

Convergence Technologies:

Overview of the Private and Public Markets

Jonathan P Gertler MD

Managing Director*

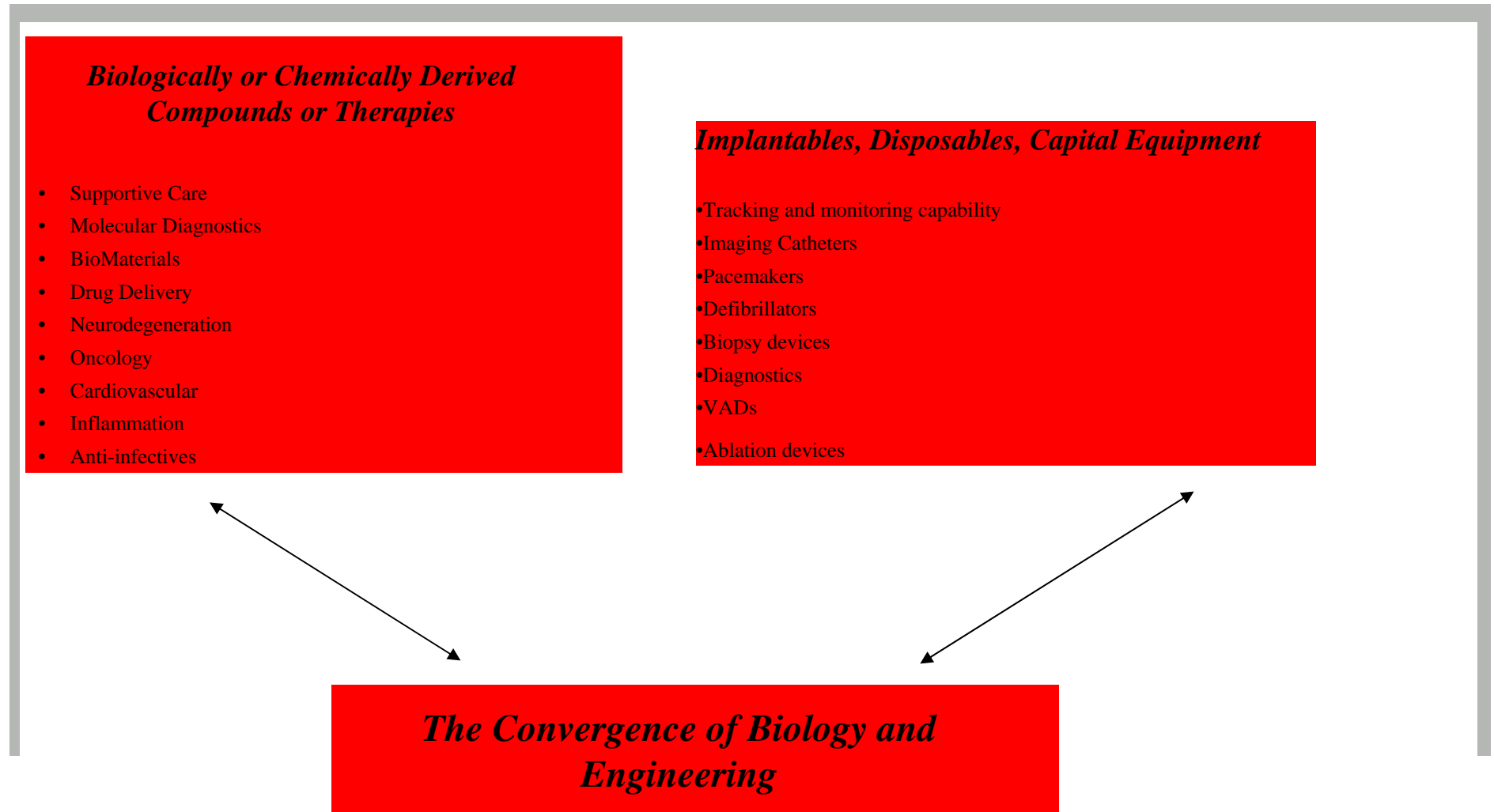
Head - Biopharma Investment Banking*

Leerink Swann

Boston, MA

* As of June 13 , 2007

Evolution of Life Science Technology



Evolution of Life Science Technology

Convergence

Thesis:

➤ **Innovative and disruptive technologies in diagnostics or therapeutics will enhance public market perception of value and potentially create must-have perception among acquirors**

➤ **For Example**

- **Antiproliferatives**
- **Biomaterials**
- **Cell based/molecular diagnostics and therapeutics**
- **Sensing and Feedback**
- **Tissue Simulation**

**Cardiovascular,
Orthopedics
Cancer Detection,
Diabetes Management,
Drug Discovery**

Categorizing the Investment

Disruptive Technologies

Huge Technology Value

- Large unmet need
- New clinical principles applied
- Complete shift of patient control
- Linkage of Diagnostic Information to Patient Subset of Responsiveness
- Behavioral shift of care delivery

Examples

Angioplasty/DES vs. surgery

Aggressive monitoring and control of diabetes mellitus

Disease modification for Neurodegeneration

Tailored chemotherapeutics

Convergence Technology Companies

Cell Therapy

Aastrom

isolagen

RenaMed
BIOLOGICS

arbios

Organogenesis inc.
LIVING TECHNOLOGY

ARTHRO KINETICS

Drug Device Convergence

Boston
Scientific

Johnson+Johnson

CONOR
MEDSYSTEMS


Medtronic

 **Abbott**
A Promise for Life

Biomaterials

 ORTHOVITA®

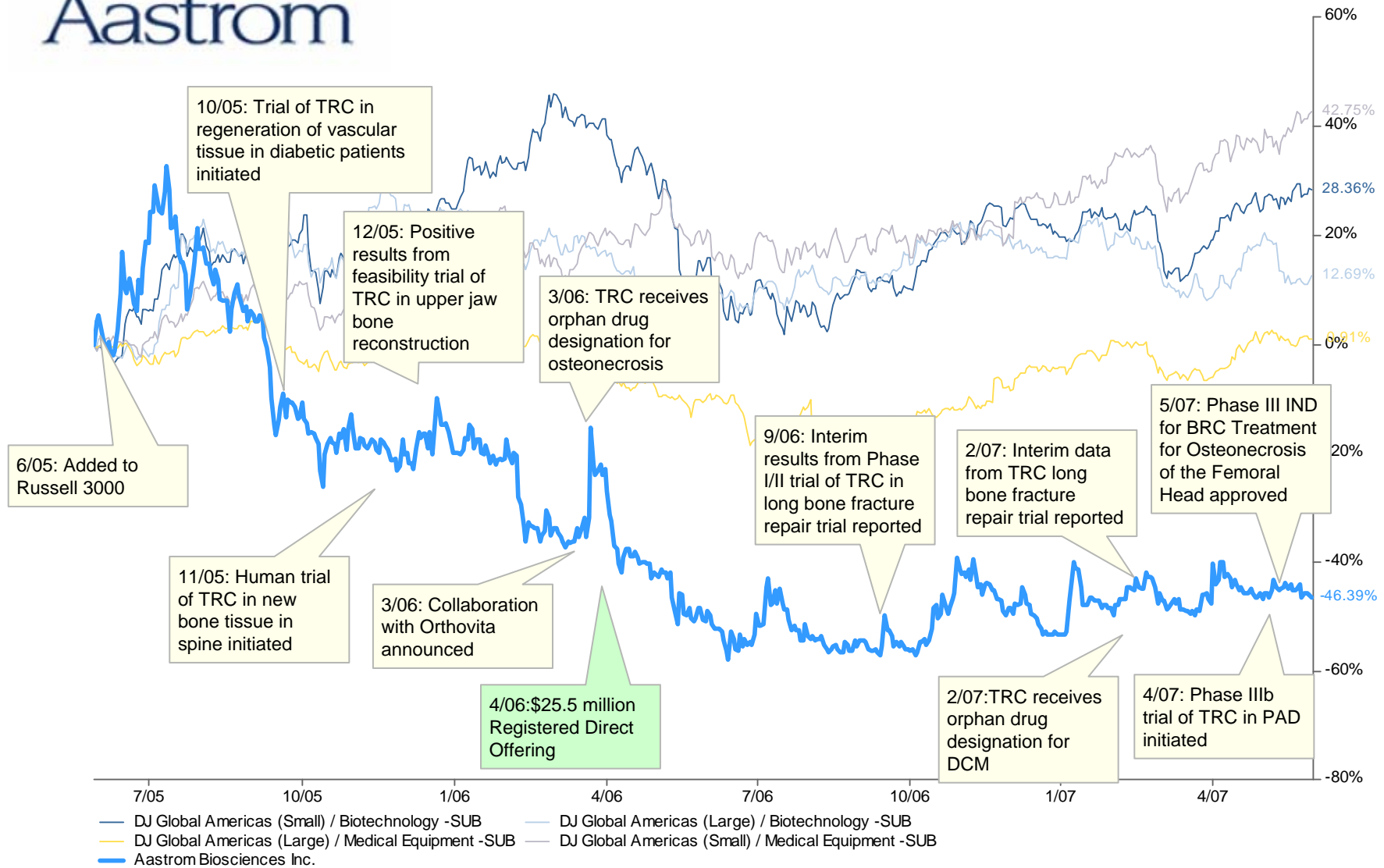
LifeCELL

ACUSPHERE

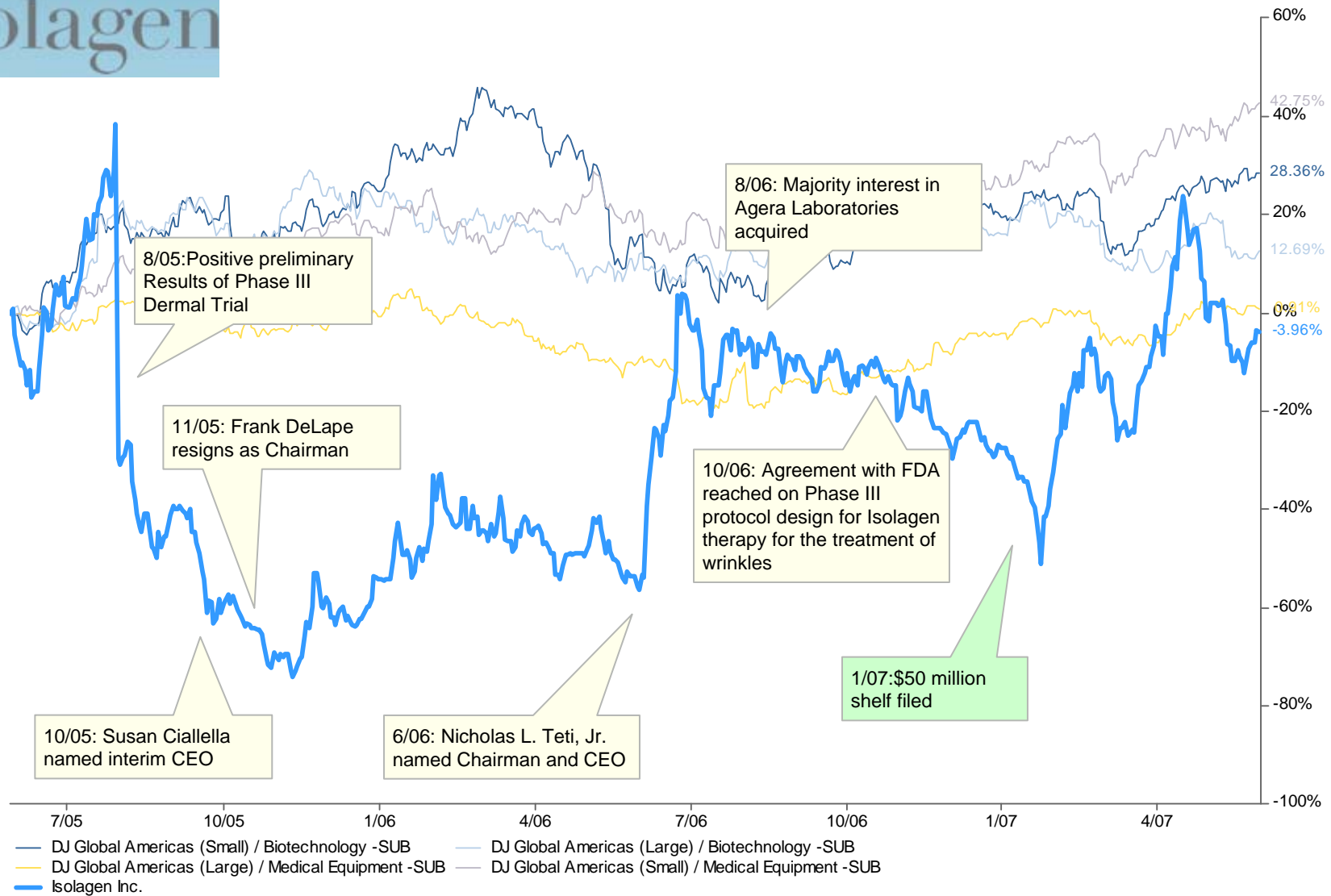
 NUCRYST™
PHARMACEUTICALS

Aastrom Biosciences: Stock Performance, Financings and Selected Milestones

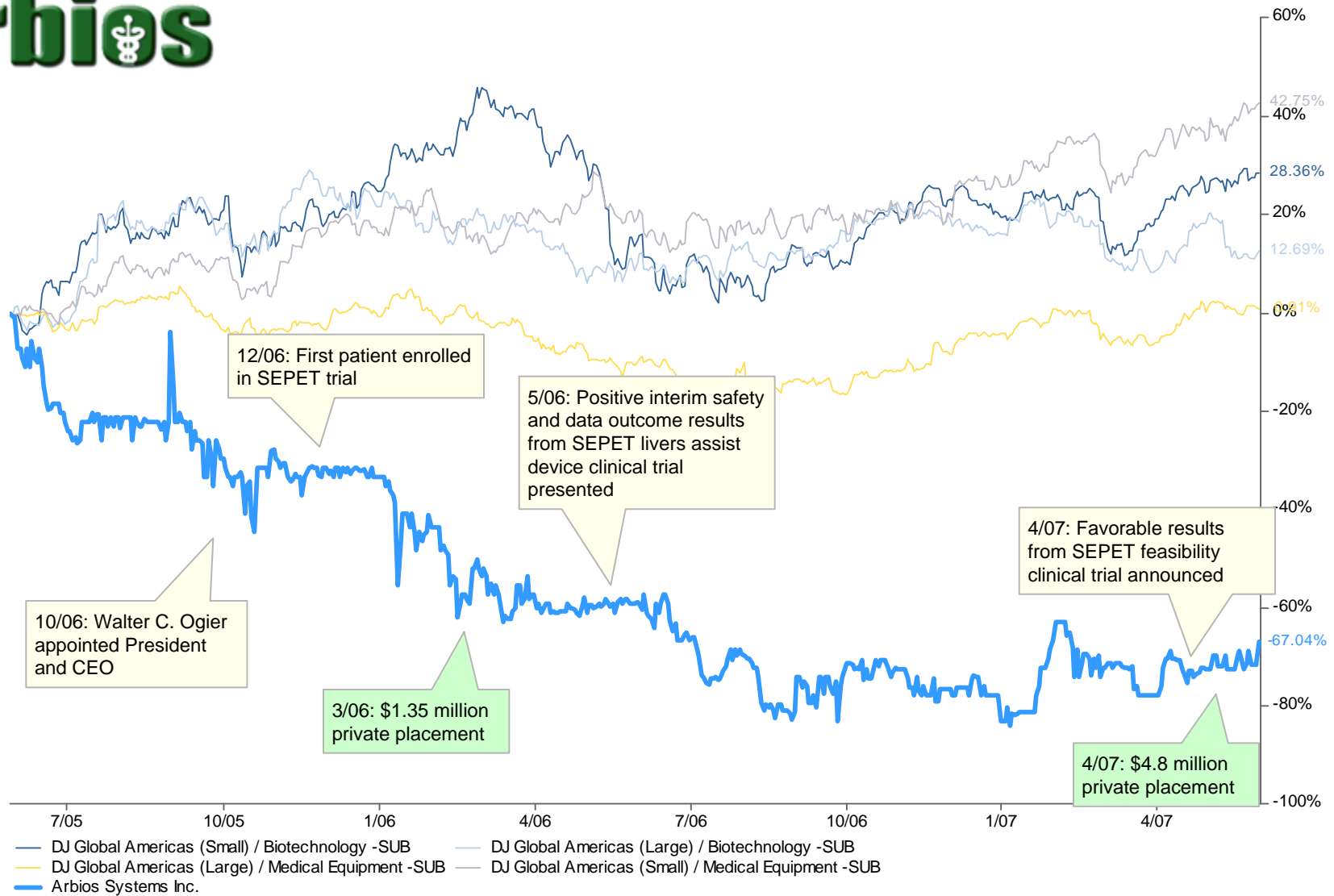
Aastrom



Isolagen: Stock Performance, Financings and Selected Milestones



Arbios Systems: Stock Performance, Financings and Selected Milestones



Organogenesis, Inc.: Recent Milestones



News Releases

May 31, 2007 - On Heels of Life Sciences Initiative, Governor Patrick Announces Organogenesis to Expand in Massachusetts

May 7, 2007 - CEO of World's First Profitable Regenerative Medicine Company, Organogenesis, Details Path To Profitability For The Regenerative Medicine Field

January 2006 - Organogenesis Inc. Announces Further Sales Force Expansion

April 2005 - Same Apligraf® Cell Viability & Structure....Now with a 10 Day Shelf Life!

February 2005 - Apligraf® Treats Over 100,000 Patients in the USA

January 2005 - Organogenesis Inc. Launched Major Study to Treat Pressure Ulcers

Arthro Kinetics: Recent Milestones and Financings



News Releases

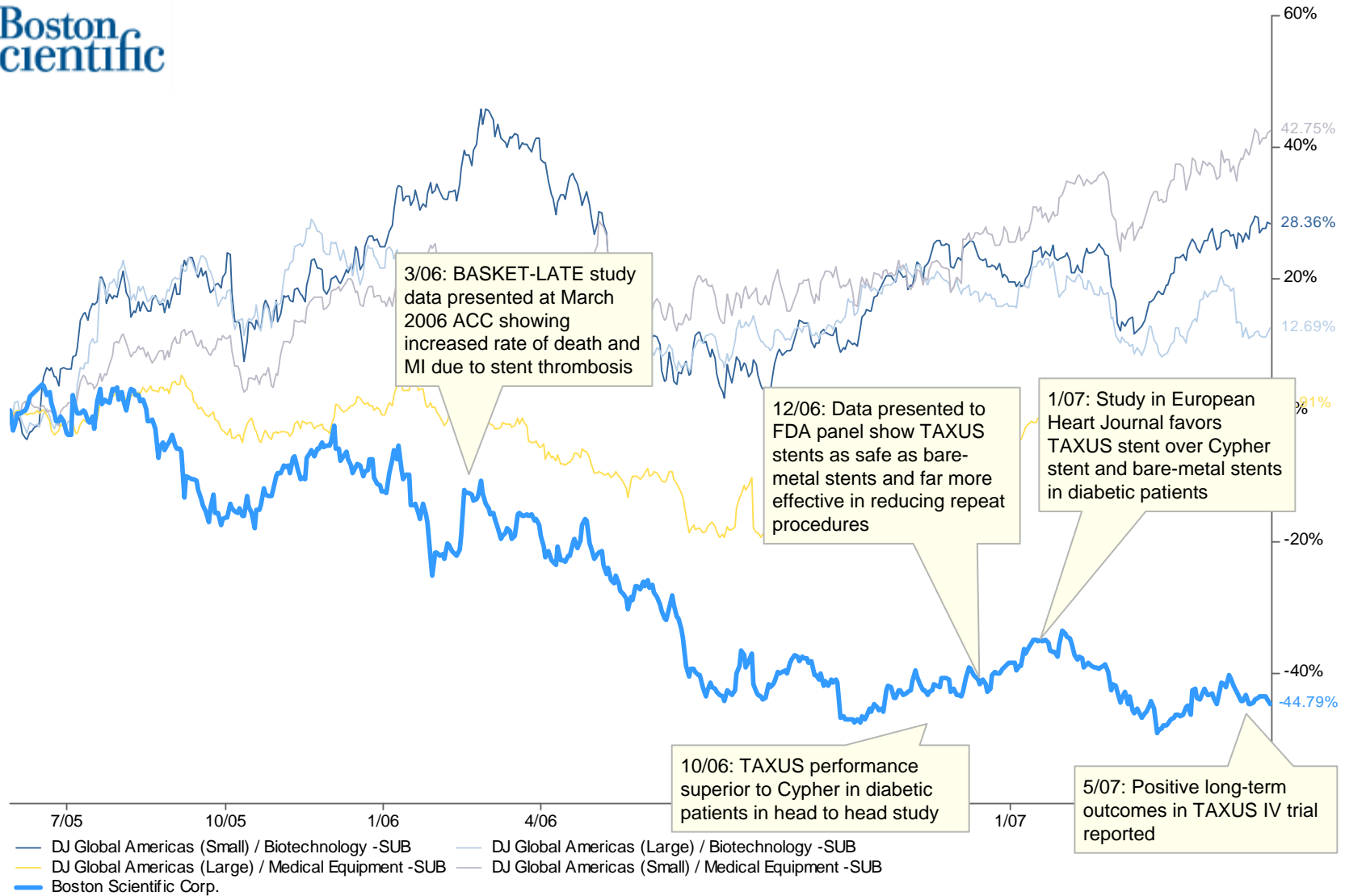
March 22, 2007 - Arthro Kinetics plc EGM approves Euro 9 million (£6.04 million) Placing

January 30, 2007 - CaReS Regulatory Authorization in Germany

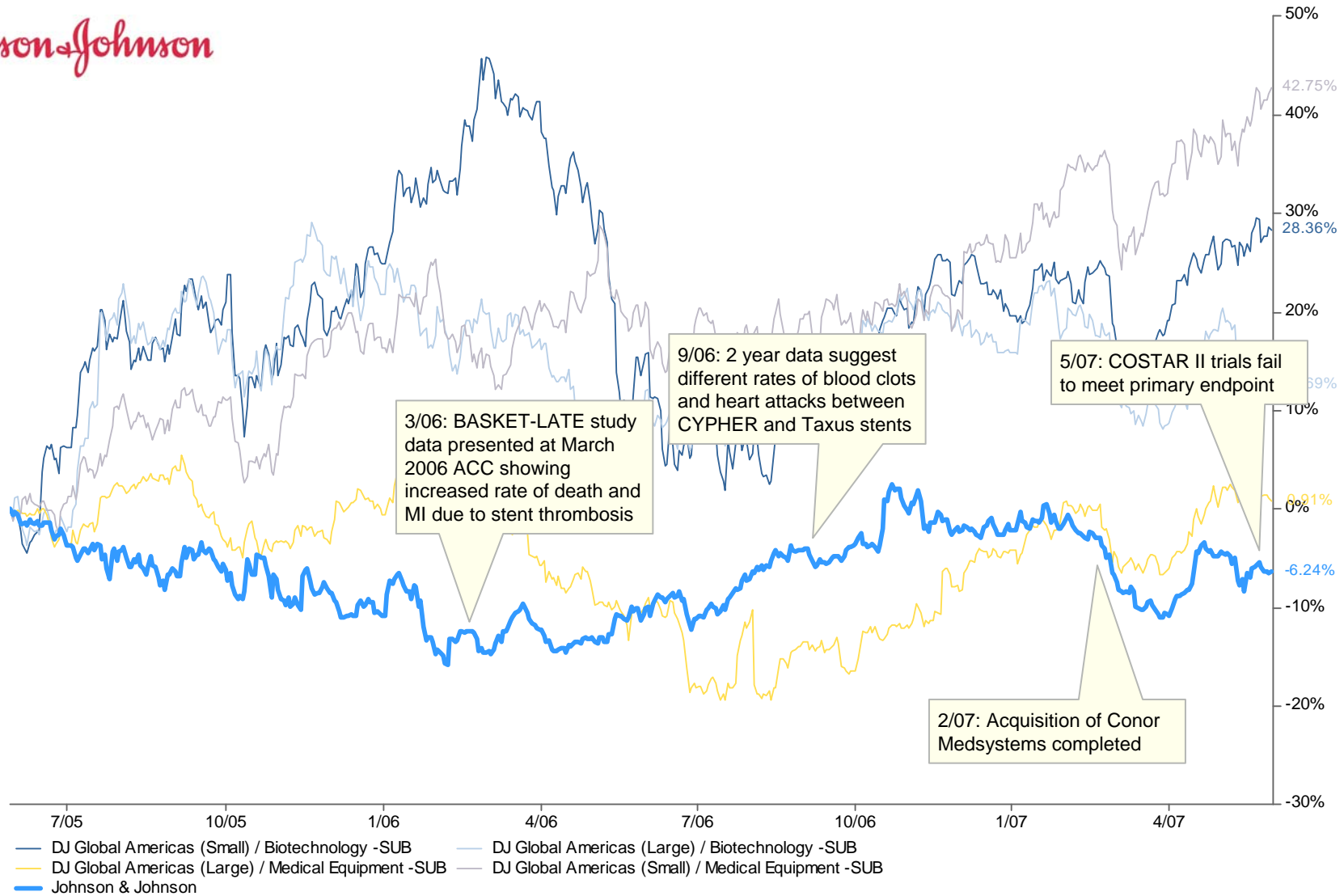
September 7, 2006 - FDA Approval for endoscopic instrumentation 510(k) application

August 29th 2006 - 1.000th patient has been successfully treated with CaReS®

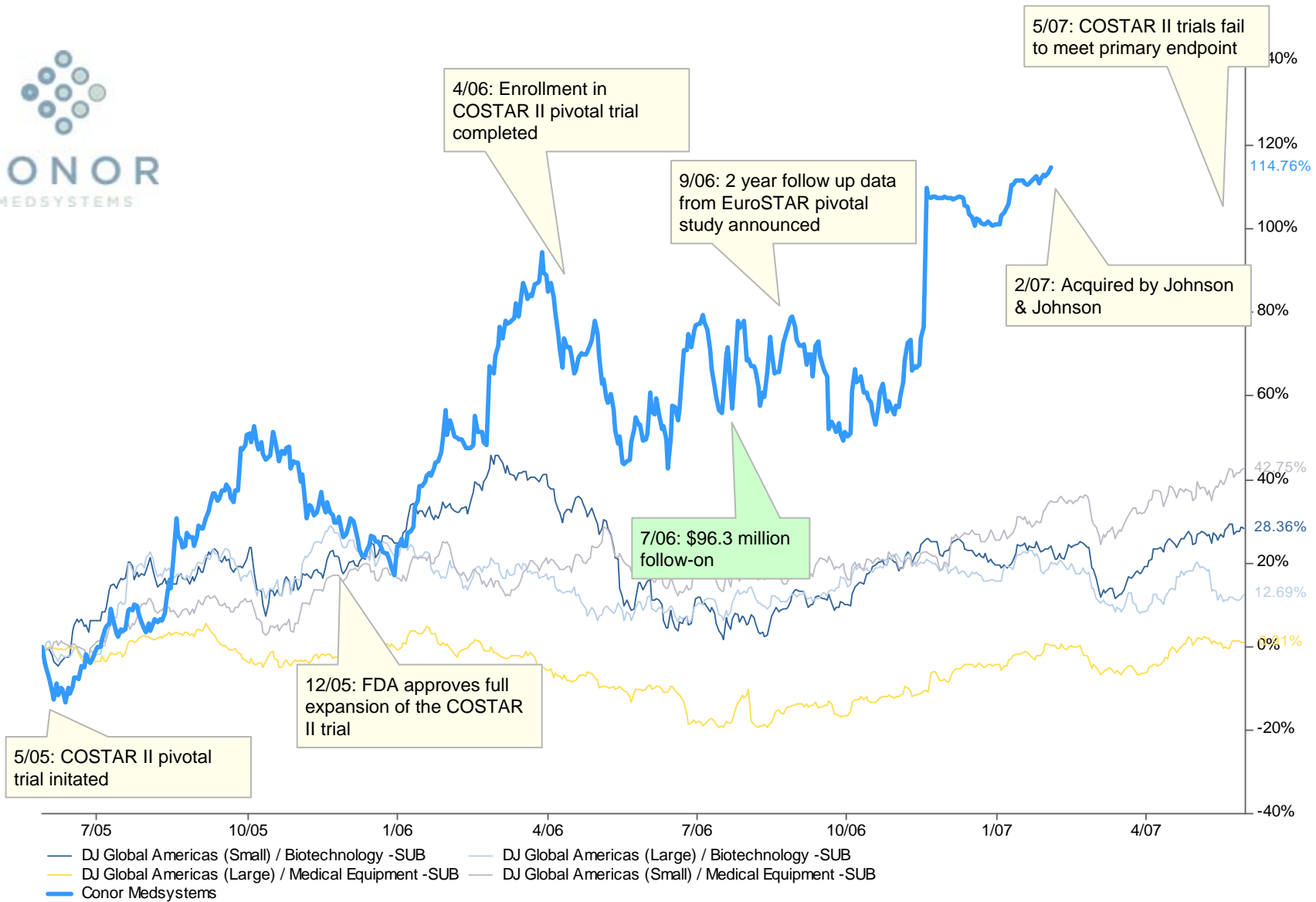
Boston Scientific: Stock Performance, Financings and Selected Milestones



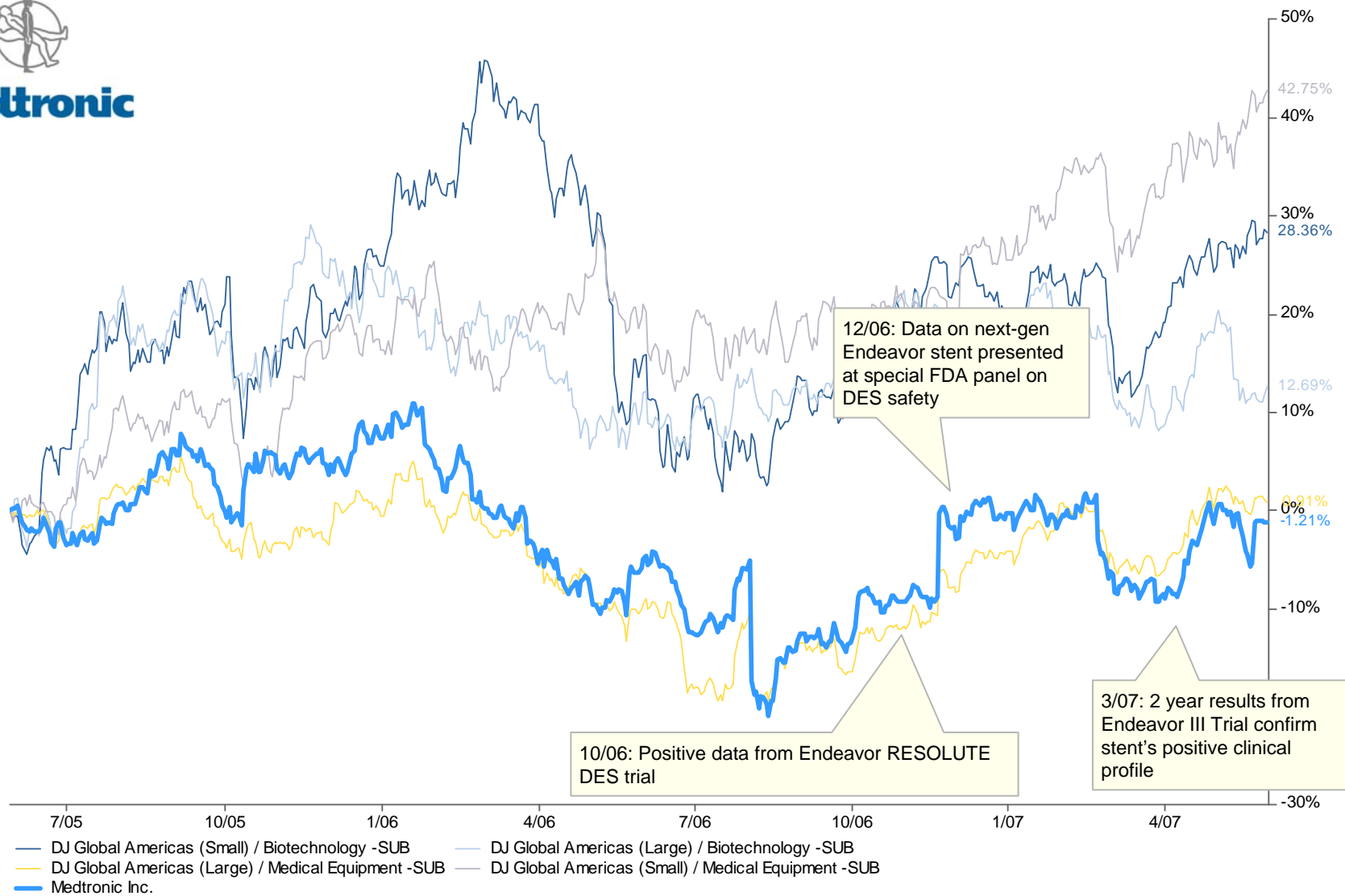
Johnson & Johnson: Stock Performance, Financings and Selected Milestones



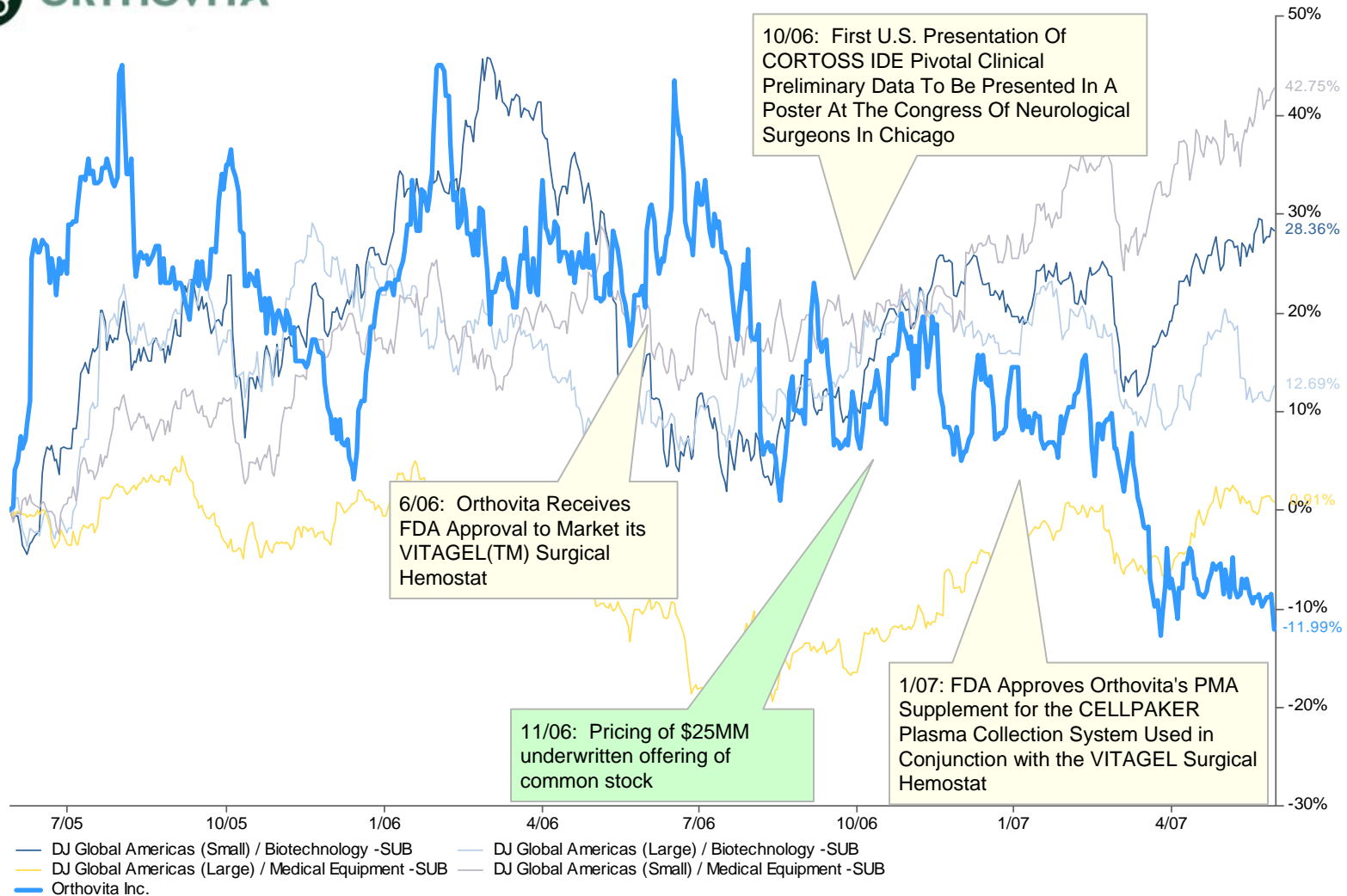
Conor Medsystems: Stock Performance, Financings and Selected Milestones



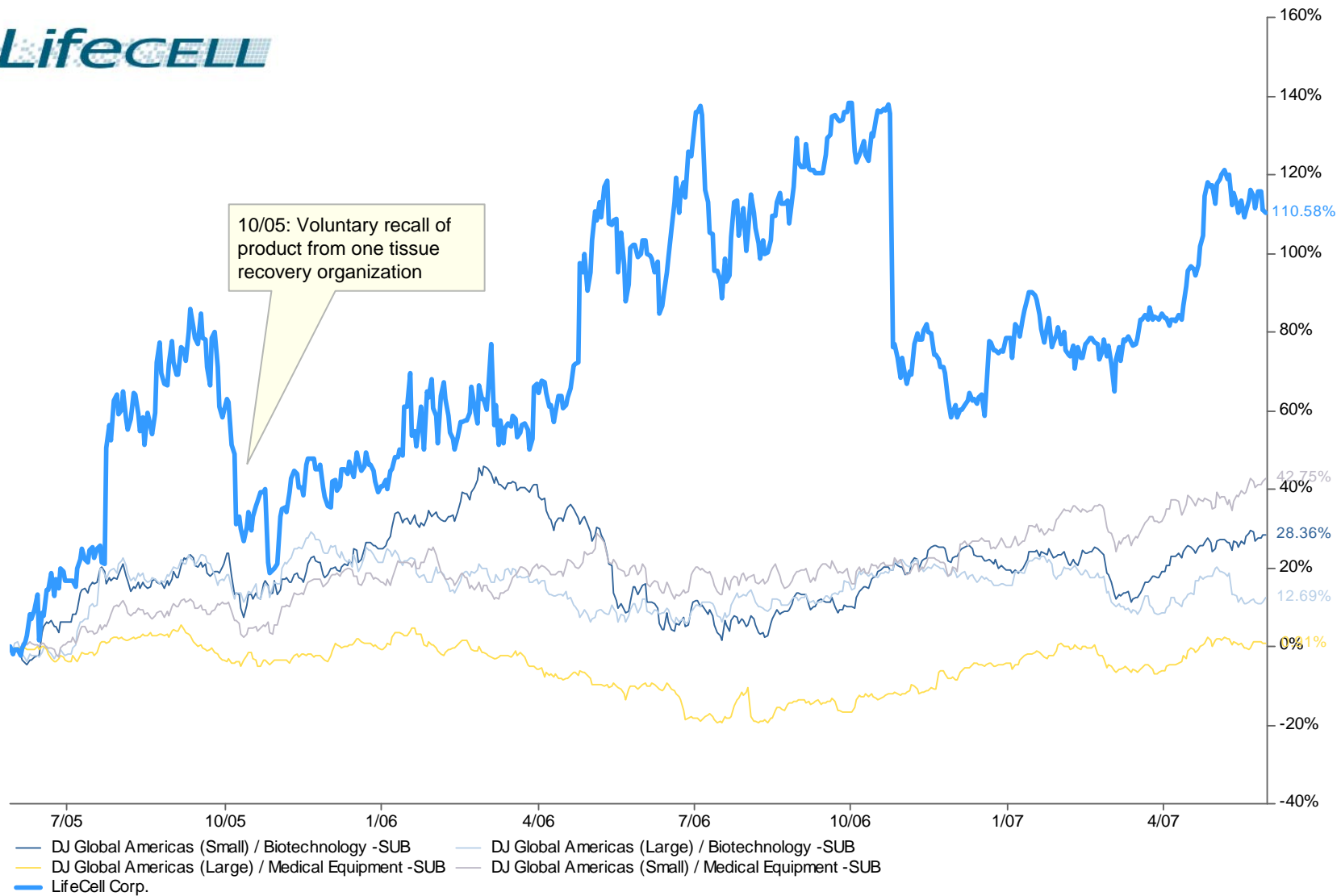
Medtronic: Stock Performance, Financings and Selected Milestones



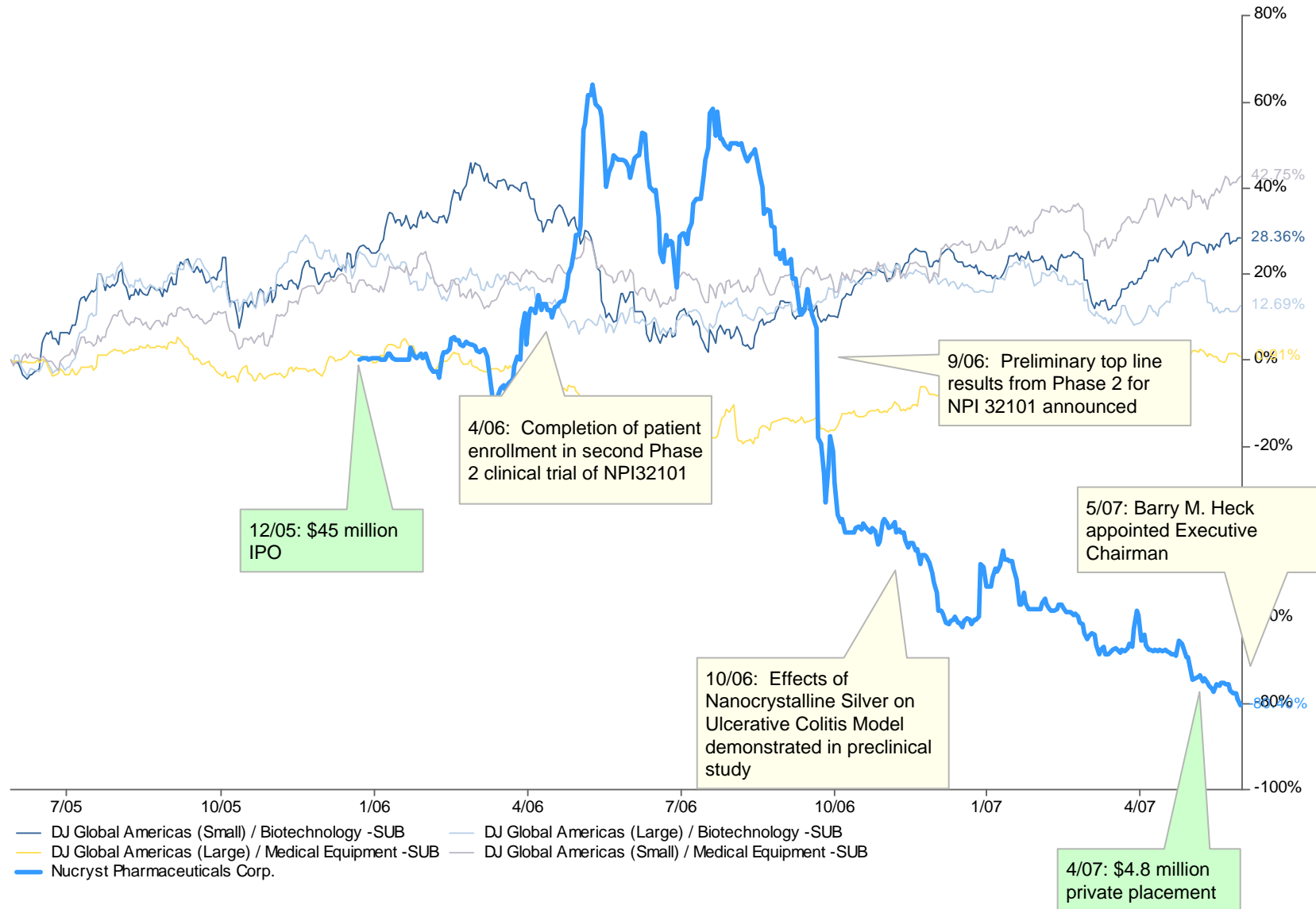
Orthovita: Stock Performance, Financings and Selected Milestones



LifeCell: Stock Performance, Financings and Selected Milestones



Nucryst Pharmaceuticals: Stock Performance, Financings and Selected Milestones



Caveats

Solutions in search of indications

Unknown mechanisms of therapeutic benefit

Flying in the face of clinical practice

Broad based research effort in lieu of disciplined commercialization reduction

Financial planning that allows for rationale proof of principle, replication, and scale while still ensuring pipeline development

Fear of dilution at the expense of capitalization

Response of the Private and Public Markets to Convergence Technologies

- Convergence technologies appear to be viewed either by classic development risk metrics or as a revenue/earnings based valuation by Biotech and Medtech investors respectively
- Large company valuation can absorb development risk or clinical downturns when revenue stream constitutes only a component of company product line
- Regardless of form of convergence or potential therapeutic benefit, clinical trial failure leads to valuation decline
- Regulatory risk may be compounded or unclear giving rise to greater risk aversion among investors
- Convergence technologies represent multidisciplinary scientific and clinical thinking but face the same if not greater scrutiny as all disruptive efforts in the Life Sciences

Issues and Panelists

How does a large company reduce the science of convergence technologies to practice?

How can a small company focus and fund a project that proves value on a reasonable scale?

Deborah Kilpatrick

Vice President of Marketing Development, CardioDx

Cell Based Therapy - What are the risks and challenges of using cell based therapeutics in focused and blockbuster categories?

George Dunbar

President and CEO, Aastrom Biosciences

How can firms focused on convergence technologies evolve fundamental business plans and regulatory strategies that allow investor comfort and mitigate execution risk?

Harry Glorikian

Managing Partner , Scientia Advisors

What are investors currently looking for and what concerns are present in reviewing convergence technologies?

Seth Rudnick MD

General Partner Canaan Partners

Discussion points for Business Model Development

Funding Mechanisms:

Private vs. Public Investors

Partnership, Licensing, Transitional Equity vs. Non Dilutive
Milestones

Large Markets vs Proof of Principle in Niche areas of unmet need

Revenue Generation vs. Development Efforts

Managing Investor and Partner expectations