



Embracing Partnerships Merck Partnering – Brief Overview

**4th Annual SABPA Pacific Forum
UCSD
November 8, 2008**

COMBINING OUR STRENGTHS
SHARING OUR SUCCESSES

James M Schaeffer, PhD
Executive Director
Licensing & External Research
San Diego, CA

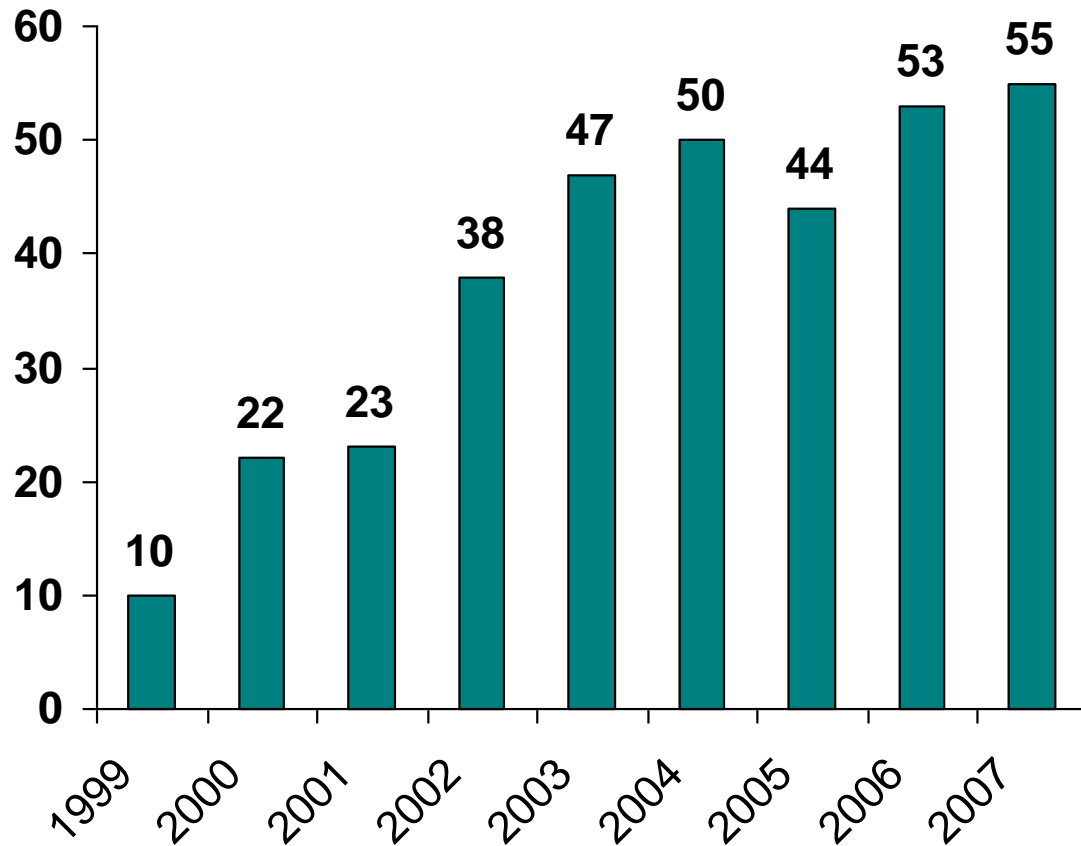
Merck's Global Partnering Strategy

Points to cover:

- External Alliances are a key strategic component of future growth
 - Enabling Technologies
 - Preclinical programs
 - Clinical Development compounds
- What is Merck seeking from potential partners?
 - Synergies with existing programs
 - Excellence in Science
 - Novel approaches to high priority targets/projects

Success in Building Partnerships

Approximately 250 significant transactions over the past 5 years



of alliances formed

Merck Constantly Scans for Partnering Opportunities



2007 Alliances

Signed

Reviewed under a CDA

Opportunities reviewed

Interactions

We Offer a Transparent and Straightforward Partnering Process

Opportunity Identification



Opportunity Initiation
(Find and Select)

Executing the Deal



Doing the Deal
(Negotiate)

Alliance Management External Basic Research (EBR)



Alliance Management
(Implement)

Regional Scientific Scouting Network



Yael Weiss, MD, PhD
Western United States



Steven Xanthoudakis, PhD
Canada



Tim Sparey, PhD
United Kingdom,
Republic of Ireland,
Eastern Mediterranean,
Israel, and South Africa



Hans Boström, PhD
Scandinavia,
The Baltic Countries,
and Middle East
(ex-Israel)



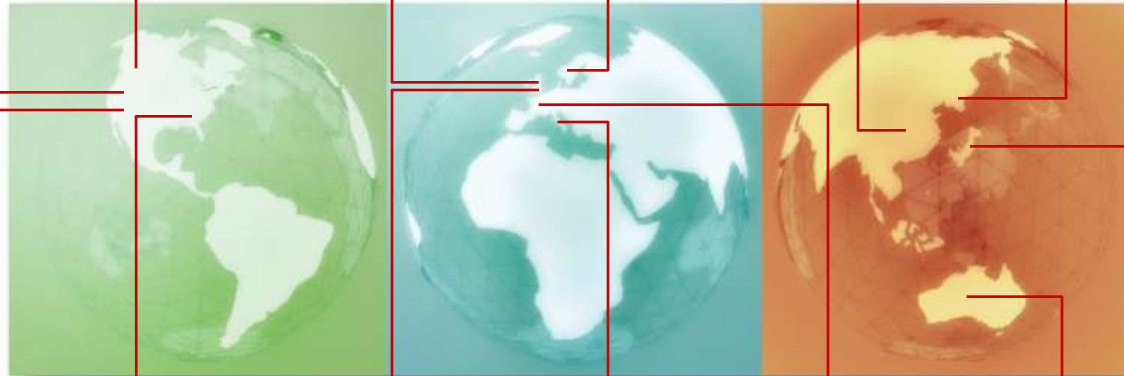
Jing-Shan (Jennifer) Hu, PhD
China, Hong Kong,
and Taiwan



Kuchan Kimm, MD, PhD
Korea



Koichi Kato, PhD
Japan,
Singapore



Greg Wiederrecht, PhD
Vice President
and Head Central
Scientific Contact



James M. Schaeffer, PhD
Western United States



Reid J. Leonard, PhD
Eastern
United States,
India



Rob Pinnock, PhD
United Kingdom
Academia, and
Benelux



Margaret Beer, PhD
Head, European Group,
Italy, and Switzerland



Manfred Horst, MD, PhD, MBA
France, Spain,
Portugal, Germany,
Russia, and
Eastern Europe



Phil Kearney, PhD, MBA
Australia,
New Zealand



Key Transactions (2006 – 2008)

Anti-Infectives/ Antivirals / Vaccines

Ambrilia Dynavax
Coley Idera
Crucell Intercell
Cubist Paratek

Oncology

Ariad
Avalon
Moffitt Cancer Center
Celera Diagnostics
Nicholas Piramal

CNS

Gladstone Institutes
Neuromed
Neuroptix
Addex (PD)
Addex (Schizo)

Technologies

Abmaxis*
DowPharma
GlycoFi*
Sirna*

Other

Advinus (Metabolic Disorders)
GTx (Endocrine)
Harvard University (Ophthalmology)
SurModics (Ophthalmology)
AmbrX (Diabetes)

Cardiovascular

NovaCardia*
FoxHollow
NicOx
KineMed

Merck's Areas of Interest – on the web!

www.merck.com/licensing

Merck Licensing - Areas of Interest

Page 1 of 2

Where patients come first **MERCK** Patents & Copyrights | Healthcare Professionals | Worldwide
 Quick Find Search

HOME | ABOUT MERCK | PRODUCTS | NEWSROOM | INVESTOR RELATIONS | CAREERS | RESEARCH | LICENSING | THE MERCK MANUALS

- Licensing**
- Our Vision
- About Us
- Our Partners
- Working Together
- Commercial Successes
- Areas of Interest
- Our Process
- Alliance Management
- Submit Your Discovery
- News & Events
- Contact Licensing
- Podcast
- Blog
- Test Results

Areas of Interest

COMBINING OUR STRENGTHS
SHARING OUR SUCCESSSES



YOU'VE DISCOVERED SOMETHING SIGNIFICANT

At Merck, we share your passion for developing novel, breakthrough products. You've discovered something significant, and we are inspired by your innovation. Our philosophy is to bring medical excellence to patients through first-in-class/best-in-class products for unmet medical needs.

We are asking partners for:

- New Chemical Entities (NCEs) and New Molecular Entities (NMEs) as product candidates for development.
- Basic research collaborations
- Technologies that will enhance the productivity of our research laboratories



What we are looking for in a licensing candidate:

We welcome viable compounds in development, targets with proof of concept, molecules with a defined mechanism of action (or a testable hypothesis), and technologies that provide a competitive advantage. We are most interested in compounds that have large market potential for unmet medical needs, and that can be developed rapidly. An attractive compound would have selectivity, potency, a demonstrated mechanism of action, preliminary toxicology data, oral availability, and a good half-life for once-daily administration. We also look for strong intellectual property protection on the target and the molecule.

To learn about our Areas of Interest, click here. (PDF 329KB)

What we are looking for in a proposal:

When contacting us about your discovery, we ask that you provide a clear, concise, nonconfidential data package for review, and that you highlight the advantages of your discovery and provide a perspective on its value within the competitive landscape. In preparing the package, it may be helpful to consider that our review process is centralized and includes review by the appropriate experts from basic biology, chemistry, preclinical, clinical, marketing, and patent.

We look forward to hearing from you about your discovery. Together we can translate cutting-edge science into breakthrough medicine.

REGIONAL SCOUTS

A list of our regional scouts and contact information [Click here](#)

SUBMIT YOUR DISCOVERY

We are serious about our commitment to strategic alliances. Our goal is to work together with our partners to remain in the forefront of turning scientific breakthroughs into medicines that make a difference.

[Submit your discovery](#)

SIRNA THERAPEUTICS

Sirna Therapeutics, a wholly owned subsidiary of Merck & Co., Inc., is realizing the potential of RNAi as a completely novel approach to drug discovery and development that may ultimately lead to an entirely new class of therapeutic products to treat human diseases.

Visit www.sirna.com

WHAT OUR PARTNERS ARE SAYING

"We are proud to have established this collaboration with Merck because their researchers have helped to define the therapeutic potential of targeting miR143 to treat Parkinson's disease. This is another important validation of our leadership in silencing modulation."
 — Vincent Muthi, CEO of Adzee

January 2008

EMBRACING PARTNERSHIPS



COMBINING OUR STRENGTHS
SHARING OUR SUCCESSSES

Table of Contents

Atherosclerosis and Cardiovascular Diseases	
Lipids	1
Vascular Wall/Metabolic Syndrome	2
Hypertension/Cardiovascular	3
Bone, Respiratory, Immunology, and Endocrine (BRIE)	
Anemia	4
Arthritis	5
Asthma/COPD	5
Bone	6
Sarcopenia	6
Urology	7
Diabetes and Obesity	
Diabetes	8
Obesity	9
Infectious Diseases	
Antibacterials	10
Antifungals	10
Antivirals - HIV	11
Antivirals - HCV	11
Antiviral and Anti-infective Technologies	12
Vaccines	12
Neurosciences and Ophthalmology	
Alzheimer's Disease	13
Circadian Disorders	14
Ophthalmology	15
Pain	16
Parkinson's Disease	17
Schizophrenia	17
Oncology	
Oncology	18
Capabilities - Technologies to Evaluate	19
Research Technologies	
Bioinformatics IT	20
Biologic Platforms	20
Drug Delivery	21
Drug Discovery Platforms	22
Peptide Therapeutics	23
Molecular Biomarkers	23
RNA Therapeutics	24

MERCK & CO., INC.
KENILWORTH, N.J., U.S.A.

Copyright © 2005-2008 Merck & Co., Inc. All rights reserved. LIC 2005-WA27025-00



What Does Merck Look for in a Therapeutic Entity?

- **Potency** *in vitro* and *in vivo*
- **Mechanism** -- evidence that agent “hits the target” in animals
 - Minimally a pharmacodynamic assay
 - Ideally, activity in a validated animal model
- **Selectivity** vs. a large range of receptors, enzymes, ion channels
- Preliminary **toxicology** data
- Oral **bioavailability** (for small molecules)
- Good **half-life** for biologics or small molecules
- **Strong IP** position
 - On the target
 - Minimally, Freedom to Operate
 - On the molecule
 - Most compound patents can be designed around; This is why there are so many “fast followers” or “me too” drugs