

Pfizer in St Louis



Daniel Getman, Ph.D.

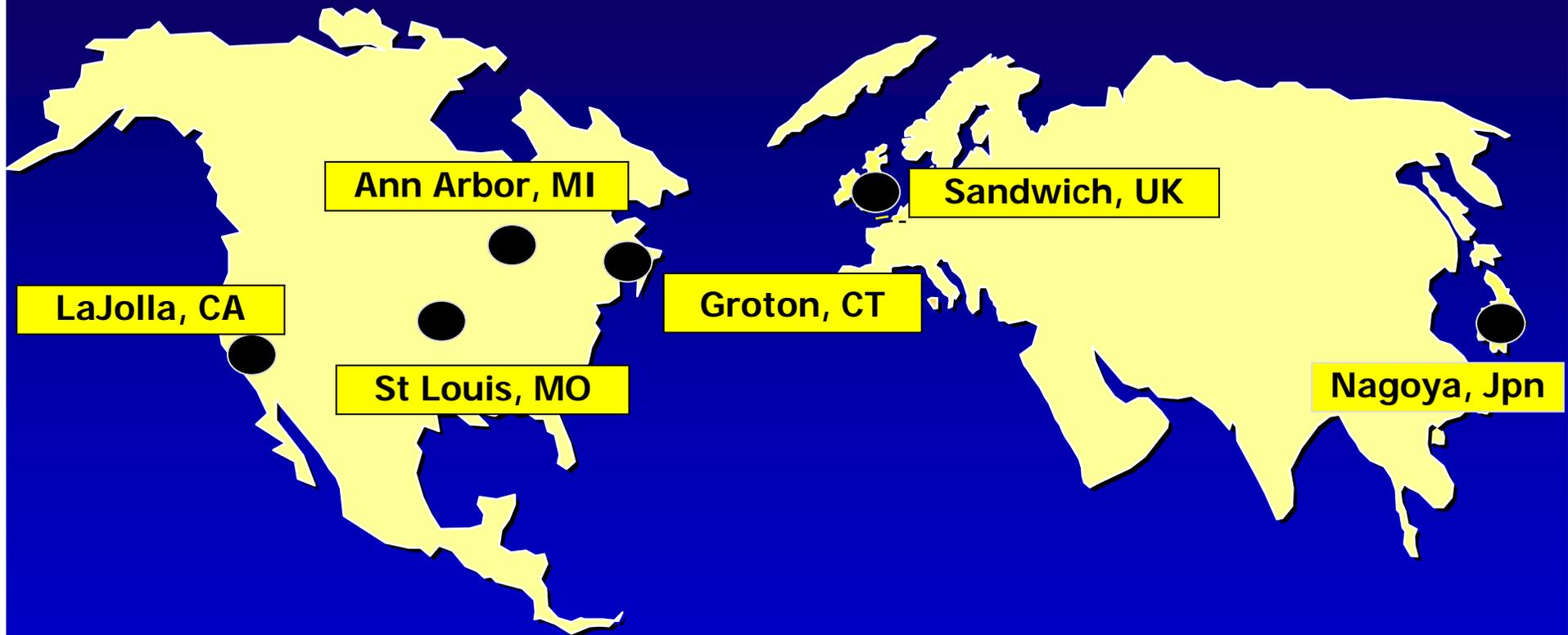
Vice-President, Pfizer Global Research and Development

Director, St Louis Laboratories



Our Global Organization

Six Major Research Sites Worldwide

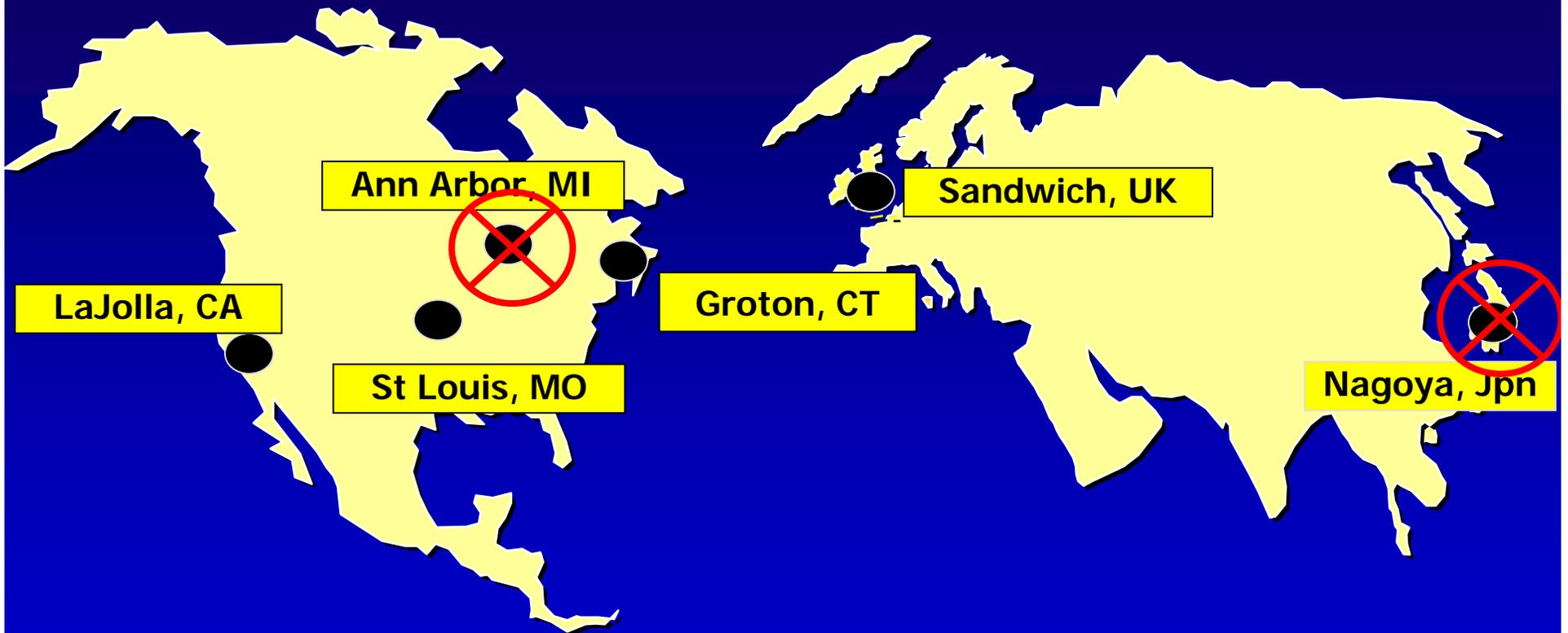


13,000 Researchers Worldwide
> \$7B Billion Annual R&D Investment



Our Global Organization

Four Major Research Sites Worldwide

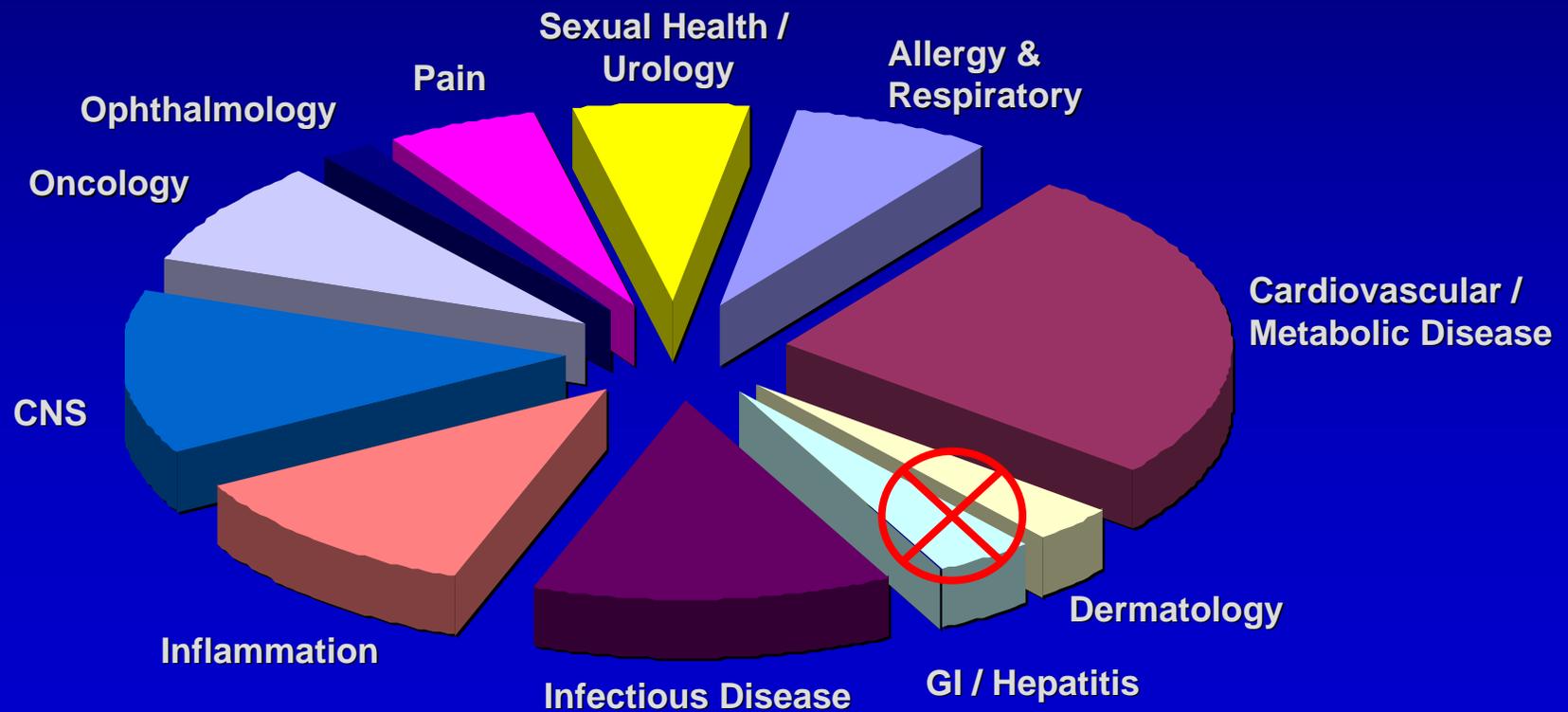


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Patient Focus Therapeutic Area Organizations

Therapeutic Areas - Idea to Market



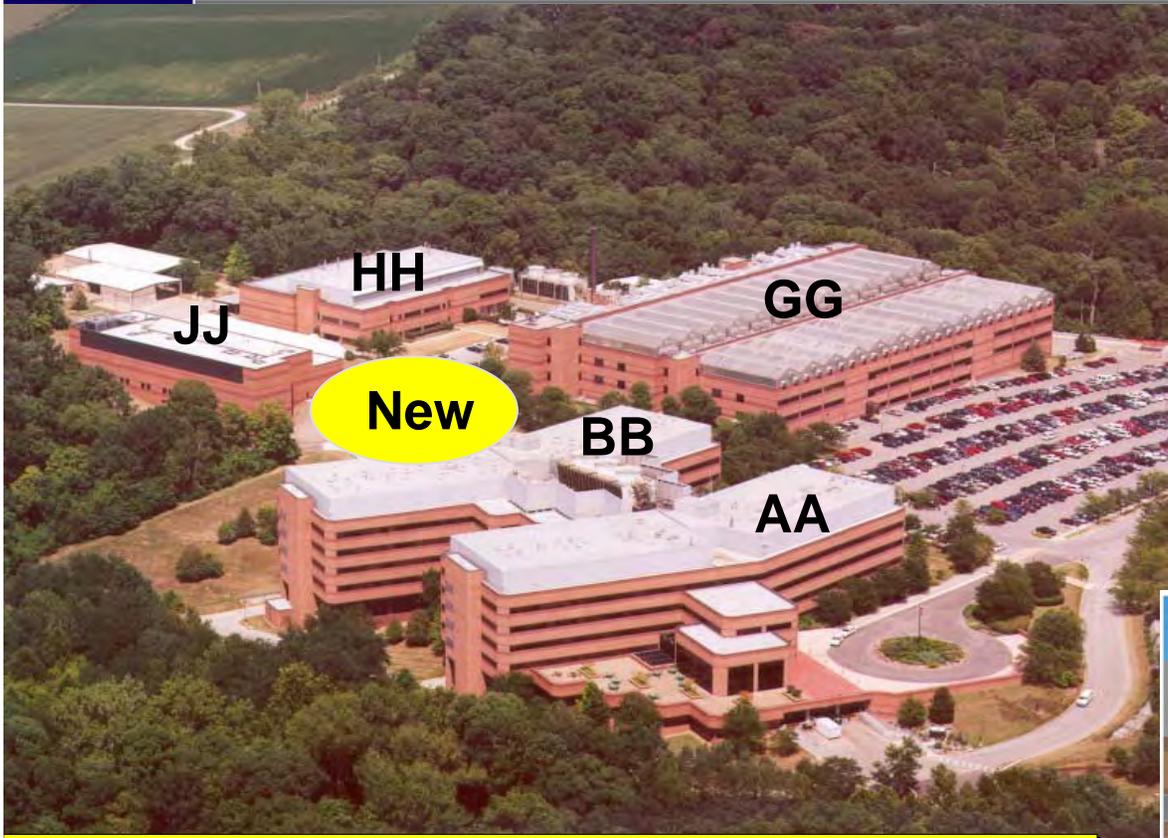


Pfizer in St Louis



Pfizer in St Louis

Our Chesterfield Campus



New Research Building:

- ◆ Four-story
- ◆ 330,000 square foot
- ◆ House ~ 250 researchers
- ◆ Complete late 2008
- ◆ Investment: ~ \$200M

1200 colleagues
> 1000 People in Research





Pfizer in St Louis

Our Areas of Disease Research

Inflammation



*Rheumatoid Arthritis
Osteoarthritis
Immunomodulation & Pain*

~~**Cardiovascular
Disease**~~



*Hypertension
Thrombosis
Obesity & Diabetes*

~~**Allergy and
Respiratory**~~



*COPD
Asthma*

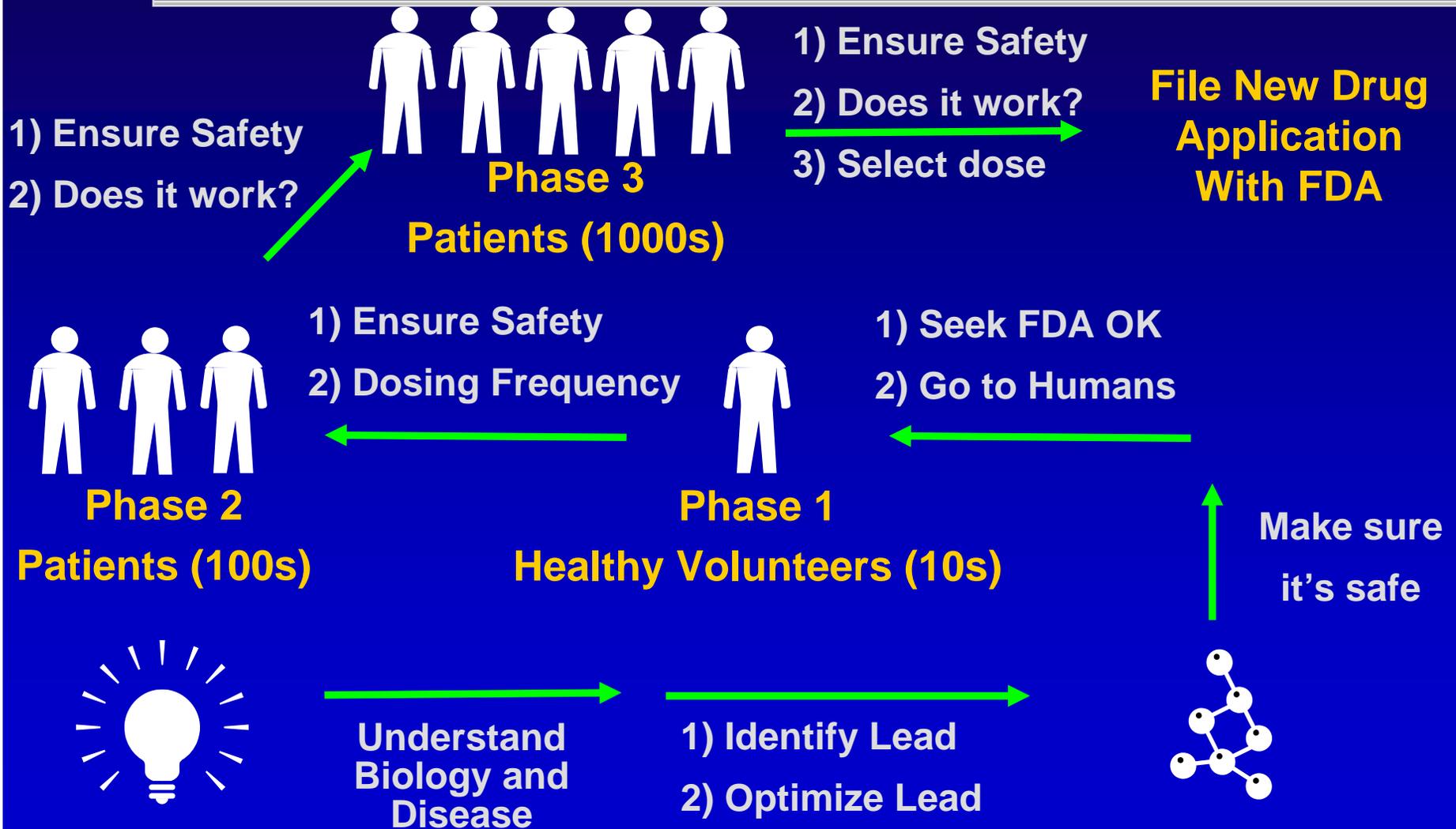
**Global
Biologics**



*Biologics for all therapeutic areas
(cancer, arthritis, cardiovascular)*



The Long Road to a New Medicine





The Little White Pill

What's Behind it?



Knowledge of:

- Molecular basis of the disease
- How to modify the disease process
- Extensive safety evaluation & pharmacokinetic studies

What we strive for:

- A medicine that will be safe and effective
- A practical solution to address a medical need



Our Commitment to
our Community
Regionally

Bringing Value to the St. Louis Region



1. > 1500 Pfizer colleagues in Missouri and > \$300 M in capital investment

2. Philanthropic Activities – Our Focus
 - ◆ Science and Math Education
 - ◆ Patient Advocacy and Healthcare
 - ◆ United Way

3. Develop mutually beneficial partnerships in the region with selected universities, community groups and businesses



Science Education Partnerships in the Community

STARS
**(Student & Teachers
as Research Scientists)**

Univ. Missouri St Louis
Washington University
St Louis University

St. Louis Academy of Sciences
St Louis Science Fair
Outstanding Teacher Award



St. Louis Science Center
Exhibits – Brain, Human Genome

Washington University
Mentors in Medicine
Young Scientists



Science Education Internally



Summer Interns

35 College Students

6 Teachers

Job Shadowing



Science Outreach to Schools

> 100 Pfizer volunteers

6 demonstrations

> 200 schools

> 16,000 students



Our Involvement in Life Sciences

St Louis Region and State of Missouri

**Washington University
Biomedical Agreement**

St Louis Region

**Regional Chamber & Growth Assoc
Coalition for Plant & Life Sciences
Connections with Incubators**

**State of Missouri
MO BIO
Hawthorn Foundation**

Partnering for a Healthier World



BJ Bormann, Ph.D.

Vice President, Head of Strategic Alliances

Pfizer Global Research and Development



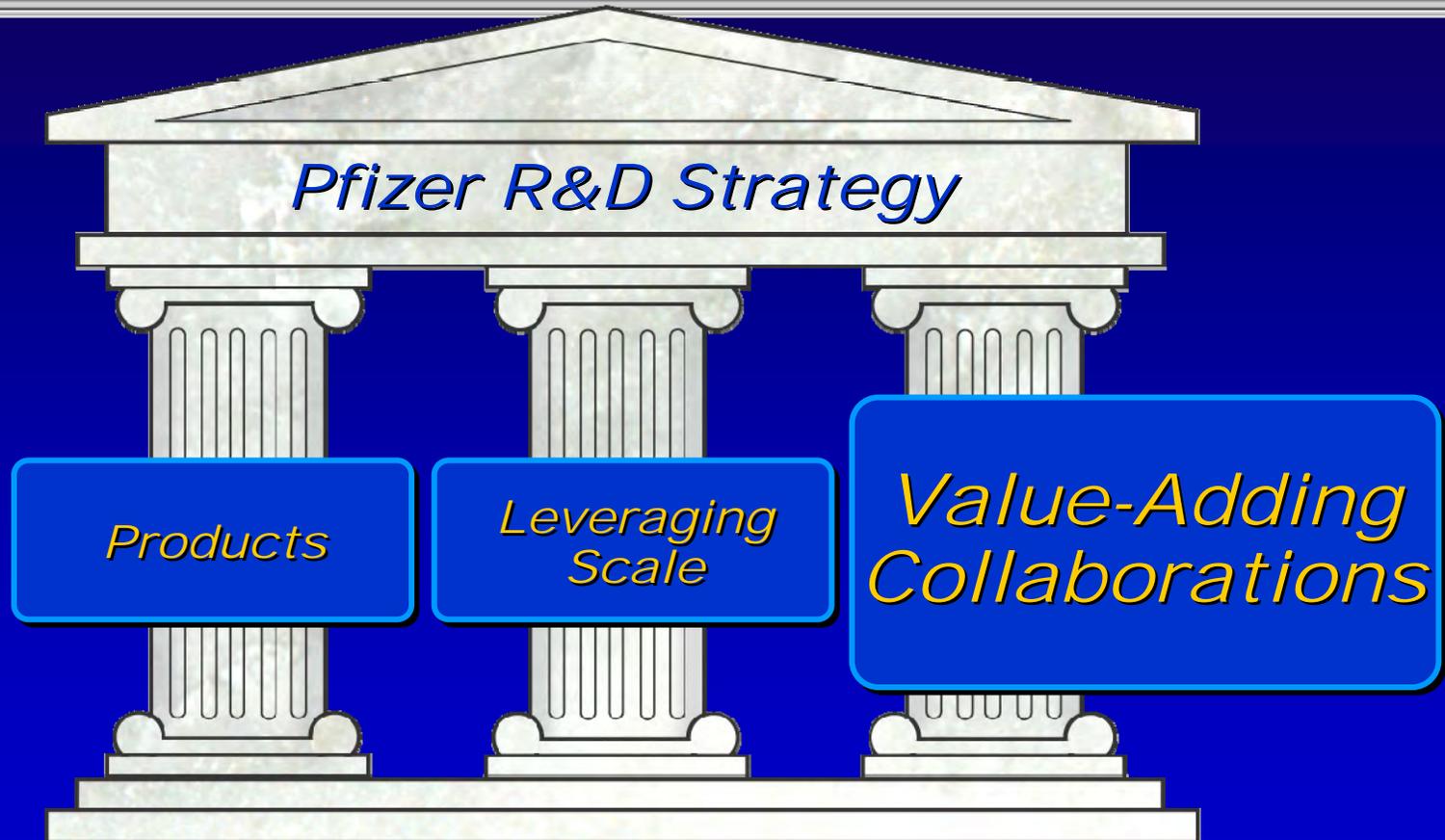
The Research Based Pharmaceutical Industry



**Our Work
Validates or
Disproves
Medical
Hypotheses**



An R&D Strategy for Improved Productivity





External Investment Vision

Our Alliance Investments

- ◆ Integrate and align with global strategies, initiatives & internal investments
- ◆ Address opportunities and gaps, creating new medical breakthroughs
- ◆ Enable cost-effective evaluation of novel approaches
- ◆ Access innovative technologies with potential to change the R&D paradigm
- ◆ Managed with respect to the science, business, legal and IP issues
- ◆ Assessed and monitored with appropriate metrics

Cradle to Grave Alliance Management



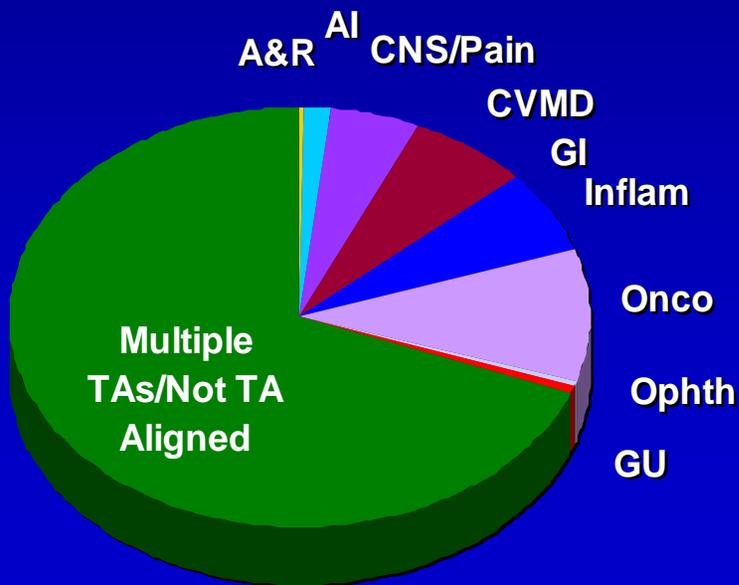
Alliances are a key component of the Pfizer R&D budget

- ◆ Approximately \$7.5 Bn spent on R&D annually
- ◆ Internal R&D covers only a fraction of the potential opportunities
- ◆ Alliance strategy builds on complementary strengths of Pfizer partners
- ◆ A diverse, healthy biopharmaceutical community is in Pfizer's best business interests

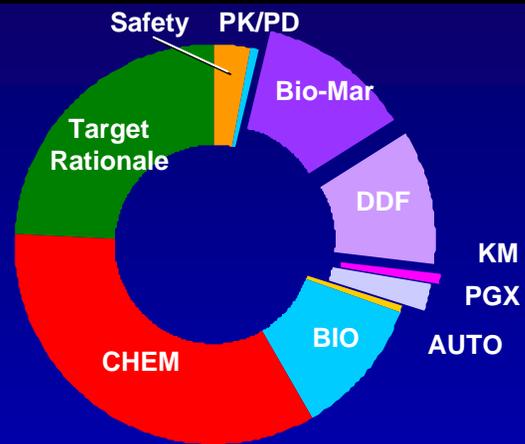


Current Alliances Investment by Type

Therapeutic Areas



Research Disciplines





Strategic Drivers: How We Assess Opportunities

Portfolio Enhancement

- ◆ **Understanding Disease & Maximizing Value**
 - Therapeutic Area Alignment
 - Translational Research
 - Confidence in Target Rationale (CIR)

Effectiveness, Productivity

- ◆ **Drug Discovery and Development**
 - Compound and Program Survival
 - Accurate Attrition Decision Making
 - *Candidate Producing Collaborations*

Efficiency and Cost

- ◆ **Leveraging scale**
 - Synergy, Cycle-Times
 - Collaboration, Alignment
 - Strategic Sourcing

Intrinsic Value

- ◆ **Market Performance**
 - Line Extension – New Formulations
 - New Indications Discovery
 - Patient Acceptance/Compliance



What, specifically, are we interested in?

- ◆ **Therapeutic drug candidates**
- ◆ **Development enablers**
- ◆ **Platform technologies**
- ◆ **New ideas**
- ◆ **Problem-solving**



Problems to be solved

- ◆ ***“We can’t keep up with all of the scientific breakthroughs in medical research”***
 - Understanding disease pathogenesis and exploitable points of therapeutic intervention
 - Systems biology—integrated response to pharmaceutical intervention
 - Novel drug design (e.g., aptamers/nucleic acids, conjugates, micro RNA, nanoparticles, engineered proteins)

- ◆ ***“Our traditional assessment processes are slow, expensive and imprecise”***
 - Biomarkers of disease progression and reversal
 - Diagnostics (e.g., disease characterization, genomic classification, imaging)
 - Modeling (clinical trial design, bioinformatics)

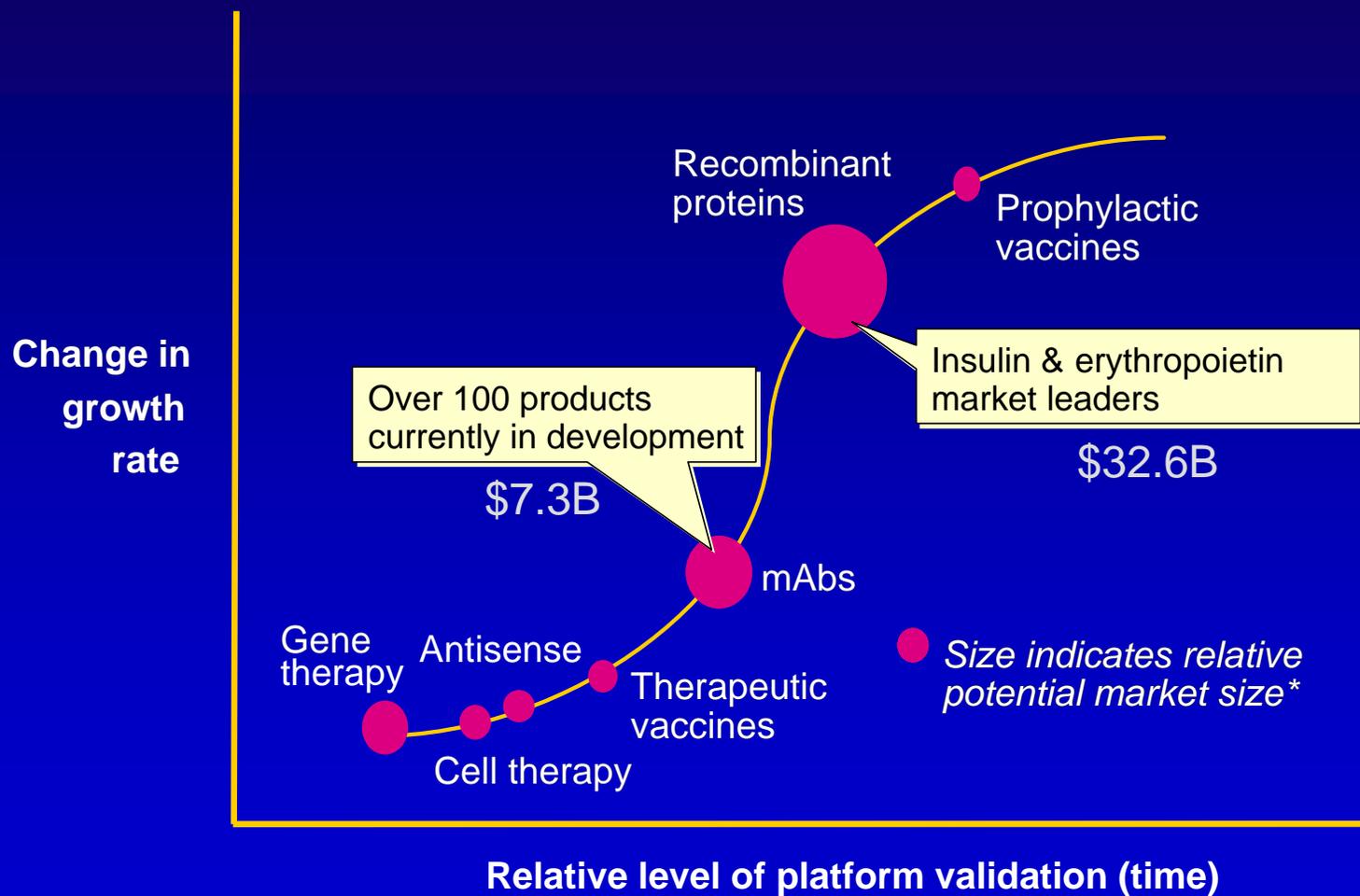
- ◆ ***“Shortcomings exist in product development fundamentals”***
 - Formulations and delivery
 - Predicting safety
 - Process efficiency

- ◆ ***“Insufficient substrate is available for compelling medical needs***



Therapeutic Biologics

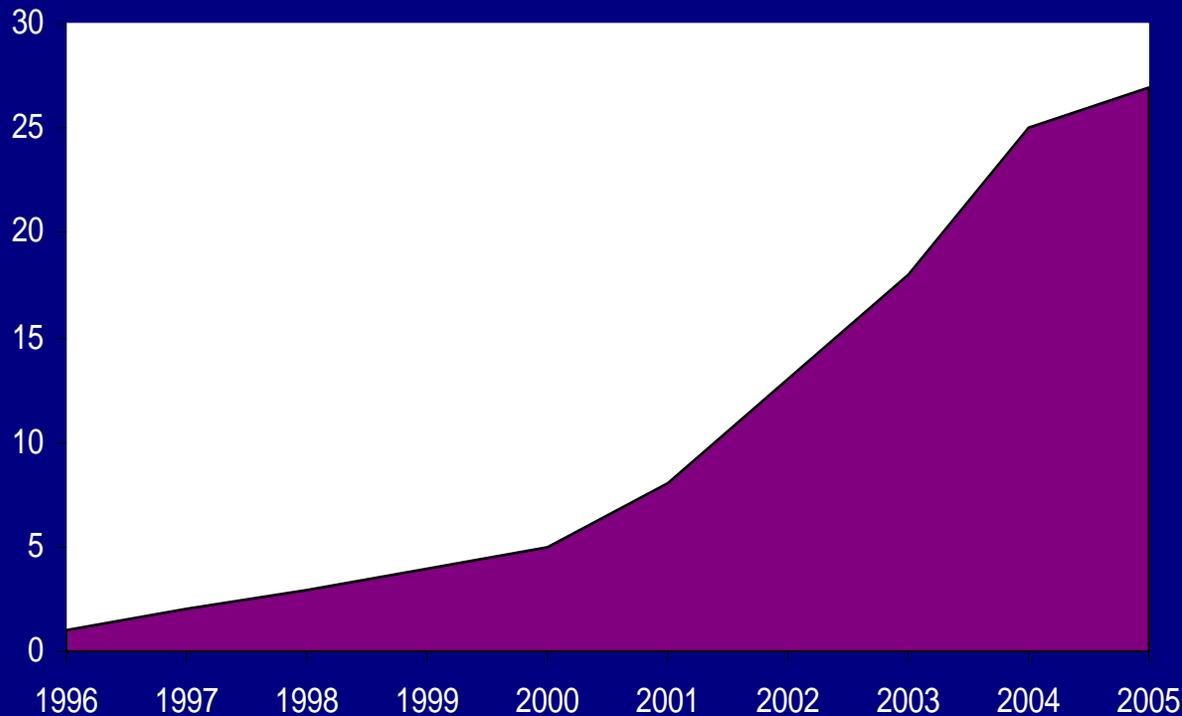
Relative Maturity of Biologics Market Segments





Growth of Pfizer's Biologics Portfolio

From a single program in 1996 to over 25 programs today, Pfizer continues to increase its Biologics Portfolio.





Expanding the Scope of R&D Future Biologics Powerhouse

Rebif
(interferon beta-1a)

Fragmin
(dalteparin sodium injection)

Genotropin

SOMAVERT
(pegvisomant for injection)

MACUGEN
PEGAPTANIB SODIUM INJECTION

EXUBERA
human insulin powder

PEG-hGH

CTLA4 mAb

MCSF mAb

ETC-588

TLR CPG 7909

ETC-216

T2-TrpRS

IGF1R mAb

ETC-642

CD40 mAb

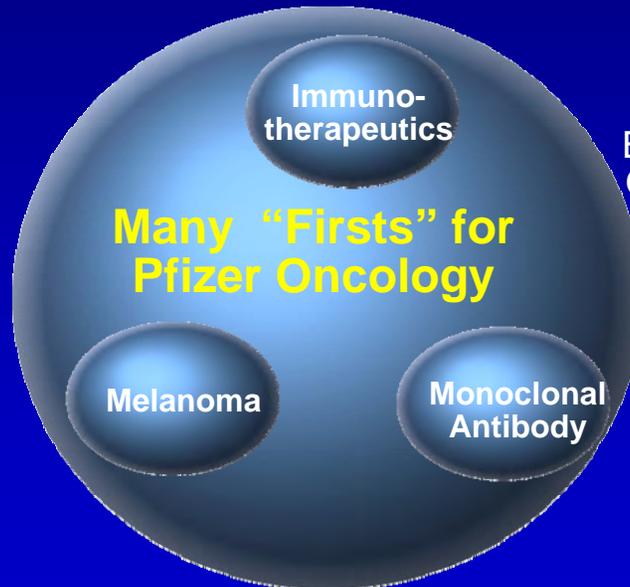
MAdCAM mAb

*\$1.5 Billion Pfizer
2006 Biologics Sales*

Expanding Oncology Portfolio: CP-675,206



anti-CTLA4 mAb



First Immunotherapeutic

Novel MOA that enhances immune system ("removes the brake")
Broad applicability for all tumor types
Option to lead in Tumor Immunology

First Fully-Human mAb

Focus on cutting edge science
Sales of biologics estimated at 31% of cancer market in 2009 vs 18% in 2003*



Investing In The Future

- ◆ **Gene Therapy**
- ◆ **Biomarkers**
- ◆ **Personalized Medicine**
- ◆ **Therapeutic Vaccines**
- ◆ **Diagnostics**
- ◆ **Pfizer's Incubator**



Major R&D Research Partnerships

Altering the R&D Productivity Paradigm

Speeding/Enhancing Development Candidates

Enhancing Pipeline Value

Gene	Function	Screen	Lead	Candidate	Development	Speed	Product Enhancement
Compugen	Xenogen	U. Dundee	Biotica	GenVec	Amersham/Nycomed	U. Georgia	Atrix
IBIS	Inpharmatica	Biotrove	Amgen	Quark	Entelos	Argonaut	Ventaira
Metabolex	Lexicon Genetics		ComGenex	Renovis	Chromos	Foster Miller	Bradford
PPDD	Deltagen		Medarex	Rigel	Chondrogene	U. Michigan	Part Design
Xenon	Affymetrix		Morphosys	Incyte	GeneLogic		Watson Pharm
Athersys	Affinium		Archimex	Noxxon	Virtual Scopics		Bend
Stem Cell Sciences	Scripps		Melior	TransTech	Lonza		
	Washington Univ.		PCT	Quark	Oxford Biosensors		
					Yale		
					iCardiac		
					Genizon		





Expanding the Scope of R&D Licensing and Acquisition

Selected Recent Alliances and Acquisitions

QuoreX	Anti-Infectives Drug Targets
NIH/Perlegen	Identifying the Genetic Basis of Common Disease
Renovis	VR1 Antagonists for Pain
Rigel	Inhaled Tyrosine Kinase Inhibitors for Asthma & COPD
Coley	TLR9 Agonist Oncology Therapy
BioRen	Antibody Optimization Technology
Idun	Caspase Inhibitors for Therapeutic Apoptosis Control
Rinat	Antibodies to Treat CNS Diseases
TransTech	Small molecules/peptides for Alzheimer's and Sepsis
Quark	RNAi and small molecule screening for wet AMD
Scripps	Broad collaboration in several areas

Biomarkers in Diagnostics



- Already incorporate pharmacogenomic end points into clinical trials on marketed compounds.
- Diagnostics that determine therapeutic outcomes will affect how drug is used in medical practice.
- Example: Molecular imaging tools in neuropsychiatric diseases or as measures of drug absorption/ distribution:
 - May provide powerful insights into the biological effects of drugs



Biomarkers in Oncology



- Biomarkers used to develop oncology products:
 - Herceptin
 - Gleevec, Iressa, Velcade
- Major departure from traditional cancer treatment
- Produces smaller, targeted market



Biomarkers: The Value of Collaborations



- Biomarker R&D becomes more strategic -- increased emphasis on safety, priority therapeutic areas
- Cost sharing improves support for biomarker research
- Biomarkers and diagnostics are developed with less emphasis on commercial viability
- Scientific community more likely to accept validity of new biomarkers or surrogate endpoints



Golden Age Of Medicine

- ◆ **In the next 5–10 years, there will be an explosion in the number of new therapies for the treatment and prevention of life-threatening diseases such as cancer, cardiovascular disease and diabetes.**
- ◆ **These new therapies will result from the innovations made over the last 15 years across the entire spectrum of R&D.**
- ◆ **We look for partners in our pursuit of new therapies**



Questions ?