

ANNUAL REPORT 2004



THE **MEDICINES** COMPANY®



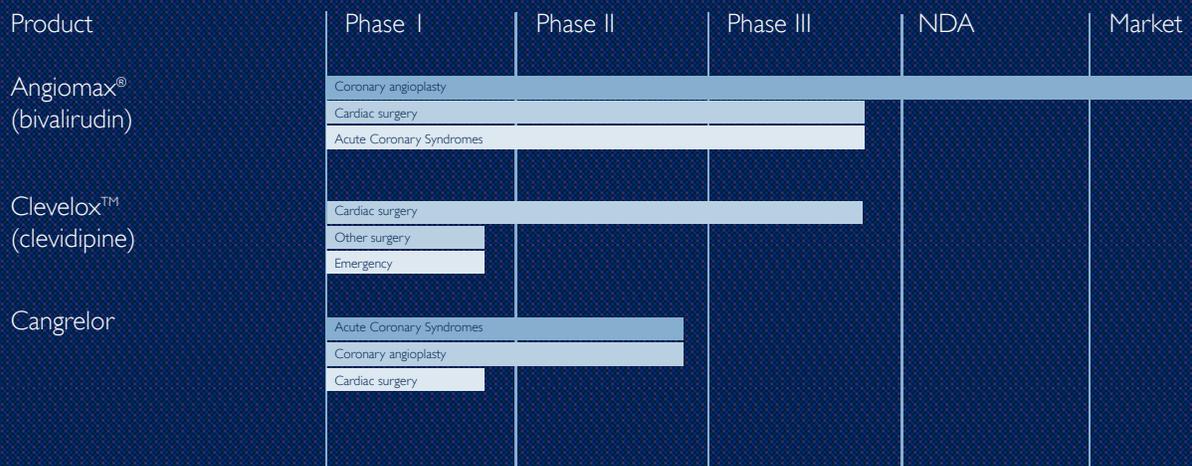
THE **MEDICINES** COMPANY®

THE **MEDICINES** COMPANY:

Meeting the demands of the world's most advanced medical practitioners

- **Develops acute care hospital pharmaceutical products** to improve patient care and hospital operations and economics.
- **Markets Angiomax® (bivalirudin)**, an anticoagulant approved for use in patients undergoing coronary angioplasty.
- **Creates value using a range of clinical and commercial skills** to develop products acquired from leading life science innovators.

PRODUCT **PIPELINE***



*Includes potential uses

DEAR FELLOW STOCKHOLDERS

ENTERING 2004, our plans called for revenue growth of Angiomax that would drive our first year of profitability. We also hoped to progress late-stage development of potential new uses for Angiomax, as well as to advance Clevelox and cangrelor.

Our strategic focus remains on addressing acute care hospital customers. We believe we can compete in the U.S. hospital market by serving the needs of these high-end customers.

Our 2004 PERFORMANCE was strong.

We grew revenue by 68 percent and turned a profit. This was accomplished within nine years of starting The Medicines Company. A good result by any standards in life sciences.

We strengthened our capacity and capability. The addition of John Kelley from Aventis as President and Chief Operating Officer, coupled with the addition and promotion of senior managers in the second half of 2004, increased the depth and expertise of our organization considerably. We continue to attract high-level pharmaceutical industry talent.

We organized our business units to meet customer demands. The following pages examine the promise and progress of our Interventional and Emergency Medicines Business Unit and our Surgery Business Unit.



CLIVE MEANWELL

Chairman and Chief Executive Officer

PROMISE

INTERVENTIONAL AND EMERGENCY MEDICINES

Medicines are needed for interventions on diseased arteries. Interventions involve the threading of catheters through the vascular system to alleviate blockages and other abnormalities. In emergencies, chest pain that may indicate a heart attack is treated early with medicines while physicians decide the optimal treatment strategy.

MISSION:

We aim to provide the best products in interventional and emergency medicine, to:

- Prevent unwanted clotting
- Get patients safely home quicker
- Minimize the bleeding associated with these procedures and other anticoagulant products
- Minimize the overall cost of treatment

PRODUCTS:

Angiomax for coronary angioplasty

(approved): an anticoagulant that specifically targets the clotting factor thrombin



Angiomax for acute coronary syndromes

(Phase III): in late-stage development to potentially treat patients who come to the hospital emergency department with chest pain

Cangrelor (Phase II): inhibits the aggregation of platelets

PROGRESS

INTERVENTIONAL AND EMERGENCY MEDICINES

2004 DEVELOPMENTS:

- Increased Angiomax sales by 68%
- Enrolled more than 6,000 patients in the landmark ACUITY clinical trial evaluating Angiomax in patients with acute coronary syndromes
- Published long-term results of the REPLACE-2 clinical trial that reported lower mortality among Angiomax-treated patients at high risk of death
- Completed manufacturing scale-up of cangrelor
- Launched Angiomax in Europe (European tradename is Angiox™)

PROMISE SURGERY

Medicines are needed to support patients undergoing surgery, such as agents to inhibit blood clotting and agents to provide reliable control of blood pressure.

MISSION:

We aim to provide the best products to support patients during surgical procedures, to:

- Provide the surgery team with control
- Provide consistent and predictable effect
- Improve efficiency of care
- Minimize overall cost of treatment

PRODUCTS:

Angiomax for cardiac surgery (Phase III): in development to potentially address the medical need for alternatives to heparin, a widely used anticoagulant, in cardiac surgery

Clevelox (Phase III): A fast-on, fast-off blood pressure control agent being studied in cardiac surgery

SURGERY PROGRESS

2004 DEVELOPMENTS:

- Completed Phase III safety clinical trials of Angiomax in cardiac surgery
- Completed Phase III efficacy clinical trials of Clevelox in cardiac surgery
- Progressed with patient enrollment in Phase III efficacy clinical trials of Angiomax in cardiac surgery
- Progressed with patient enrollment in Phase III safety trials of Clevelox in cardiac surgery*

*voluntarily suspended in 2005

FINANCIAL OVERVIEW

December 31,

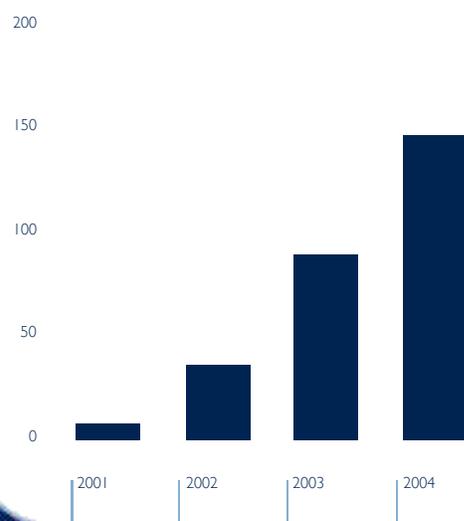
BALANCE SHEET DATA (in thousands)

	2004	2003
Cash and cash equivalents, available for sale securities and accrued interest receivable	\$ 161,224	\$ 136,855
Working Capital	\$ 173,349	\$ 139,725
Total assets	\$ 210,044	\$ 166,662
Accumulated deficit	\$ (297,145)	\$ (314,145)
Total stockholders' equity	\$ 171,671	\$ 140,165

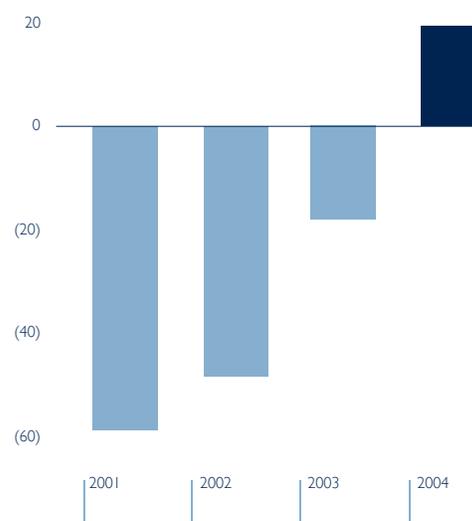
Derived from audited financials

FINANCIAL HIGHLIGHTS

REVENUE (\$mm net per annum)



NET INCOME/LOSS (\$mm per annum)



THE MEDICINES COMPANY

CORPORATE INFORMATION

Executive Officers

Clive Meanwell
Chairman and
Chief Executive Officer

John Kelley
President and
Chief Operating Officer

Steve Koehler
Senior Vice President and
Chief Financial Officer

John Richards
Vice President

Paul Antinori
Vice President and General Counsel

Directors

William W. Crouse
Managing Director
HealthCare Ventures

Robert J. Hugin
Senior Vice President and
Chief Financial Officer
Celgene Corporation

T. Scott Johnson, M.D.
Partner and Co-Founder
JSB Partners, LP

Armin M. Kessler
Former Chief Operating Officer and
Head of Pharmaceutical Division
Hoffmann-La Roche, Inc.

Robert G. Savage
Former Group Vice President and
President for the General Therapeutics
and Inflammation Business
Pharmacia Corporation

Elizabeth H.S. Wyatt
Former Vice President,
Corporate Licensing
Merck & Co., Inc.

Employees

220 (end 2004)

Headquarters

8 Campus Drive
Parsippany, NJ 07054

Offices

Waltham, MA
Abingdon, UK

Founded

1996

IPO

2000

Stock Listing

Nasdaq: MDCO

Transfer Agent:

Mellon Investor Services

Independent Registered Public Accounting Firm

Ernst & Young LLP

Corporate Counsel

Wilmer, Cutler, Pickering, Hale and Dorr LLP

Investor Relations Contact

Michael Mitchell
Executive Director, Corporate Affairs
973-656-1616
investor.relations@themedco.com

Stock Information

The following table reflects the range of the high and low bid information per share of our common stock, as reported on the Nasdaq National Market for the periods indicated. These prices reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

Year Ended	HIGH	LOW
December 31, 2003		
First Quarter	\$20.00	\$15.20
Second Quarter	\$25.91	\$16.83
Third Quarter	\$31.41	\$19.25
Fourth Quarter	\$29.98	\$22.80

Year Ended	HIGH	LOW
December 31, 2004		
First Quarter	\$33.15	\$25.76
Second Quarter	\$36.11	\$26.93
Third Quarter	\$32.40	\$19.93
Fourth Quarter	\$29.76	\$22.27

Statements contained in this document about our position and the success of our products in the marketplace, the development of our products and the acquisition of additional products and all other statements that are not purely historical, are forward-looking statements for purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. These forward-looking statements involve known and unknown risks and uncertainties that may cause the Company's actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by these forward-looking statements. Some of the important factors that may cause or contribute to such differences include the commercial success of Angiomax® (bivalirudin), whether the Company's products will advance in the clinical trials process, whether the Company's products will receive approval from regulatory agencies, physician's acceptance of clinical trial results, and the Company's ability to identify, select and acquire additional product candidates, as well as the risk factors detailed from time to time in the Company's periodic reports filed with the Securities and Exchange Commission, including without limitation the Company's Annual Report on Form 10-K filed on March 14, 2005. We specifically disclaim any obligation to update these forward-looking statements.



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www.themedicinescompany.com