2004 Annual Report

Vical

Product Pipeline

PRODUCT AREA	PROJECT TARGET AND INDICATION(S)	DEVELOPMENT STATUS	DEVELOPMENT RIGHTS
CANCER			
Immunotherapeutic	High-dose Allovectin-7® for metastatic melanoma	Phase 2	Vical
	IL-2/EP for solid tumors	Preclinical	Vical
Tumor-associated antigen therapeutic vaccines	Unspecified cancer	Research	Sanofi Pasteur
	Unspecified cancer	Research	Merck
INFECTIOUS DISEASE			
Infectious disease vaccine	*Plasmodium falciparum* (malaria)	Phase 1/2	Vical
	Cytomegalovirus	Phase 1	Vical
	Bacillus anthracis (anthrax)	Phase 1	Vical
	Ebola virus	Phase 1	Vical/NIH
	West Nile Virus	Preclinical	Vical/NIH
	SARS coronavirus	Phase 1	NIH
	HIV–preventive	Phase 1	Merck
	HIV–therapeutic	Phase 1	Merck
	Hepatitis B virus–preventive	Research	Merck
	Hepatitis B virus–therapeutic	Research	Merck
	Hepatitis C virus–preventive	Research	Merck
CARDIOVASCULAR			
Angiogenic growth factor	VEGF-2	Phase 2	Corautus
	FGF-1	Phase 2	Centelion
VETERINARY			
Preventive infectious disease vaccine(s)	Various undisclosed	Research-Clinical	Merial
	Undisclosed fish disease	Clinical	Aqua Health
Protective cancer vaccine	Companion animal cancer	Clinical	Merial

Condensed Financial Information (unaudited)

	2004	2003	2002
	(in thousands, except per share data)		
STATEMENT OF OPERATIONS DATA			
Revenues	$ 14,545	$ 8,078	$ 7,007
Operating expenses	39,688	34,182	38,635
Loss from operations	(25,143)	(26,104)	(31,628)
Net investment income	1,410	1,654	3,696
Net loss	(23,733)	(24,450)	(27,932)
Net loss per share (basic and diluted)	$ (1.05)	$ (1.22)	$ (1.39)
Shares used in per share calculation	22,695	20,091	20,079
BALANCE SHEET DATA			
Cash, cash equivalents and marketable securities, including restricted	$ 73,996	$ 84,518	$ 111,513
Working capital	67,300	76,983	105,672
Total assets	101,226	110,707	129,426
Long-term obligations, less current portion	8,209	8,662	4,319
Stockholders' equity	82,909	89,822	114,307

DEAR SHAREHOLDERS Vical is a vaccine company applying a fundamentally new technology that we believe can create a paradigm shift in the field of infectious disease by speeding up the discovery and early development of new vaccines. Our technology platform also offers inherent advantages in safety, stability, analytics and manufacturing as well as the potential to combine multiple vaccines. There are substantial unmet medical needs in the area of vaccines, and we believe this technology can succeed in addressing them where conventional vaccine technologies have fallen short.

Over the past few years, we have attracted to Vical a team of vaccine development experts who are focused on applying this platform to our selected development targets. We also have built a state-of-the-art manufacturing facility to support our development and commercialization needs and maintain full control of our programs. Our expertise in DNA manufacturing has allowed us to develop a vaccine contract manufacturing business that has become an important source of revenues for the company. We have established collaborative partnerships with institutions and major pharmaceutical companies that can supplement our own capabilities. With the physical, personal and financial resources at our disposal, we are advancing toward the commercialization of our initial product candidates.

Our current product pipeline, as outlined on the preceding page, reflects the broad potential of our platform technology and the diversity of our collaborative programs. Applications of our technology include cancer, infectious diseases, and cardiovascular diseases. We have placed our initial focus on key independent infectious disease and cancer vaccine development programs and are leveraging the resources of our partners to pursue programs beyond our immediate interest. This approach has led to the active development of a dozen different programs by Vical and our collaborators, and success in any individual program could open more product opportunities in related fields.

We continue to be encouraged by the results in our high-dose Allovectin-7® program.

PRODUCT PROGRAMS

ALLOVECTIN-7® We believe that the gene-based immunotherapy Allovectin-7®, our lead development program in metastatic melanoma, may offer a well-tolerated treatment of local or regional disease for patients who have few if any other options. The approved first-line therapies, dacarbazine and interleukin-2, offer limited and short-lived efficacy and are associated with serious and life-threatening toxicities. There are no approved second-line therapies. There remains a significant unmet medical need in metastatic melanoma.

Clinical trials of Allovectin-7® have shown that the treatment is consistently well tolerated and elicits responses in both injected and non-injected melanoma tumors. We conducted a Phase 3 trial at a low dose of 10 micrograms in combination with chemotherapy, and most recently, a Phase 2 trial at a 200-fold higher dose of 2000 micrograms as a stand-alone treatment. The audited results of this trial were presented in November 2004 at the annual meeting of the International Society for Biological Therapy of Cancer. The high-dose Phase 2 trial yielded encouraging trends in response rates, duration of response, and survival, with exceptional safety and a convenient outpatient regimen with no pre-treatment or immediate post-treatment care.

We continue to be encouraged by the results in our high-dose Allovectin-7® program. In early 2005, we completed a Special Protocol Assessment, or SPA, with the U.S. Food and Drug Administration, or FDA, of a Phase 3 trial for high-dose Allovectin-7®. We are very pleased to have received approval for a small trial of 375 patients, with durable response rate as the primary endpoint. We believe the objectives established in the SPA are realistic and achievable based on the results we have seen in our prior studies. Full details of the trial design are expected to be presented in May 2005 at the annual meeting of the American Society of Clinical Oncology.

We are now focused on finding the best partner to help us with this Phase 3 trial to establish the safety and effectiveness of Allovectin-7®. We are looking for a strategic fit—a company that can provide meaningful support for the continued development and commercialization of Allovectin-7®. Our ongoing discussions with several potential partners are encouraging, and we expect to complete this process in 2005.

CMV Our lead infectious disease vaccine candidate against cytomegalovirus, or CMV, has been well received by the medical community.

We initiated two Phase 1 trials in 2004 with our bivalent and trivalent immunotherapeutic vaccine candidates against CMV. Both trials have completed enrollment, and data will be presented in April 2005 at the 10th International Cytomegalovirus/Betaherpesvirus Workshop in Williamsburg, VA. Based on the data, we intend to select one vaccine candidate to advance into Phase 2 testing in transplant patients. This would be approximately a 160-subject study, including a control group who would not receive the vaccine, and we intend to complete the design and start the trial in the second half of 2005.

Partial funding for this program has been provided under three grants totaling $4.1 million from the National Institutes of Health, or NIH. We expect to continue with the rapid development already achieved in this program, and remain excited about the potential for this novel vaccine.

ANTHRAX Given the uncertainty in biodefense funding, we announced early in our anthrax vaccine program that we would proceed only as long as we could secure government funding. We were fortunate to have received government grants of almost $7 million to support much of our preclinical work, in addition to government support of our Phase 1 clinical trial at the Vaccine and Treatment Evaluation Units funded by the NIH.

With this support, we have completed enrollment for our Phase 1 study in our anthrax vaccine program, and we expect to present safety and immunogenicity data at an appropriate scientific meeting in 2005. We plan to complete any remaining

non-clinical development work with the support of the unused portions under our existing grant. Based on our discussions with government agencies, it appears that funding needed to support further clinical development will not be available in the foreseeable future.

IL-2 / EP Rounding out our internal development efforts, we expect to begin a trial this year with a gene-based IL-2 product candidate and electroporation for solid tumors, which will have its initial application in metastatic melanoma patients. The goal is to provide the clinical benefits of IL-2 protein therapy and avoid the toxicity associated with systemic delivery. Our experiments in small animals have been encouraging and preclinical data will be presented in April 2005 at the annual meeting of the American Association for Cancer Research in Anaheim, CA. We look forward to starting the initial human safety study this year.

COLLABORATIONS

NIH Our collaboration with the NIH is among the largest in the field of vaccines, covering multiple vaccine development programs, manufacturing contracts, and commercialization rights. The NIH also has supported the expansion of our infrastructure by furnishing increased manufacturing capabilities.

Ebola. The NIH began human safety testing in healthy volunteers of their DNA vaccine against Ebola in November 2003, making it the first clinical-stage Ebola vaccine. Ebola has been allocated $90 million for initial stockpiling and $260 million for long-term procurement under Project BioShield.

SARS. Human safety testing of the NIH's DNA vaccine against SARS began in December 2004, and enrollment of up to ten healthy volunteers is underway. This is the first SARS vaccine to advance to human clinical testing in the United States, further confirming the ability of our technology to compress early development timelines.

West Nile Virus. Clinical supplies have been manufactured and shipped in support of human safety testing of a vaccine for West Nile Virus which the NIH expects to begin in the first half of 2005. This disease continues to spread across the United States, and poses an ongoing threat to birds, horses and humans.

HIV. Phase 1 testing is ongoing with the NIH's multivalent HIV vaccine and we expect the NIH to advance into Phase 2 testing. Additional HIV vaccines based on our technology continue under development by Merck and the International AIDS Vaccine Initiative. At Vical, we are exploring opportunities to apply an HIV vaccine in a therapeutic setting using the licensed electroporation technology.

ANGIOGENESIS Our angiogenesis partner Centelion, a subsidiary of Aventis Pharma which is part of the new Sanofi-Aventis Group, is conducting two Phase 2 trials—one in Europe and the other in the United States. This program is targeting peripheral vascular disease using the gene for FGF-1. We expect results from at least one of these trials in 2005.

Corautus Genetics is working on the gene-based delivery of VEGF-2 as a treatment for severe cardiovascular disease. In 2004, Corautus announced the initiation of a Phase 2b clinical trial, and that trial is ongoing.

VETERINARY Our partners at Aqua Health, a division of Novartis, are anticipating approval in Canada of what could be the world's first marketed DNA vaccine. This is a vaccine to protect salmon from a particular infectious disease that strikes when the fish are transferred from the protected environment of fish farms into pens in the ocean.

Also in the animal health arena, our collaborators at Merial have made significant progress in several target areas. Initial trials of a DNA cancer vaccine in dogs have been completed, and advanced clinical trials are expected to begin in 2005. Merial is developing a combination vaccine for cats, which has shown good protection and compatibility in a challenge model. Supporting the potential for DNA vaccines to address emerging diseases and pandemics, Merial has made advances toward developing a vaccine for avian influenza.

FINANCIAL POSITION

We completed a registered direct placement of stock under our shelf registration during the first quarter of 2004, generating gross proceeds of approximately $18.6 million. We ended the year with about $74 million in cash and investments.

For the full year 2004, we had a great year in revenues which reached a record $14.5 million, compared with $8.1 million in 2003. Our 2004 revenues were driven by increased contract manufacturing shipments for the NIH, a milestone payment received under our FGF-1 angiogenesis agreement with Centelion, and increased grant revenues for our CMV vaccine program. This brings our cumulative revenues from licensing, contract and grant activities to approximately $107 million.

We held the net loss for the full year 2004 down to $23.7 million, compared with our forecast range of $26 million to $29 million, despite the nonrecurring charge of $1.5 million in the first quarter for settlement of the WARF litigation. Our projected net loss for 2005 is between $23 million and $26 million.

OUTLOOK

In 2004, Vical advanced through the hard work of an exceptional team toward the scientific, operational, and business goals identified in our strategic plan. We are building on the momentum of our recent achievements as we approach key milestones in our lead programs in 2005. I am proud of the progress we have made so far, and truly excited by the expectations for the coming year, both in our independent programs and those of our collaborators.

Sincerely,

Vijay B. Samant
President and Chief Executive Officer
March 31, 2005

Cytomegalovirus infects more than half of all adults by age 40, and as many as 85 percent at some point in their lives.

CMV

CYTOMEGALOVIRUS

THE NEED

CMV is a common herpes virus, part of the family of viruses that cause genital herpes, cold sores or fever blisters, chicken pox and infectious mononucleosis. CMV infects more than half of us by the age of 40, and as many as 85 percent of all adults at some point in their lives. Although the body rarely rids itself of CMV, a healthy immune system usually is able to keep the virus in check. As a result, CMV disease often goes unnoticed in otherwise healthy adults, and reactivation typically occurs only when the immune system is compromised by other disease or drugs. But for immunocompromised people such as HIV patients and transplant patients, the disease can be very serious. People at greatest risk include bone marrow and solid organ transplant patients who take immunosuppressive drugs, AIDS patients and other immunocompromised individuals, and fetuses and newborns of mothers who become infected during pregnancy.

An estimated 25,000 patients receive solid organ transplants in the United States annually, and another 4,000 receive bone marrow transplants, with similar numbers in the European market. Nearly 3,000 immunocompromised patients suffer from CMV infection in the United States each year, causing severe consequences in more than half of the cases and death in more than 150 cases. CMV infection affects an estimated 30 percent to 60 percent of transplant recipients, causing transplant rejection, serious illness and even death if untreated. Transplant patients who develop CMV disease use significantly more healthcare resources, including longer hospitalization, than asymptomatic or uninfected transplant patients. Relatively toxic antiviral drug therapy and anti-CMV immune globulin are used to control the disease, but do not eliminate the infection. As a result, reactivation of the disease often occurs if drug therapy is discontinued or if drug resistance develops. The treatment itself can be costly and, in some forms, inconvenient. Treatment is not effective for all patients and side effects may be severe, including damage to the bone marrow or kidneys.

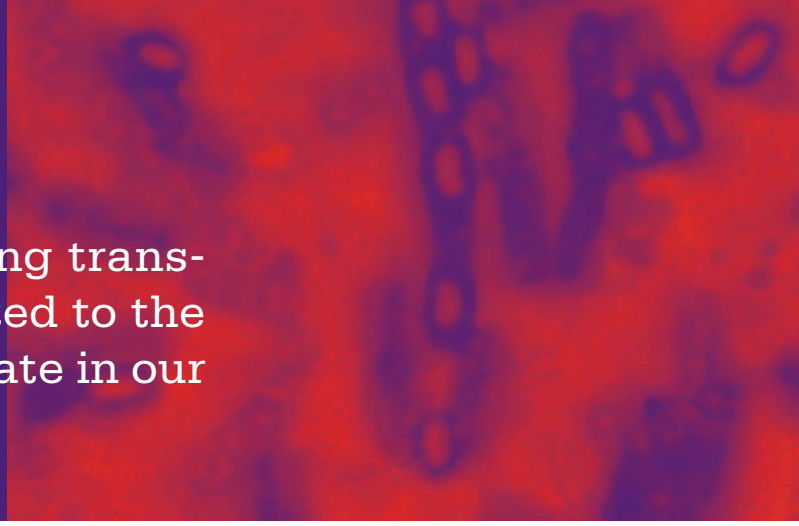
The other group that is susceptible is infants born to women who become infected with CMV for the first time during pregnancy. Approximately one in a hundred infants in the United States is born with CMV infection, leading to severe consequences in about 3,600 infants and death in about 400 infants per year. Congenital CMV infection is the leading infectious disease-related cause of birth defects in the United States.

The Institute of Medicine, or IOM, of the National Academy of Sciences estimated the cost of treating the consequences of CMV infection in the United States at more than $4 billion per year in a 1999 report, and placed a CMV vaccine in its first priority category on the basis of cost-effectiveness.

Since we announced our program for the development of a CMV vaccine, we have received positive feedback from doctors, patients, and especially parents of affected children confirming the need to address this serious medical problem. A 2004 report from the National Vaccine Advisory Committee, published in the journal Clinical Infectious Diseases, drove home the point:

“The disease burden for congenital CMV infection is similar to that for congenital rubella before vaccination was introduced to control this disease.

CMV... is a well-known cause of serious morbidity and sometimes fatal infections in immunocompromised patients, especially recipients of solid-organ or hematopoietic cell allografts and individuals with advanced AIDS.”



Some of the country's leading transplant centers have contributed to the trial design and will participate in our CMV vaccine trials.

CYTOMEGALOVIRUS

THE VICAL APPROACH

There is currently no approved vaccine available for CMV. A subunit protein vaccine that invokes mainly an antibody response may not provide full protection for transplant patients. A live attenuated vaccine may provide both antibody and cellular responses, but may present a risk for immunocompromised patients. Our DNA-based immunotherapeutic vaccine against CMV uses genes that encode highly immunogenic CMV proteins. We have designed two-component, or bivalent, and three-component, or trivalent, CMV immunotherapeutic vaccine candidates to induce both cellular and antibody immune responses against the target pathogen without the safety concerns that live-attenuated virus vaccines pose for immunocompromised patients.

The bivalent vaccine candidate uses plasmid DNA encoding two highly immunogenic proteins of the CMV virus, phosphoprotein 65, or pp65, and glycoprotein B, or gB. The trivalent vaccine candidate also includes a third plasmid encoding the highly immunogenic CMV immediate early 1, or IE1, gene product. In laboratory animal testing, both poloxamer-formulated plasmid DNA vaccine candidates demonstrated potent and specific immune responses against the encoded CMV immunogens. Having established the safety and immunogenicity of both vaccine candidates in laboratory animals, we are now evaluating both vaccine candidates in humans.

We started a Phase 1 clinical trial with our bivalent CMV immunotherapeutic vaccine formulation in March 2004, and another Phase 1 clinical trial with our trivalent CMV immunotherapeutic vaccine formulation in September 2004. Enrollment of approximately 40 healthy subjects in each trial is complete. Initial safety data from the first trial showed the bivalent vaccine to be safe and well-tolerated. Results from both clinical trials will allow us to decide which product configuration to advance to a Phase 2 proof-of-concept study in transplant patients.

In support of this program, we have been awarded approximately $4.1 million for research and development related to our CMV vaccine program under three grants from the NIH. Part of that funding has supported the development of novel clinical assays, which allow us to measure the immune response to our vaccines against immune responses of previously infected individuals. We intend to manufacture the vaccine and perform the assays in-house to maintain full control over the program.

CMV experts and leading transplant centers are actively working with us to advance this program, and we expect the Phase 2 study to begin in the second half of 2005.

Corporate Information

Vical's Annual Report on Form 10-K contains additional information about our business, including our financial statements and related notes, and is therefore an integral part of this report. In addition, this report contains statements that discuss our future expectations, contain projections related to the timings and results of clinical trials, our discussions with potential collaborators, our results of operations and financial condition, and include other forward-looking information within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Our actual results may differ significantly and materially from those expressed in these forward-looking statements as a result of risks and uncertainties, including those detailed in our Annual Report on Form 10-K. We disclaim any intent or obligation to update these forward-looking statements, and you should not unduly rely on them.

CONTACT

Vical Incorporated
10390 Pacific Center Court
San Diego, California 92121-4340
Tel: (858) 646-1100
Fax: (858) 646-1150
E-mail: info@vical.com
Web site: www.vical.com

CORPORATE INFORMATION

Vical common stock is traded on the Nasdaq National Market under the symbol VICL.

EXECUTIVES

Vijay B. Samant
President and Chief Executive Officer

David C. Kaslow, M.D.
Chief Scientific Officer

Jill M. Church
Vice President,
Chief Financial Officer and Secretary

Alain P. Rolland, Pharm. D., Ph.D.
Senior Vice President,
Product Development

Kevin R. Bracken
Vice President, Manufacturing

Robin M. Jackman, Ph.D.
Vice President,
Business Development

BOARD OF DIRECTORS

R. Gordon Douglas, M.D., Chairman
Robert H. Campbell
M. Blake Ingle, Ph.D.
Gary A. Lyons
Robert C. Merton, Ph.D.
Vijay B. Samant

TRANSFER AGENT

Mellon Investor Services, L.L.C.
P.O. Box 3315
South Hackensack, New Jersey 07606
Tel: (800) 522-6645
Web site: www.mellon-investor.com

ATTORNEYS

Cooley Godward LLP
4401 Eastgate Mall
San Diego, CA 92121-1909
Tel: (858) 550-6000
Web site: www.cooley.com

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche LLP
701 B Street, Suite 1900
San Diego, California 92101-8198
Tel: (619) 232-6500
Web site: www.deloitte.com

ANNUAL MEETING

Thursday, May 19, 2005
9:00 a.m.
Prime Hotel & Suites
5975 Lusk Boulevard
San Diego, California 92121

SEC FORM 10-K

A copy of the exhibits to Vical's Annual Report on Form 10-K filed with the Securities and Exchange Commission is available, upon payment of our reasonable expenses in furnishing such exhibits, upon written request to:

Investor Relations
Vical Incorporated
10390 Pacific Center Court
San Diego, California 92121-4340

Vical

10390 PACIFIC CENTER COURT
SAN DIEGO, CALIFORNIA 92121-4340