



CHANGING THE FACE OF PAIN

T O O U R S T O C K H O L D E R S

Dear Stockholders:

2007 was a defining year for Anesiva. We achieved the goals we set out at the beginning of the year, significantly advancing both of our product franchises and building a commercial infrastructure for the launch of our first pain therapeutic. We also strengthened our company's focus with the hiring of key individuals with deep experience in pain management.

We're pleased to review with you our progress and achievements:

Zingo™ (lidocaine hydrochloride monohydrate) powder intradermal injection system: Preparing for commercial introduction

Zingo is Anesiva's easy-to-administer, single-use, needle-free system that delivers sterile lidocaine powder into the skin and provides topical, local analgesia. Its rapid onset of action allows IV placement or venipuncture to begin one to three minutes after administration.

In August, Zingo was approved by the U.S. Food and Drug Administration (FDA) to reduce the pain associated with peripheral IV insertions or blood draws in children three to 18 years of age. More than 18 million pediatric peripheral venous access procedures are performed in U.S. hospitals each year. We have planned extensively for Zingo's launch to ensure successful marketing, sales and manufacturing.

In February 2008, we deployed an experienced 15-person hospital-based sales force, under seasoned leadership, to educate healthcare providers about Zingo. We also signed an agreement to co-promote Zingo in the United States with Sagent Pharmaceuticals, forging what we believe is a truly synergistic partnership.

Our marketing team implemented several awareness initiatives to improve peripheral venous access pain management in children, including a website tailored to healthcare professionals and parents, www.ManageIVPain.com, and RN VOICE (Registered Nurses for Venipuncture Optimization through Increased Comfort and Education), a multidisciplinary organization founded to facilitate better management of pediatric venous access pain.

To maximize Zingo's global market opportunity, we forged an exclusive licensing agreement with experienced partner Sigma-Tau SpA covering major European markets, and we granted an exclusive license to Medical Futures, Inc. for marketing and distribution of Zingo in Canada.

“More than 18 million pediatric peripheral venous access procedures are performed in U.S. hospitals each year. We have planned extensively for Zingo's upcoming launch to ensure successful marketing, sales and manufacturing.”

In the U.S., with FDA approval for Zingo's pediatric indication in hand, we recently filed a supplemental New Drug Application to expand the label to include adults, who undergo approximately 400 million peripheral venous access procedures each year in U.S. hospitals.

In 2008, we'll work to grow the Zingo franchise through our innovative marketing and sales efforts while taking steps to ensure manufacturing capacity sufficient to meet product demand.

Adlea™: Blockbuster Potential

Adlea is a potent, long-acting, non-opioid analgesic drug candidate designed to provide pain relief for weeks to months after a single local application. Adlea has been evaluated in multiple clinical trials that have demonstrated its ability to provide site-specific, local pain relief without most of the systemic side effects associated with currently opioid-based pain medications and other analgesics such as NSAIDs.

Adlea has demonstrated long-lasting pain reduction in Phase 2 trials to date. Treatment with Adlea, which is non-addictive and non-narcotic, may reduce the need for other, less safe, systemic pain medications. Further, in highly painful circumstances such as total knee replacement surgery, Adlea can be additive to existing therapies to provide long-lasting post-operative pain relief.

“Adlea has demonstrated long-lasting reduction in pain in Phase 2 trials to date.”

We're working to develop Adlea in indications with high unmet need, focused initially on clinical trials supporting an approval to manage pain following orthopedic surgery. We currently have underway two pivotal Phase 3 trials, one in bunionectomy surgeries and one in total knee replacement surgeries, and anticipate having data from these trials by the end of this year.

We also have initiated multiple Phase 2 trials over the last year for post-operative pain associated with orthopedic surgeries, including total hip replacement and knee replacement surgeries. Efficacy data are already available in additional surgical indications including total knee replacement, tendonitis and bunionectomy.

Adlea also has tremendous potential for treating pain associated with moderate to severe osteoarthritis. Exploratory studies have demonstrated that Adlea provides pain relief for weeks to months in patients suffering from osteoarthritis of the knee. A Phase 2 trial for this indication is ongoing.

We're working to bring Adlea through development swiftly, as we believe its superior profile and utility across indications make it a potential blockbuster. We are pursuing partnerships that may support the development and commercialization of Adlea in multiple indications.

Looking ahead: Growing our value

While we accomplished a great deal in 2007 to transform Anesiva into a company poised to commercialize Zingo, we also put in place an infrastructure for the sales and marketing of potential future products such as Adlea. We worked to support this infrastructure in 2007 by completing a \$47.7 million financing, finishing 2007 with \$90.8 million in cash and cash equivalents.

Unlike any disease, pain spans numerous medical conditions afflicting literally tens of millions of patients. In Zingo, we have a compelling product that addresses peripheral venous access pain in children and potential expansion to adults. Beyond that, there is significant need for new pain management medicines that provide powerful pain relief without the side effects of today's most potent analgesics. We believe that Adlea can be that product, fulfilling a huge unmet medical need and representing a blockbuster commercial opportunity.

By targeting these unmet needs, we intend to build Anesiva's value for you, our stockholders, and to become the leader in the development and commercialization of novel pharmaceutical products for pain management. We thank you for your continued support.

Sincerely,



Rodney A. Ferguson, J.D., Ph.D.
Chairman of the Board



John P. McLaughlin
Chief Executive Officer



ZINGO

ZINGO HIGHLIGHTS

- Zingo approved by FDA to provide topical local anesthesia prior to peripheral venous access procedures in children 3-18 years of age
- Established hospital-based sales force with average 14 years experience to drive demand for Zingo in the pediatric hospital setting
- Phase 3 trial in adults met primary endpoint and significantly reduced peripheral venous access pain in adults
- Supplemental New Drug Application filed for adult indication
- Co-promotion and distribution agreement signed with Sagent Pharmaceuticals, Inc.
- Formed exclusive marketing and distribution agreements for major European markets with Sigma-Tau SpA, and for Canada with Medical Futures, Inc.

FPO



Zingo (lidocaine hydrochloride monohydrate) powder intradermal injection system: Approved and Preparing to Launch

Approval & Launch Planning

Zingo is Anesiva's easy-to-administer, single-use, needle-free system that delivers sterile lidocaine powder to provide topical, local anesthesia to reduce the pain associated with peripheral intravenous insertions or blood draws in one to three minutes after administration. In August 2007, the U.S. Food and Drug Administration (FDA) approved Zingo for use in children three to 18 years of age. In clinical trials, the most common adverse reactions were redness, red dots and swelling.

While preparing to launch Zingo in the pediatric population, Anesiva conducted an FDA-requested Phase 3 trial of Zingo for an additional indication in adults. The pivotal trial demonstrated significantly less pain associated with peripheral venous access procedures in patients treated with Zingo compared to placebo. Based on these results and positive data from earlier trials, Anesiva filed a supplemental New Drug Application with the FDA to expand Zingo's label to include adults in March 2008.

Internationally, Anesiva forged exclusive licensing agreements with Sigma-Tau SpA covering major European markets, and with Medical Futures, Inc. for marketing and distribution of Zingo in Canada. In addition, Anesiva entered into a joint venture

with Wanbang Biopharma in China to supplement U.S. production capacity using U.S.-sourced components.

Sales & Marketing

Selling in hospitals involves two steps: creating product demand and obtaining formulary access. Anesiva's skilled 15-person sales force, under experienced leadership, entered the field in February 2008. Beyond these representatives, Anesiva will co-promote Zingo in the United States under an agreement with Sagent Pharmaceuticals. The Anesiva team is promoting Zingo primarily to healthcare providers, while Sagent's representatives focus on hospital pharmacists and group purchasing organizations, capitalizing on the expertise and strengths of both sales organizations.

Anesiva implemented a number of marketing initiatives aimed to improve peripheral venous access pain management in children: the website www.ManageIVPain.com, an interactive repository of information, guidance and support to parents and healthcare providers, encourages nurses to minimize IV pain for their pediatric patients. A second initiative, RN VOICE (Registered Nurses for Venipuncture Optimization through Increased Comfort and Education), provides its members with resources on improving the management of IV pain in children.



ADLEA

ADLEA HIGHLIGHTS

- Presented data demonstrating pain reduction for up to two weeks after knee replacement surgeries
- Demonstrated in a Phase 2 study substantial, long-term pain reductions in osteoarthritis of the knee
- Initiated Phase 2 trial for pain relief following knee replacement surgery
- Initiated Phase 2 trial for pain relief following total hip replacement surgery
- Defined regulatory pathway in post-operative pain with FDA

Adlea: Substantial Clinical Progress Across Indications

Efficacy Demonstrated in Trials to Date

Adlea is a powerful, long-acting, site-specific non-opioid analgesic drug candidate designed to provide pain relief for weeks to months after a single local application. Adlea's unique mechanism of action provides a long-lasting, localized effect and blocks the transmission of moderate to severe pain caused by major surgical procedures and osteoarthritis.

Adlea has demonstrated long-lasting pain reduction in numerous Phase 1 and 2 trials. Treatment with Adlea, which is non-addictive and non-narcotic, may reduce the need for other less safe, systemic pain medications such as opioids and NSAIDs. Reducing use of these standard agents may improve the quality of life for patients recovering from surgeries and those suffering from osteoarthritis.

Adlea can be additive to existing therapies for post-operative pain:

- In a Phase 2 trial in total knee replacement surgeries, patients receiving Adlea had significantly less post-operative pain than patients who received placebo. Both groups received post-surgical analgesia, and there was a trend toward reduced morphine use in the Adlea-treated group as compared to placebo.

- In a Phase 2 trial in bunionectomy surgeries, Adlea treatment resulted in statistically significantly less post-operative pain, at the planned dose to be used in the Phase 3 trial, compared to placebo. Further, a significantly lower proportion of the Adlea-treated patients required post-surgical rescue pain medication relative to placebo.

In the treatment of osteoarthritis pain, Adlea provided sustained reduction in mean pain intensity as compared to baseline over the twelve-week study period in a Phase 2 trial. This lengthy duration of clinical benefit is consistent with Adlea's known mechanism.

Regulatory Pathway Defined

In October 2007, Anesiva announced the planned regulatory pathway for Adlea in post-surgical pain. The company also has initiated Phase 2 trials for post-operative pain associated with total hip replacement and knee replacement surgeries and in pain due to osteoarthritis of the knee.

Anesiva is conducting two Phase 3 trials for Adlea in bunionectomy surgeries and total knee replacement surgeries in 2008 to support a label of pain management following orthopedic surgery.

2008 MILESTONES

- Launch Zingo to reduce the pain associated with peripheral IV insertions or blood draws in children three to 18 years of age
- File supplemental New Drug Application for Zingo to expand the label to include adults
- Establish Zingo marketing and distribution agreements in additional territories
- Initiate Phase 3 trial evaluating Adlea in bunionectomy surgeries
- Initiate Phase 3 trial evaluating Adlea in total knee replacement surgeries
- Initiate Phase 2 trial of Adlea in arthroscopic shoulder surgeries
- Report data from Phase 3 trial of Adlea in bunionectomy surgeries
- Report data from Phase 3 trial of Adlea in total knee replacement surgeries

Corporate Directory

Management

John P. McLaughlin
Chief Executive Officer
and Director

Patrick A. Broderick
Vice President, General Counsel
and Corporate Secretary

James R. Carr, Pharm.D.
Vice President, Marketing

Nancy E. Donahue
Senior Vice President,
Marketing

Susan M. Kramer, Dr.P.H.
Vice President, Preclinical
Development

Samantha R. Miller
Vice President,
Business Development

Melissa Morandi
Vice President,
Quality Assurance

John X. Regan
Senior Vice President,
Operations

Yvonne Richardson
Vice President,
Manufacturing

Jean-Frédéric Viret, Ph.D.
Vice President and
Chief Financial Officer

Board of Directors

Rodney A. Ferguson, J.D., Ph.D.
Chairman of the Board
Managing Director,
Panorama Capital

James N. Campbell, M.D.
Director of the Blaustein Pain
Treatment Center at Johns Hopkins
University School of Medicine

Thomas J. Colligan
Retired Vice Chairman,
PricewaterhouseCoopers LLP

Carter H. Eckert
Former Chairman and
Chief Executive Officer,
IMPATH Inc.

James A. Harper
Retired Group Vice President,
Global Marketing and Sales,
Eli Lilly and Company

Daniel S. Janney
Managing Director,
Alta Partners

John P. McLaughlin
Chief Executive Officer and
Director, Anesiva

Arnold L. Oronsky, Ph.D.
General Partner,
InterWest Partners

Michael F. Powell, Ph.D.
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Annual Stockholders Meeting

Anesiva's annual meeting of
stockholders will be held at
9:00 a.m. on May 8, 2008 at:
Marriott San Francisco Airport
1800 Old Bayshore Highway
Burlingame, CA

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Quarterly Reporting & Other Information

Anesiva's Form 10-K and other SEC
filings, news releases and other
information regarding the company
and its technology are available on
the Internet: www.anesiva.com

Stock Comparison Chart



This annual report includes "forward-looking statements" within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. Words such as "expect," "estimate," "project," "budget," "forecast," "anticipate," "intend," "plan," "may," "will," "could," "should," "believes," "predicts," "potential," "continue," and similar expressions are intended to identify such forward-looking statements. Forward-looking statements in this annual report include matters that involve known and unknown risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to differ materially from results expressed or implied by this press release. Such risk factors include, among others: the timing and results of our clinical trials, whether Anesiva is able to manufacture its products on commercially reasonable terms, whether Anesiva can secure FDA approval for the use of Zingo in adults, the degree to which Zingo gains market acceptance, and our regulatory approval strategy for Adlea. Actual results may differ materially from those contained in the forward-looking statements in this annual report.

Anesiva undertakes no obligation and does not intend to update these forward-looking statements to reflect events or circumstances occurring after this annual report. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document. All forward-looking statements are qualified in their entirety by this cautionary statement. The Anesiva logo, Zingo and Adlea are trademarks of Anesiva, Inc.



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