



C H A N G I N G
the Face of Pain



4975 – Potential for Blockbuster Status

On the heels of Zingo, we have 4975, the second product in our pipeline, which has been shown in a series of Phase 2 studies to provide statistically significant reductions in moderate to severe pain in post-surgical, musculoskeletal and neuropathic settings for weeks to months following a single administration. We are currently focusing on the use of 4975 in post-surgical and osteoarthritis indications. We are in the process of commencing a series of clinical trials, which will include a pivotal Phase 3 trial in total knee replacement later this year, as well as Phase 2 trials in total hip replacement, arthroscopic shoulder surgery and osteoarthritis of the knee.

Given the significant and growing number of these procedures and incidence listed in the following table, we believe 4975 has blockbuster potential. We are moving quickly to continue the rapid development of this promising product.

Potential Market Opportunities for 4975 (Annual Patients in U.S)		
Post-Surgical Pain	Total Knee Replacement	56.7 MM 473,000
	Arthroscopic Shoulder Surgery	485,000
	Total Hip Replacement	250,000
Musculoskeletal Pain	Osteoarthritis of the Knee	1.1 MM
	Tendonitis of the Elbow	1.25 MM
Post-Trauma Neuropathic Pain	Intermetatarsal (Morton's) Neuroma	216,000

Pain Management—A Market Poised for Explosive Growth

Pain impacts quality of life, prognosis and patient recovery time, and presents a significant, costly, unmet medical need to the healthcare system. Approximately \$27 billion dollars were spent on pain drugs in 2005—a market that is poised for explosive growth in the years to come¹. Existing pain medications are often associated with significant side effects, and there has been little recent innovation to address these challenges. As the baby boom generation ages and the incidence of painful age-related disorders increases in a population that is likely to wish for an active, pain-free retirement, new treatments are needed.

(Footnotes)

¹ Source: Decision Resources, Novel Approaches to Pain Therapy Executive Summary, May 2006.

We believe that both patients and healthcare providers will continue to drive the need for effective, convenient products. Market research that we have conducted has indicated that the amount of pain experienced by a patient during a hospital visit can have a direct and significant impact on a patient's satisfaction with a hospital or emergency department. Hospitals and healthcare providers are increasingly focused on these patient satisfaction scores.

It is for these reasons that we are investing in the development and commercialization of our product pipeline to create the next generation of pain therapeutics to address these challenges with fast-acting, convenient, effective medications that do not have the side effects common to currently available pain products.

Investment Highlights

In closing, we have a number of near-term milestones in the upcoming year and are well capitalized with a seasoned management team to deliver on our ambitious strategic plan and mission to be a leader in the development and commercialization of pain therapeutics. In addition, we have retained worldwide rights to Zingo and 4975 giving us the ability to co-promote certain indications, while maintaining 100 percent ownership in others.

We thank you for your continued support of our endeavors to provide effective, convenient and novel pain management products for patients who need them.

Sincerely,

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

John P. McLaughlin
Chief Executive Officer

Significant Accomplishments of 2006

Zingo

- Filed NDA/eCTD with FDA for product approval
- Presented positive Phase 3 data at multiple medical meetings

4975

- Completed successful FDA meeting to define clinical plan for 4975
- Completed trial showing pain management in Phase 2 trials of 4975 for knee replacement surgeries and tendonitis
- Convened advisory committee of thought leaders in orthopedic surgery, rheumatology, pain management and anesthesiology to review data and advise on future trials
- Obtained Orphan Drug status of 4975 for intermetatarsal neuroma
- Raised \$45 million in over-subscribed registered direct stock offering

2007 Milestones

Zingo

- Acceptance of NDA/eCTD for filing in pediatric indication
- Conduct adult Phase 3 trial
- Hire sales infrastructure
- Approval of NDA/eCTD for pediatric indication
- Submit filing for product approval in adult indication

4975

- Conduct Phase 2 trial for higher dose TKA surgeries
- Conduct Phase 2 trial for hip replacement surgeries
- Conduct Phase 2 trial for arthroscopic shoulder surgeries
- Conduct Phase 2 trial in OA of the knee
- Conduct Phase 3 trial in TKA surgeries



ZINGO

New Drug Application Filed and Accepted for Review

Anesiva Awaiting FDA Clearance to Begin Commercialization of Lead Product Candidate

Anesiva's most advanced product candidate, Zingo, a fast-acting, local anesthetic, has been shown in two Phase 3 clinical studies in pediatric patients to reduce pain associated with peripheral venous access procedures, such as intravenous (IV) line placements and blood draws.

Last year, Anesiva filed its first New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) using the electronic Common Technical Document (eCTD) format. This type of filing is a standard part of the review process used by regulatory agencies both in the United States and many other countries to review and approve new prescription-based drugs for marketing and distribution.

Routine venipuncture procedures can be painful, and many children and parents fear the needle insertion required to withdraw blood or start an intravenous line. A product such as Zingo, which provides analgesia in one to three minutes to reduce the pain associated with these procedures, would allow uninterrupted care without the traditional wait time (as much as 60 minutes) associated with currently available anesthetic creams and ointments.

If approved by the FDA, Anesiva plans to market Zingo using a specialty sales force of approximately 35-45 sales representatives focused on children's hospitals and their busy emergency departments. We are also currently conducting a single Phase 3 study in the adult population, as we believe that Zingo may have broad applicability in adult venipuncture procedures as well as future settings including oncology clinics and hemodialysis.

Zingo delivers microcrystals of lidocaine into the epidermis (outer most layer of skin). Instead of using a needle to deliver the analgesic, Zingo uses compressed gas to accelerate the lidocaine particles, which quickly dissolve into the epidermis and provide the rapid analgesia observed in clinical testing. The rapid onset of action, combined with convenient, ease-of-administration, delivered in a needle-free disposable system may offer significant advantages over current options.



4975

Data Demonstrate Weeks of Pain Relief After Single Administration

Series of Late-Stage Clinical Studies to Begin This Year to Treat Moderate to Severe Pain in Multiple Settings

A long-acting, non-opioid analgesic drug candidate, 4975, has been shown to reduce certain post-surgical, musculoskeletal and neuropathic pain for weeks to months after a single application. In multiple mid-stage clinical trials for site-specific, moderate-to-severe pain, 4975 demonstrated a statistically significant reduction in pain following total knee replacement surgery and in the treatment of pain associated with end-stage osteoarthritis of the knee, tendonitis of the elbow and intermetatarsal neuroma. 4975 has also demonstrated the potential to reduce opioid-based medication required for effective pain management. These characteristics combined with its rapid onset, site-specific action, local administration, and analgesic properties make 4975 a potential blockbuster pain therapeutic.

Patients undergoing major surgical procedures, such as total knee replacement, typically receive multiple types of analgesia to control post-operative pain during the recovery and rehabilitation process. Opioid-based medications, such as morphine, have well known side effects that include sedation, respiratory depression, euphoria, nausea and vomiting during acute use, constipation and the potential for physical dependence during chronic use. 4975 has been shown to be well tolerated across many clinical trials and has not exhibited the systemic side effects associated with opioid medications.

Unlike opioid-based medications, 4975 is a TRPV1 agonist based on capsaicin and acts as a specific C-neuron anesthetic to relieve pain. In normal humans and mammals, TRPV1 receptors are expressed only on nociceptors (pain sensing nerves), which are responsible for transmitting to the brain long-lasting “noxious pain” signals associated with dull, aching, throbbing pain. In clinical trials, 4975 has not been shown to have an adverse effect on normal sensation such as temperature or touch and does not interfere with nerve fibers important for motor skills or sensation.

The next steps in the continued development of 4975 include commencement of a series of Phase 2 and Phase 3 clinical studies focused on post-surgical indications, including treatment of pain associated with total knee replacement, arthroscopic shoulder and total hip replacement surgeries, as well as pain associated with osteoarthritis of the knee. Secondary targets will include tendonitis and intermetatarsal neuroma.

CORPORATE Directory

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and Corporate Secretary*

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Vice President, Business Development

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Vice President, Quality Assurance

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*Vice President and
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Vice President, Clinical Research

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ANNUAL STOCKHOLDERS MEETING

Anesiva's annual meeting of stockholders will be held at 9:00 a.m. on May 30, 2007 at: Westin San Francisco Airport, 1 Old Bayshore Highway, Millbrae, CA.

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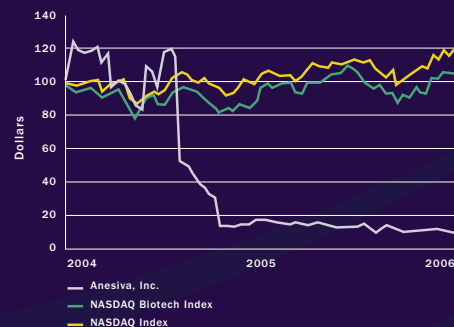
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QUARTERLY REPORTING & OTHER INFORMATION

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



Forward Looking Statement This annual report contains forward-looking statements, including without limitation all statements related to our clinical trials and progress with developing product candidates. Words such as "believes," "anticipates," "plans," "expects," "intend," "will," "slated," "goal" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon our current expectations. Our actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, risks related to the development of product candidates, progress, timing and results of our clinical trials, intellectual property matters, difficulties or delays in obtaining regulatory approval, competition from other pharmaceutical or biotechnology companies, our ability to obtain additional financing to support our operations and other risks detailed in relevant filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2006. 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, and Anesiva undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date hereof. The Anesiva logo and Zingo are trademarks of Anesiva, Inc.



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