray: Allermist (fluticasone) GlaxoSmithKline
 “Allergic rhinitis is not a category that’s dramatically underserved,” explains Lazarus, category business leader, respiratory & neurology, GfK Market Measures. “Doctors are fairly comfortable with what’s out there.” Nevertheless, the rate of physician awareness for investigational combination products runs high, because of the need for better compliance.



Among the most anticipated respiratory compounds is Allermist. It addresses nasal and ocular (itchy eye) symptoms of the condition, a combination which is not a focal point of any approved drug. The product is in Phase III clinical trials and was slated for submission in 2006. Others firms are putting allergy combo products together. Alcon plans to file a US marketing application for a nasal spray formulation of its Patanol (olopatadin) ocular allergy drug in 2007. Physicians rate the Alcon and GSK combo drugs relatively high in terms of expected usefulness, Lazarus says.

Xyzal (levocetirizine)
 UCB Pharma with Sanofi-Aventis

This once-daily antihistamine for seasonal and perennial allergic rhinitis was first launched in Europe in 2001 and is marketed in 49 countries. Still, it’s not on US physicians’ radar screens yet, says

Lazarus. That may change. UCB Pharma, which licensed the European patents to levocetirizine back in 1999, earlier this year optioned the US patents, as well, from Sepracor. It then turned around and inked a US co-promotion agreement with marketing giant Sanofi-Aventis, under which the two would share profits from Xyzal. UCB submitted Xyzal to the FDA in July and is awaiting approval.

Flutiform (formoterol + fluticasone)
 SkyePharma with Abbott

Asthma is another category seeing new combinations, in this case joining long-acting bronchodilators to open airways and prevent asthma attacks with corticosteroids to reduce irritation and swelling in air passages. Flutiform follows the pattern, uniting formoterol with fluticasone in an inhaler. Unable to find a late-stage development partner for Flutiform, SkyePharma decided to take the drug through trials itself. It’s in Phase III for asthma in adults and adolescents, and SkyePharma expects US filing in 2007. “Physicians are seeing it as a positive for the category,” Lazarus says, although their clinical experience with Flutiform is low. US marketing rights to Flutiform belong to Kos, the specialty firm being purchased by drug giant Abbott. The market is dominated by GSK’s Advair Diskus (salmeterol + fluticasone). SkyePharma claims formoterol takes effect more rapidly than salmeterol and that US physicians prefer the safety and efficacy profile of fluticasone over budesonide, the steroid in AstraZeneca’s forthcoming Symbicort (formoterol + budesonide), due to launch mid-2007. Physician ratings of Flutiform for use in this disease state are relatively high, Lazarus notes.

RESPIRATORY PRODUCTS IN THE PIPELINE

- | | |
|--|---|
| Daxas (roflumilast) Altana COPD, Asthma (Ph.III) | NVA237 (glycopyrronium bromide) Novartis COPD Phase II |
| AMG 009 Amgen Asthma (Ph.I) | QAB149 (indacaterol) Novartis Asthma, COPD Phase III |
| AMG 317 Amgen ASTHMA (Ph.I) | R1671 Roche Asthma (Ph.O) |
| AZD9056 AstraZeneca COPD (Ph.II) | R667 Roche Emphysema (Ph.II) |
| AZD8309 AstraZeneca COPD (Ph.I) | Pleconaril Schering-Plough Cold, Asthma exacerbations (Ph.III) |
| AZD3342 AstraZeneca COPD (Ph.I) | Claritin/Singulair Schering-Plough/Merck Seasonal Allergic Rhinitis (Ph.III) |
| AZD1981 AstraZeneca Asthma (Ph.I) | Asmanex/QAB149 (indacaterol) combination Schering-Plough/Novartis Asthma, COPD (Ph.III) |
| AZD5904 AstraZeneca COPD (Ph.I) | Asmanex/Foradil Schering-Plough/Novartis Asthma (Ph.III) |
| Elastase inhibitor Bayer COPD (Ph.I) | |
| MK-0633 Merck Resp. disorders (Ph.I) | |

RESPIRATORY DRUGS BY US SALES, 1ST HALF '06

| Product | US Sales (\$ thousands) | Category |
|--------------------------|-------------------------|----------------|
| Advair Diskus (GSK) | 2,244,834 | Asthma/bronc. |
| Singulair (Merck) | 1,695,435 | Allergy/asthma |
| Zyrtec (Pfizer) | 753,458 | Allergy |
| Nasonex (Schering-Pl.) | 453,114 | Allergy |
| Flonase (GSK) | 296,900 | Allergy |
| Clarinx (Schering-Pl.) | 195,537 | Allergy |
| Nasacort AQ (Sanofi-Av.) | 177,253 | Allergy |
| Rhinocort Aqua (AZ) | 156,118 | Alergy |
| Serevent Diskus (GSK) | 97,597 | Asthma |
| Allegra (Sanofi-Av.) | 80,390 | Allergy |

Prescription asthma and allergy drugs only, excluding mail service
 Source: IMS Health, National Sales Perspective

Others

GENERATING BUZZ

Cervarix GlaxoSmithKline

Cervarix is GlaxoSmithKline's answer to Merck's much heralded Gardasil, which was approved by the FDA in June 2006. The vaccine is for the prevention of cervical cancer caused by the human papilloma virus. GSK is targeting submission by the end of 2006.

The market for Cervarix is still immature with plenty of potential for growth, says Sue Ramspacher, category business leader, female health, GfK Market Measures. "With Gardasil bringing in \$70 million in its first quarter, the perception is that it is certainly being well received," she says. "It's also being well received by managed care organizations."

Wall Street analysts project Gardasil sales to reach over \$1 billion by 2010. GSK hopes the scenario for Cervarix is similar, assuming US regulators give grant the vaccine market approval.

Telaprevir Vertex Pharmaceuticals

One of the most anticipated developments on the way for Hepatitis C (HCV) is Vertex Pharmaceuticals' STAT-C (Specifically Targeted Anti-viral Therapy-HCV), Telaprevir (VX-950), presently in Phase IIb clinical development. "There is an immense unmet need in the treatment of HCV because many of the current therapies available are not necessarily highly effective," says Noah Pines, EVP, GfK V2.

Telaprevir is being studied for use in combination with pegylated interferon and ribavirin and presented encouraging data at the October American Association for the Study of Liver Diseases meeting in Boston. Results showed that 24 of 26 patients who received Telaprevir, followed by six months of standard therapy, had undetectable levels of the virus, and many had a sustained response after three months without additional treatment. If approved, Telaprevir would be the first-in-class HCV protease inhibitor creating a new market. Schering-Plough is also working on a similar compound that has yet to be named.



Cimzia (certolizumab pegol) UCB Pharma/Nektar

This pegalated anti-TNF agent from UCB Pharma is on track to get a possible initial indication for Crohn's disease next year. But, like other drugs in its class, Cimzia may be effective against a range of autoimmune inflammatory diseases, including rheumatoid arthritis in 2008 and psoriasis 2010-2012. If it achieves a label for Crohn's by early 2007—for which it has been filed in the US and EU—Cimzia could beat Abbott's RA drug Humira to the punch. Humira is being studied in Crohn's, among other indications. One potential advantage of Cimzia: once-a-month administration, thanks to Nektar's Advanced PEGylation delivery technology. Patients with RA and severe Crohn's would need weekly Humira injections. In addition, notes GfK V2 executive vice president John Taenzler, Ph.D., Cimzia comes from a viral source, so manufacturing is less expensive. "Considering these drugs cost \$10,000-\$15,000 a year, any sort of cost benefit could give [Cimzia] a huge advantage," he says.

WOMEN'S HEALTH PIPELINE PRODUCTS

AP23573 Ariad

Soft-tissue, bone sarcomas (Ph.II)

AZD2171 AstraZeneca Non-small cell lung; Colorectal (Ph.II/III)

Acapodene GTX

Prostate cancer prevention (Ph.III)

Nilotinib/AMN107 Novartis

Leukemia (submitted)

Telcyta/TLK286 Telik

Ovarian; non-small cell lung (Ph.III)

KEY PRODUCTS IN THE IMMUNOLOGY PIPELINE

Monoclonal antibody Abbott

Multiple sclerosis, Crohn's disease, psoriasis (Ph.II)

IL-18 inhibitor Abbott autoimmune disease (Ph.I)

AZD5672 AstraZeneca RA (Ph.I)

AZD8309 AstraZeneca RA (Ph.I)

AZD8955 AstraZeneca Osteoarthritis (Ph.II)

AZD9056 AstraZeneca IBD (Ph.II), RA (Ph.II)

Golimumab/CNTO 148 Centocor Rheumatoid arth. (Ph.II)

2nd Generation anti-CD20 Genentech RA (Ph.III)

BR3-Fc Genentech

RA (Ph.Ib); Sjögren's Syndrome (Ph.II)

CNTO1275 J&J

Psoriasis (Ph.III)

CNTO148 J&J

RA, ankylosing spondylitis, psoriatic arthritis (Ph.III) (separate trials)

AEB071 Novartis

Organ rejection (Ph.I)

Tobramycin (TIP) Novartis

Cystic fibrosis (Ph.III)

Valcyte (R127/valganciclovir)

Roche Ulcerative colitis (Ph.I)

R1295 Roche

MS (Ph.I)

R1503 Roche

RA (Ph.II)

R1541 Roche

Ibd (Ph.I)

R1599 Roche

Osteoarthritis (Ph.O)

CellCept (R99) Roche/Aspreva

Lupus (Ph.III)

Actemra (R1569/tocilizumab)

Roche/Chugai RA (Ph.III)

Actemra (R1569/tocilizumab)

Roche/Chugai sJIA (Ph.III)

R1594 (Ocrelizumab) Roche/

Genentech RA (Ph.II)

MabThera/Rituxan RX105 (rituximab)

Roche/Genentech/Biogen Idec RA (Ph.III)

SR 140333 NK1 antag. Sanofi-

Aventis Ulcerative colitis (Ph.IIb)

icatibant (HOE140) B2 Bradykinin

antag. Sanofi-Aventis Osteo-arthritis pain (Ph.IIa)

AVE1701 CCR1 antagonist; back-

up AVE9897 Sanofi-Aventis Rheumatoid Arthritis (Ph.I)

AVE9897 CCR1 antagonist Sanofi-

Aventis Rheumatoid arthritis (Ph.I)

TRU-015 Wyeth

Rheumatoid arthritis (Ph.II)

Desvenlafaxine Wyeth

Fibromyalgia (Ph.III)