



Merck's Partnering Transformation

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Merck Research Laboratories
ICIC
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COMBINING OUR STRENGTHS
SHARING OUR SUCCESSES

The Global Health Care Market is Challenging, But There are Many Opportunities

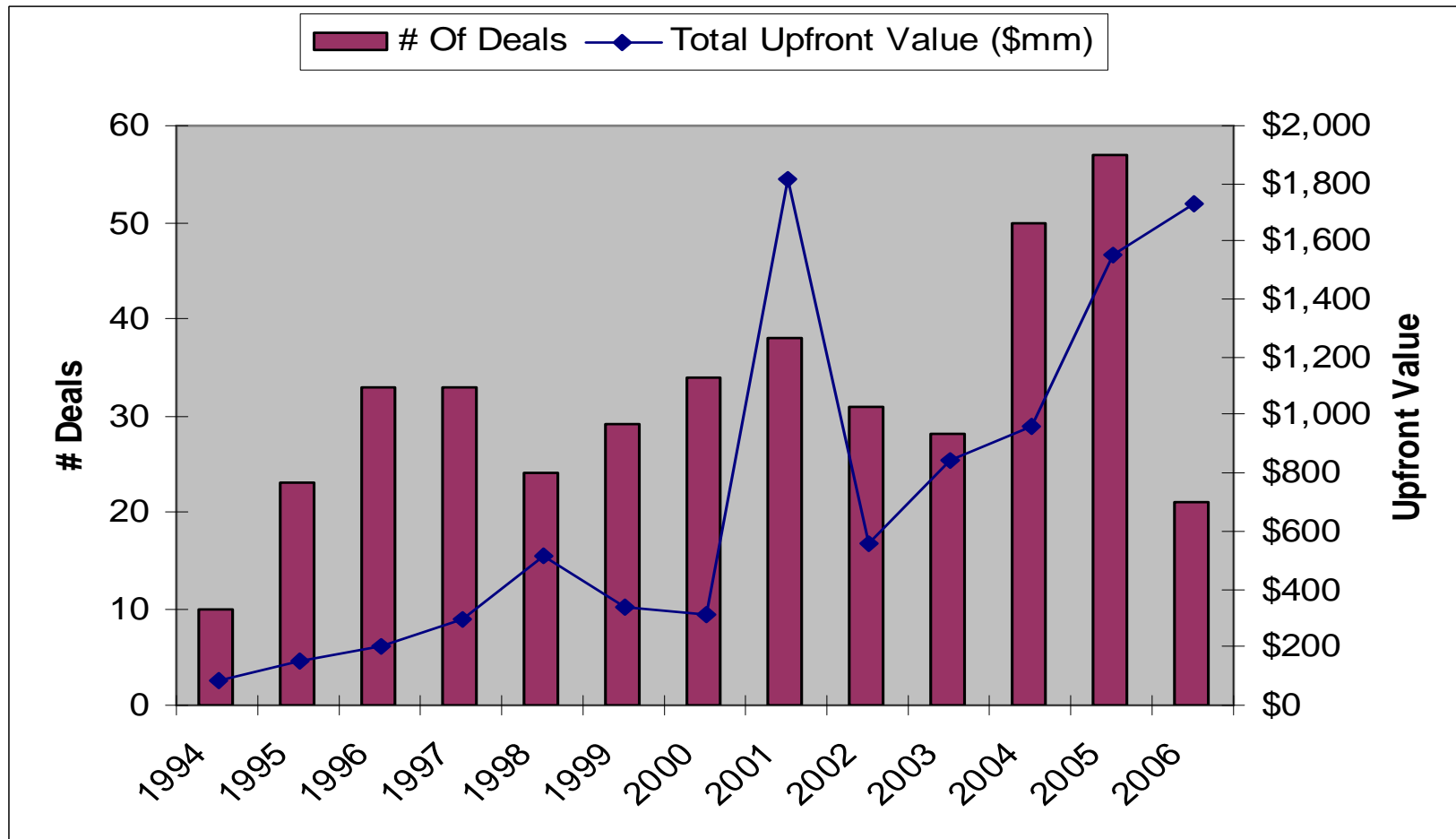
Challenges

- Declining success rates in new drug development
- Rising cost of drug development and commercialization
- Increasing price sensitivity and growing reimbursement pressures
- Greater regulatory scrutiny

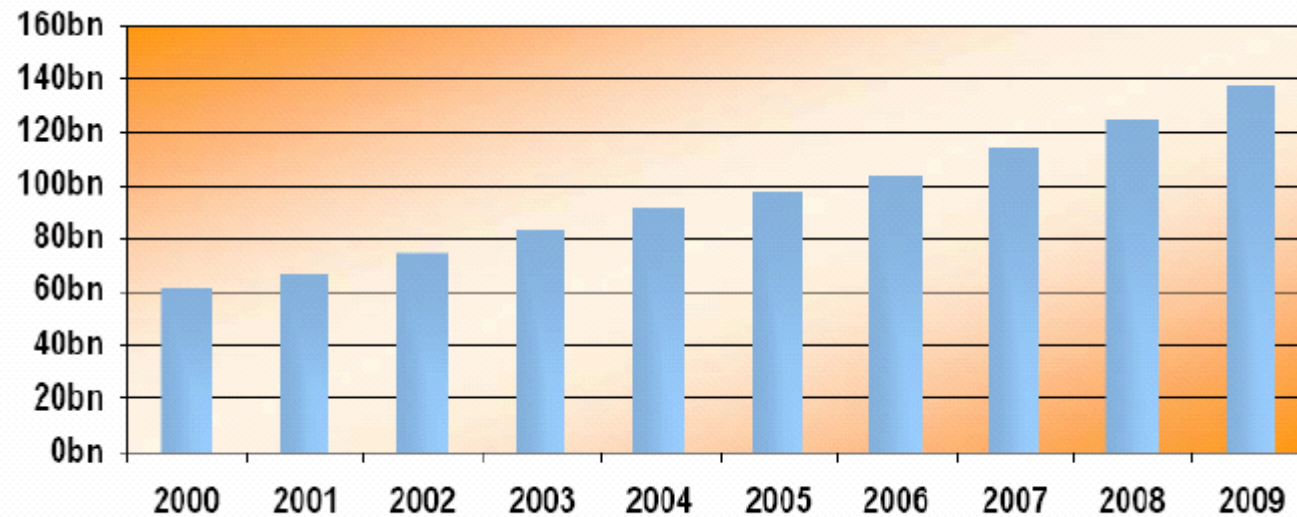
Opportunities

- Rising disease incidence globally
- High unmet medical needs (e.g. Alzheimer's, Oncology)
- New technologies for research and development
- Expanding access, income, and insurance coverage in key emerging pharma markets

Costs of late-stage deals continue to rise



In-Licensing Revenue will become increasingly Important to Big Pharma.

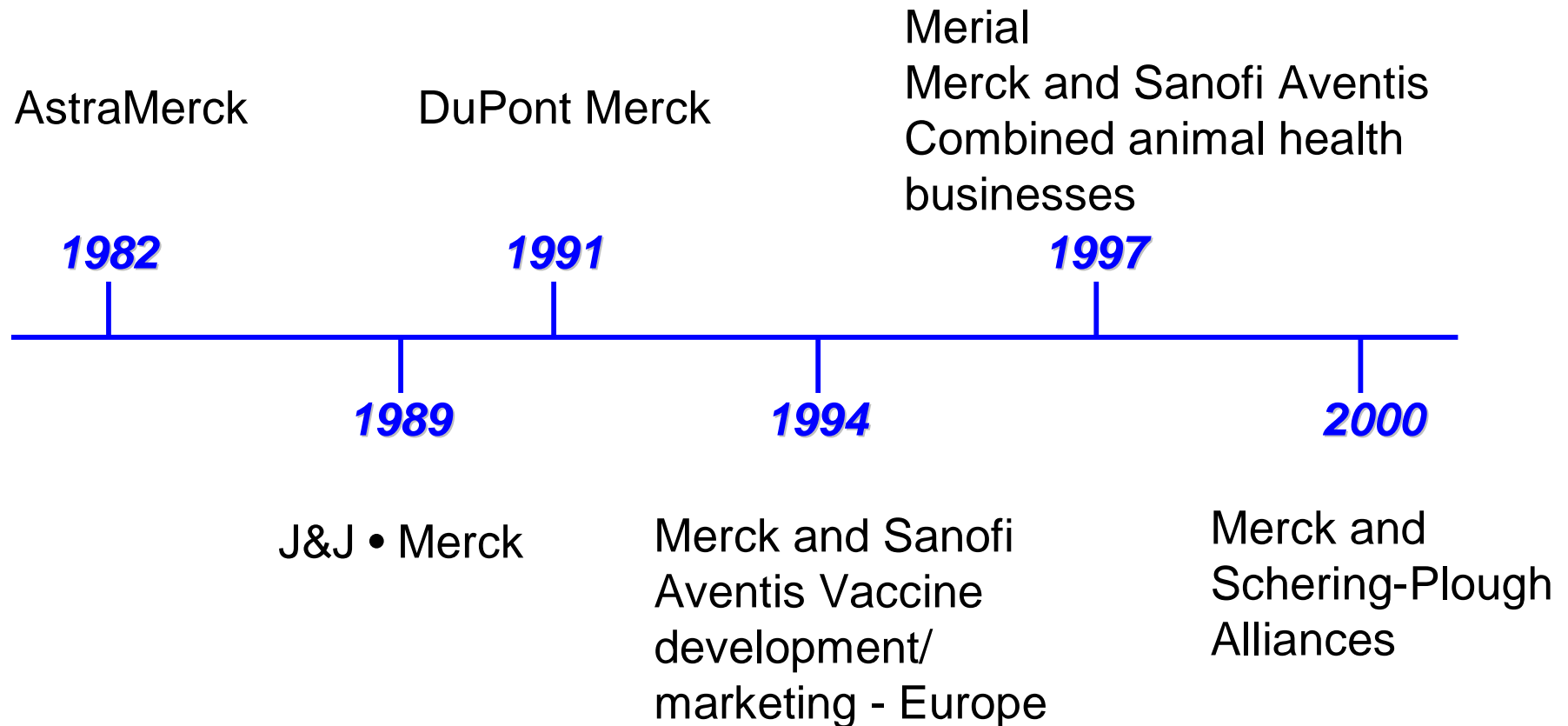


In-Licensed revenue to double between 2000 and 2009 (Source: EvaluatePharma)

Merck has been involved since the early 1980's in licensing....

- ***Yamanouchi / J&J***
**PEPCID®/PEPCID AC®/
PEPCID COMPLETE®**
- ***Dupont***
COZAAR®/HYZAAR®
- ***Gentili***
FOSAMAX®
- ***Kyorin***
NOROXIN®
- ***Osaka Univ. / Biken***
VARIVAX® / ZOSTAVAX®
- ***Biogen/Chiron/Genentech***
U. Cal/U. Wash/Inst. Pasteur
Hep B Vaccine/COMVAX

...and through a history of successful joint ventures



In 2000, the environment was changing and a focus on licensing was compelling for merck...

Merck's situation

- Upcoming patent expirations on major products
- Pipeline gaps
- Followed by late stage development failures

Improving quality of biotech offerings

- Due to chemistry and biology advances, small companies now had similar chemistry and biology abilities as large pharma
- “Democratization of Drug Discovery”

At the same time, competition for deals on the rise due to the scarcity of high quality Phase III product candidates

Competitors for a given licensing deal

Percent of respondents

5 years ago

Fewer than 3

67

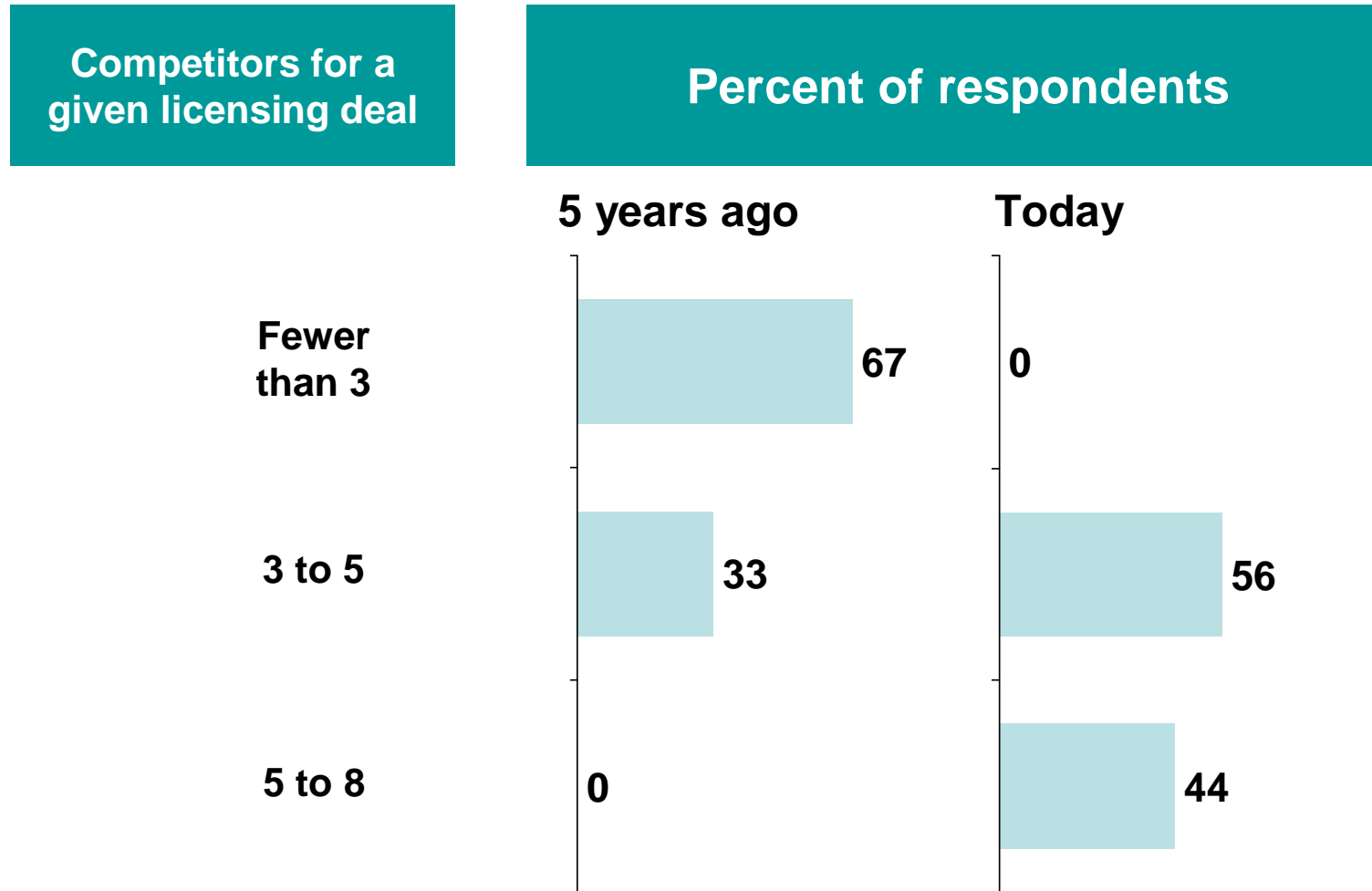
3 to 5

33

5 to 8

0

At the same time, competition for deals on the rise due to the scarcity of high quality Phase III product candidates



Merck was behind other companies in partnering

- While we were successful in licensing several key products since the late 1980's, we relied on our scientific expertise to generate opportunities
- Our goals for licensing were important, yet modest (1 NCE per year)
- Other companies, such as BMS and Pfizer were setting the pace in multiple partnerships

Licenses started to become more complicated

Our license for FOSAMAX from Gentili is a typical license from simpler times (1988)

- Instituto Gentili SPA of Pisa, Italy
- Early stage at time of license – FDA approval in 1995
- Worldwide
- Merck developed and commercialized

Today, licensors typically demand – and get – other terms

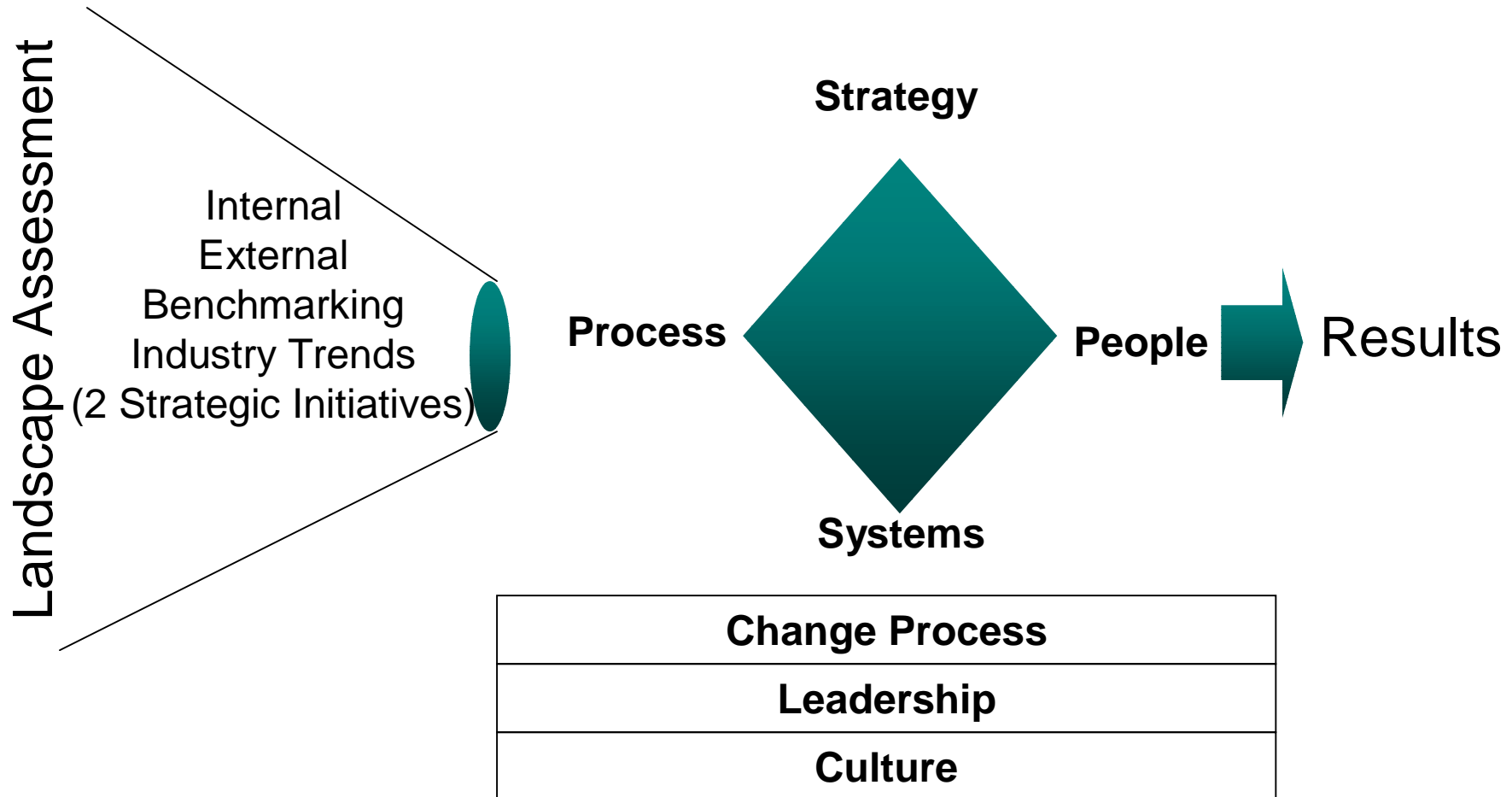
- Co-promotion in certain markets
- Sole marketing rights in home market
- Voice in development and commercialization
- Reversion rights of compounds, intellectual property

Merck needed to evolve from an inward looking organization to being externally focused

Major transition involving:

- Senior management on down
- Multiple divisions and functions
- Culture shift
 - Partnering mindset and attitude
 - Appropriate rewards and compensation
- Broad communications
- Clear and rapid decision making
- Application of marketing principles
- Resources
- Training
- Metrics

Licensing Transformation Approach



We began with a clear message from our CEO

Merck's Plan to Win Will Embrace Partnerships



- Merck will pursue partnerships and focused acquisitions that reinforce its core Rx business and drive additional top-line growth
- Merck will pursue niche acquisitions and partnerships in diagnostics and devices to enable its core Rx business, but will not build a stand alone business

Richard T. Clark
CEO and President

...along with the Virtual Lab concept

Access To External Research Extends Our Research Capacity

All Merck scientists are charged with building a “virtual lab” by mounting the best scientific program in their area, whether it comes from internal research, external collaborations or both.



***99% of worldwide
biomedical research
occurs outside of
Merck***



**Large
Pharma
Biotechs
Academia
Government**

And a Clear Strategy

Merck's research and development strategy – embracing partnerships



- **Ensure a strong internal research capability**
- **Leverage this capability through collaborations**
- **Openly collaborate with the best partners**
- **Continually evaluate potential transactions**
 - From platform technologies to late-stage product opportunities
 - In a coordinated approach across the company

Combining Internal Expertise and External Innovation

We Developed a Transparent and Straightforward Licensing Process

Opportunity Identification



**Opportunity Initiation
(Find and Select)**

Executing the Deal



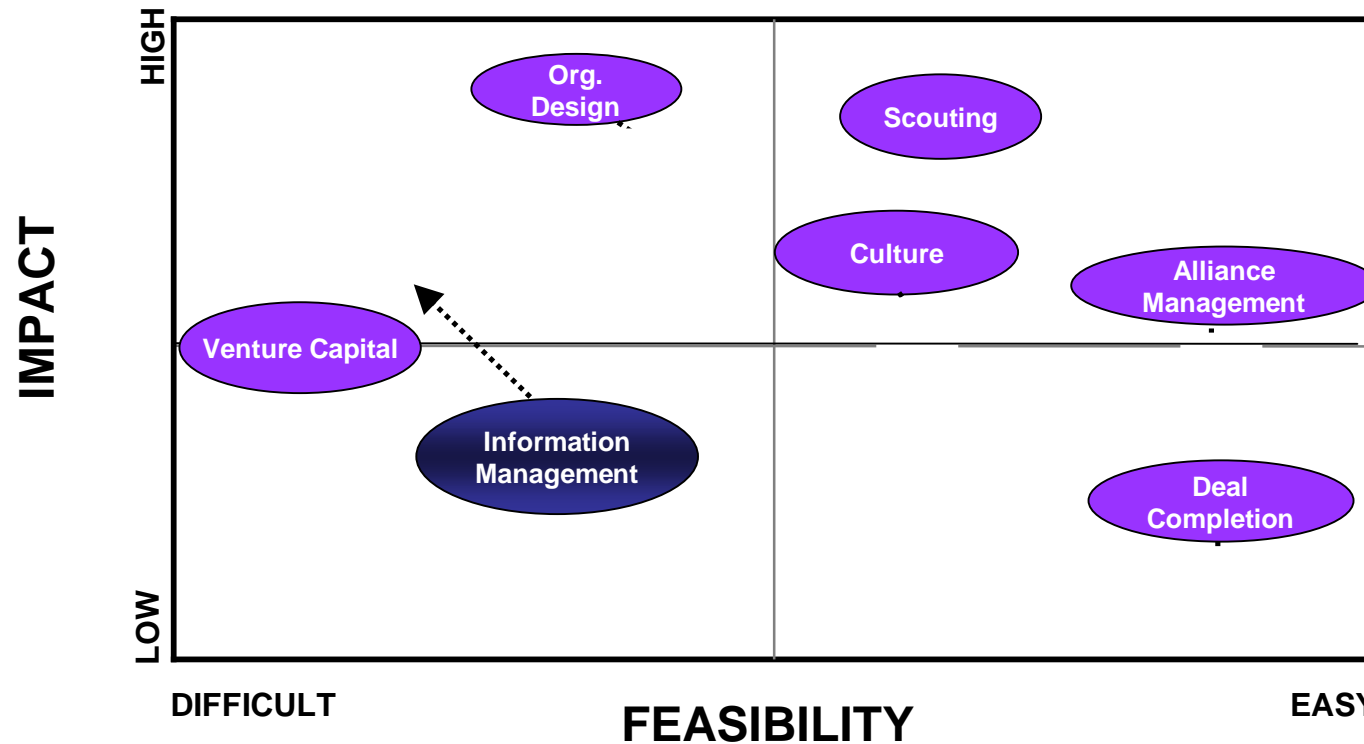
**Doing the Deal
(Negotiate)**

Alliance Management



**Alliance Management
(Implement)**

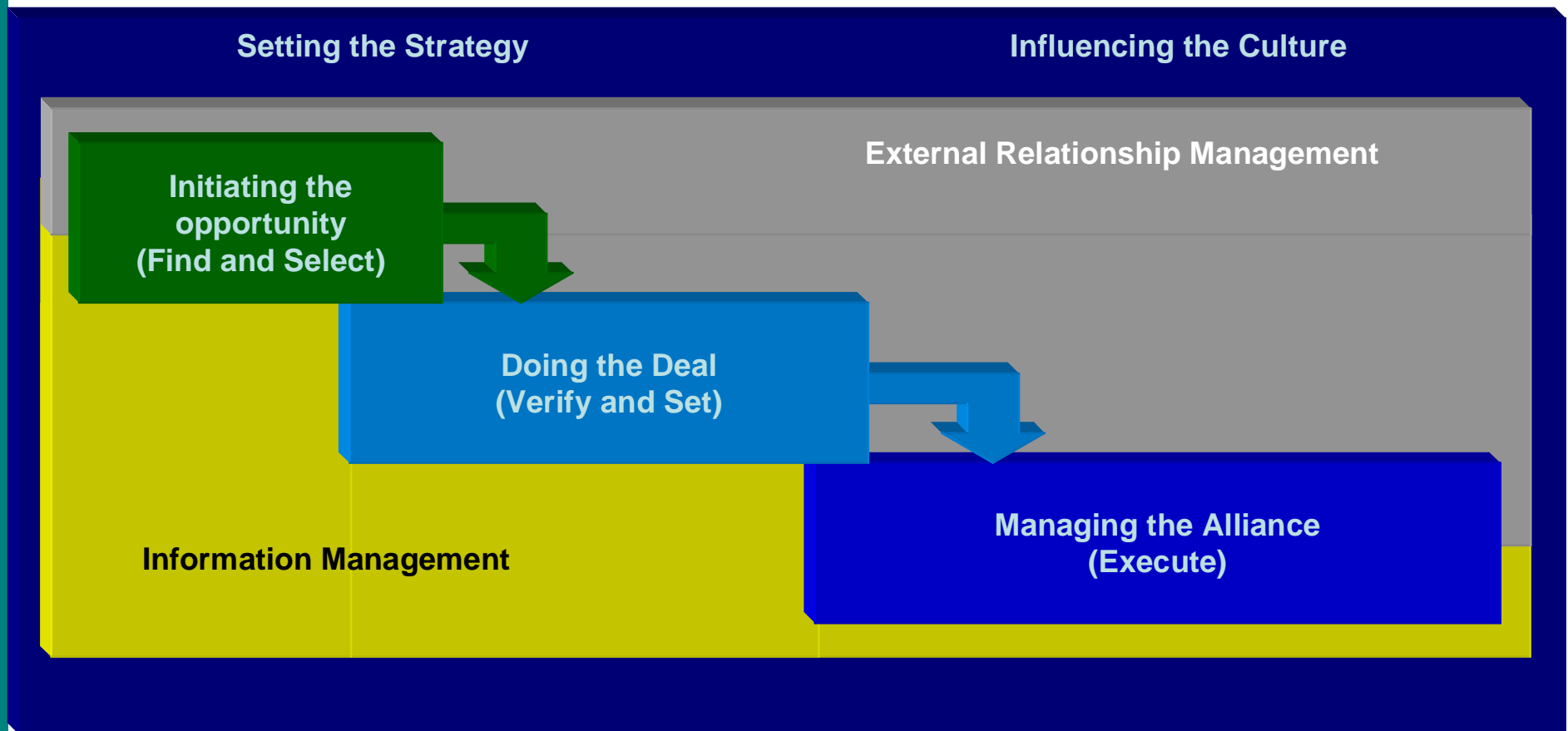
Focus on Information Management



-----> Anticipated future direction

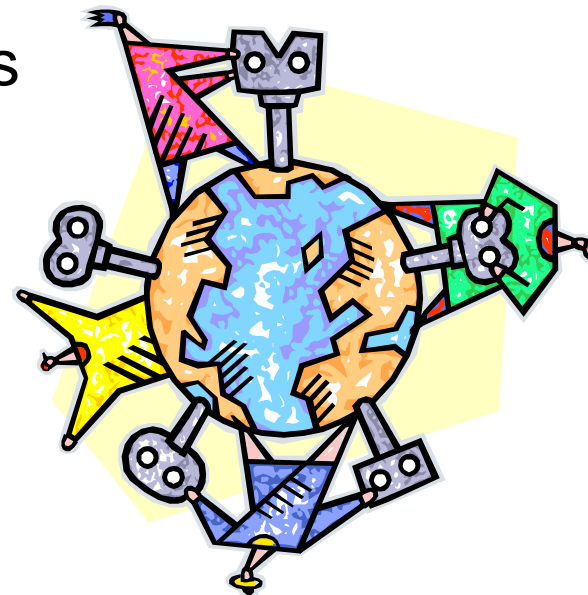
Source: Accenture, 2004

MCSLI: Framework for Licensing



We Built a Regional Scouting Function in Key Locations To Build Personal Relationships

- Senior level Merck scientists
- Build close relationships with local scientific community (companies, academia, VC's, organizations)
- Point of contact for potential partners
- Key locations established:
 - Western & Eastern Europe
 - United States
 - Canada
 - Japan
 - Australia
 - China
 - Korea



Building Long Term Relationships Has Become a Company Wide Activity

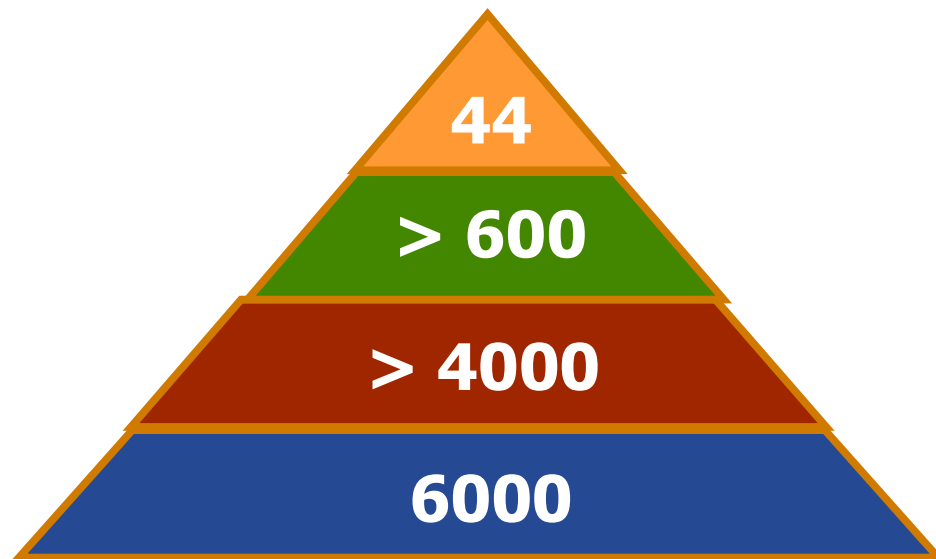
- Partnering Receptions
- Private Meetings at Conferences
- High Level Speeches about Merck Partnering
- Sponsorship of Conferences Worldwide
- Exhibits at Major Conferences
- Prospecting Trips
- Targeted Company Visits
- Scientific Meetings – scientific one on ones
- Meetings with Venture Capital companies
- Participation on Boards of major biotech and partnering organizations
- Fostering Personal Contacts – at all levels
- Working with Subsidiary Medical Directors to reach out to companies

Leaving No Stone Unturned: Merck's Evaluation of New Opportunities

- Key objective at all levels of MRL
- Clear prioritization of interests
 - Therapeutic areas and technology
 - Cross divisional
 - Aligned with worldwide business strategy for each franchise
- Efficient screening of all opportunities
 - Proactive and reactive
 - Strategic and opportunistic
 - Through monthly Review and Licensing Committees
 - Involvement of over 200 Merck experts in basic biology and chemistry, preclinical, patent, clinical and marketing

It Takes Discipline And Diligence To Find The Best Partnering Opportunities

2005 Alliances



Signed

Reviewed under a CDA

Opportunities reviewed

Interactions

We Have Defined Our Areas of Interest

High Priority

Alzheimer's Disease
Atherosclerosis
Cardiovascular disease
Diabetes
Vaccines
Obesity
Oncology
Pain
Sleep Disorders

Focused Interest

Antibiotics
Antifungal
Antiviral (HCV, HIV)
Asthma
COPD
Neurodegeneration
Ophthalmology
Osteoporosis
Schizophrenia
Stroke

Technology Platforms

Biologics and Antibodies
Drug Delivery
Information Technologies
Molecular Profiling / Molecular Biomarkers
New Vaccine Technology
Research Technologies / Drug Discovery Platforms
In Vivo Imaging

- In addition to the High Priority and Focused Interest areas, Merck will continue to pursue partnering opportunities in other disease areas where clinical proof of concept exists.*
- Merck will also pursue partnerships in diagnostics and devices to enable core Rx business.*

Dedicated review and licensing committees to review opportunities on a monthly basis

- Anti-Infectives
- Antivirals
- Arthritis & Respiratory
- Cardiovascular & Atherosclerosis
- Diabetes & Obesity
- Neuroscience
- Oncology
- New Technologies
- New Vaccine Technology

In-depth initial review with Merck experts from basic biology, chemistry, preclinical, clinical and marketing.

We have developed systems to track each interaction

Manage Agreements - Microsoft Internet Explorer provided by Merck & Co., Inc.

Address: http://psllkrprd.merck.com:26100/psp/psllkrprd_1/EMPLOYEE/CRM/c/MRK_AGREEMENT_MNU.MRK_AGRMT_GSRCH.GBL?FolderPath=PORTAL_ROOT_OBJECT.MRK_/

Licensing Knowledge Repository

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- My System Profile
- My Dictionary

Agreement | Contacts | Notes & Attachments | Tasks | RLC/Compound | Materials Transferred | Payments

10/16/2005 2:28:06PM EDT

Docket Number	Agreement Type	Agreement Priority	Agreement Status
18134	License for Product Candidate	Normal	Fully Executed

Outside Party
Sumitomo Pharmaceuticals Co., Ltd.

Agreement Information

Priority: Normal *Agreement Status: Fully Executed

Initiation Type: Prospecting Amendment Work Plan Attached

Target: SMP13496, an atypical antipsychotic in Phase II

*Description: SMP13496, (lurasidone) an atypical antipsychotic in Phase IIb.

Key Issues: Re-opened on 02Dec04. Exclusive license. Territory is World ex-Japan, Taiwan, Korea and China. Merck has a right of first refusal for Taiwan, Korea or Japan if Sumitomo wishes to co-promote in any of these countries. Royalty offset is available

Initial Correspondence Date: 02/09/2004 *Date Received: 02/09/2004

Discuss at Next LMC Discuss at Next LOC Project Team Formed Mouse Related

Agreement Type

*Primary Type	*Agreement Type	Entered By	Date Entered
<input checked="" type="checkbox"/>	License for Product Candidate	WIEDRREG	02/09/2004 1:05PM

Merck Initiator and Approver

Merck Initiator: Whiting, Paul Mail Drop: []

Phone: 01279 440535 Fax: [] Dept ID: 9524 Department: Molecular&CellularNeuroscience

Licensing Knowledge Repository

- System integrations include:
 - MIDAS for electronic access to signed legal agreements and direct input into repository
 - Outlook for ease of data input
 - eRooms to facilitate RLCs
 - CLIS – Corporate Competitive Intelligence database
 - Pharma Projects – competitive info source
 - IDdb3/Thomson – competitive info source
 - Prous - competitive info source
 - Merck HR Employee directory
 - RFA Online – Automated system to approve/assign MRL licenses
 - Outlicensing module
 - Academic relations module
 - Linked to Research Procurement

Merck finds excellence in science worldwide

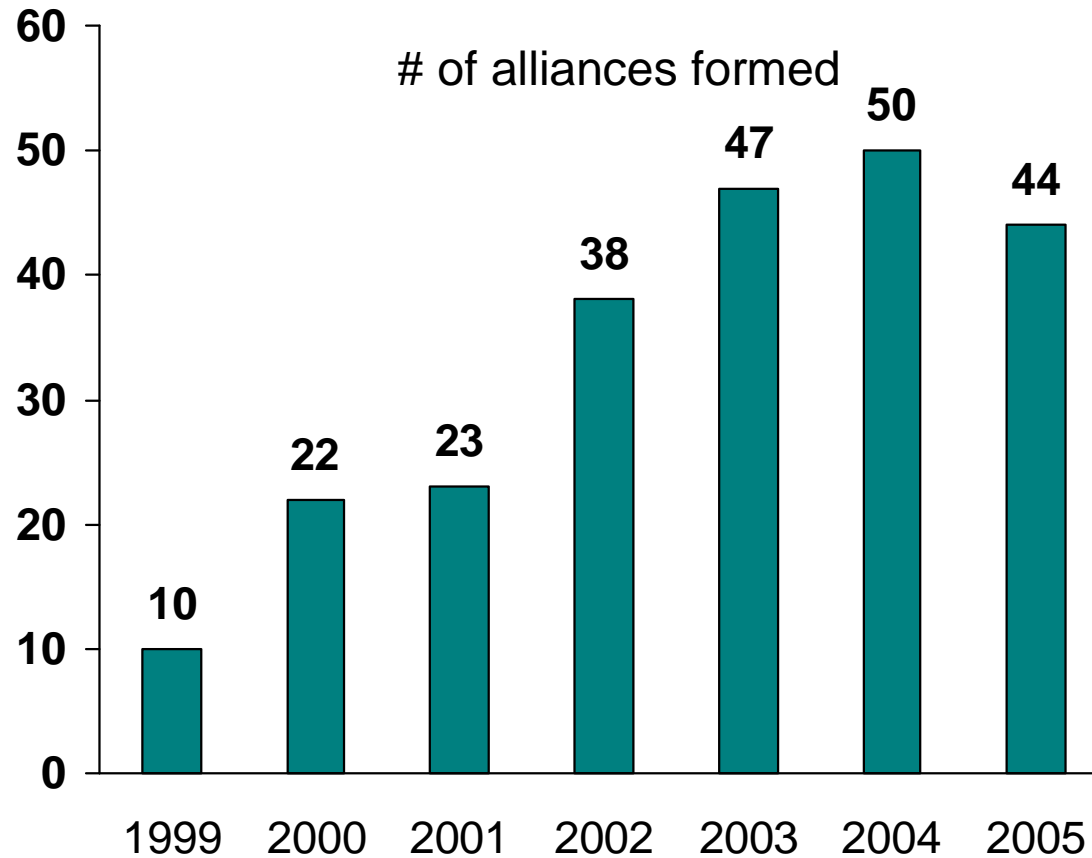
In the past 5 years, Merck has signed significant deals with partners in the following countries



The Results:

Merck has greatly increased the number of significant alliances

Over 200 deals signed in last 5 years

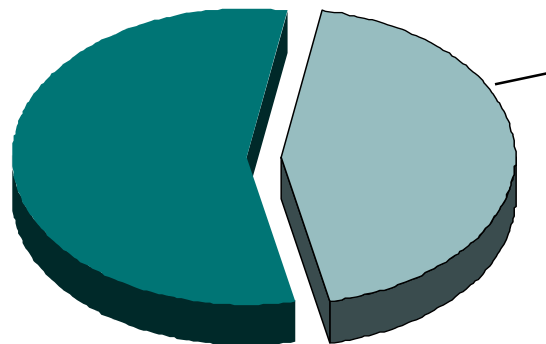


Our alliances add high-value to Merck

Over \$9.5 billion, or 44% of Merck's sales, are attributed to alliance products and patents

Key Products:

- FOSAMAX
- COZAAR / HYZAAR
- NEXIUM
- VARIVAX
- RECOMBIVAX HB

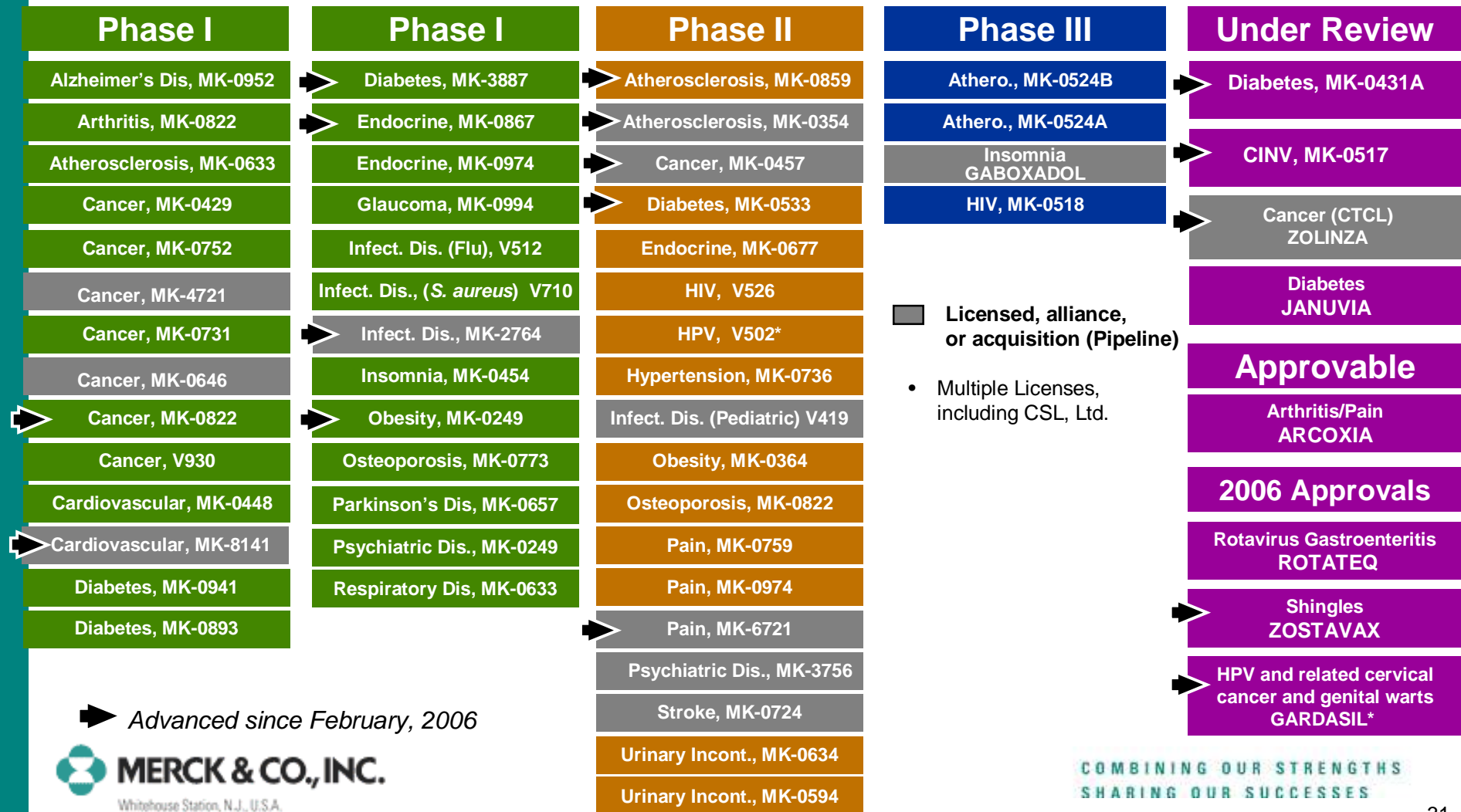


**Licensed Products or Patents:
44% of total sales**

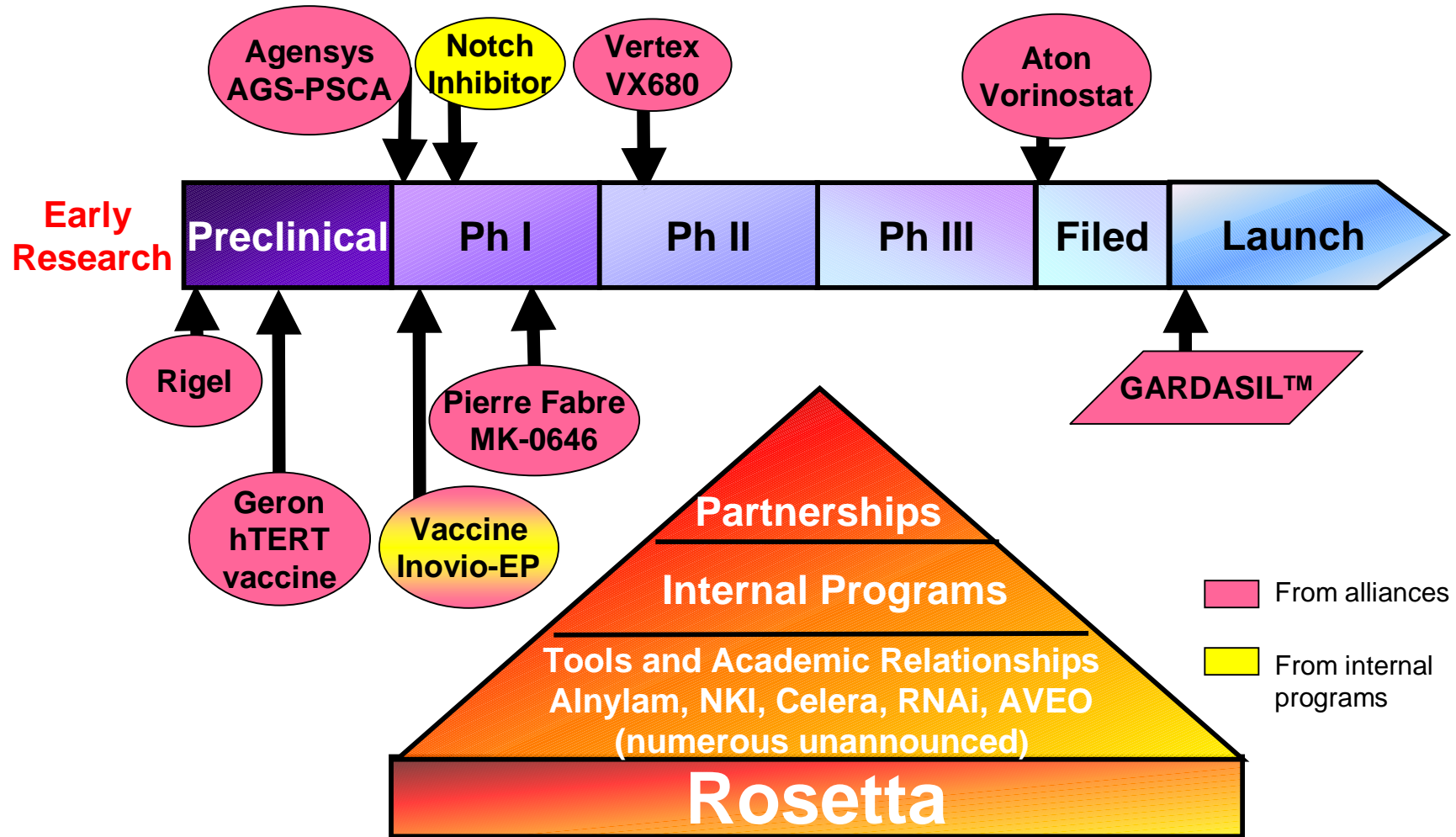
2005 Revenues: \$22 Billion

- In addition, through the partnership with Schering-Plough, Merck shares in the profits of ZETIA and VYTORIN sales: \$2.4 billion in 2005

Productivity: Important Contribution of Licensing Merck Pipeline – August 01, 2006



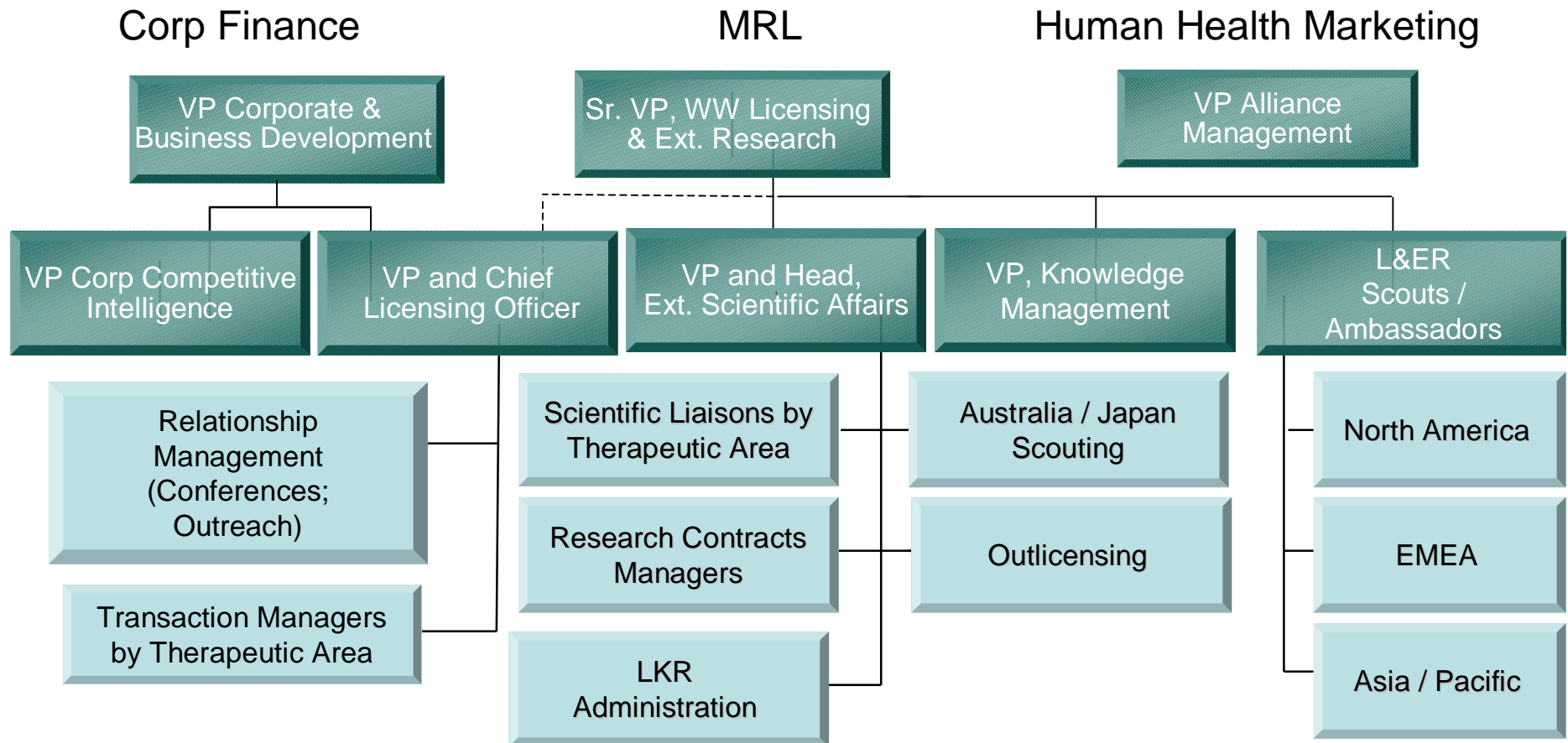
Oncology Case Study: Partnering Has Accelerated the Growth of Our Oncology Franchise



We now have the mindset, organization, people, and processes in place to win

- Close collaboration between:
 - Licensing Scouts
 - External Scientific Affairs
 - Research scientists
 - Corporate Licensing/Business Development Groups
 - Worldwide Marketing/Country Marketing
 - Alliance Management
 - Deal Team Members: Legal, Patent, Financial Analysis, Manufacturing, etc
- Rapid access and involvement of Senior Management
- Clear and straightforward process
- Objective setting and continuous prioritization in place and running
- Customer orientation

A combined organization that can seamlessly handle all relationships from a technology license to a full acquisition



Thank You!

Questions & Feedback



Please visit our website at www.merck.com/licensing/