

## PRESIDENT AND CHIEF EXECUTIVE OFFICER'S STATEMENT

### OVERVIEW

2003 was a year of transition and positioning for TranXenoGen. While progress continues on the development of the Company's avian transgenic platform, as described below, the Company has increased its focus on several short-term revenue generating efforts. The first of these is development of a novel protein, Anti-Neoplastic Urinary Protein ("ANUP") for the treatment of several types of cancer. The Company in-licensed ANUP in 2001 as a 16 kD protein originally isolated from human urine. Over the last two years, the Company has isolated the protein in human blood and developed two synthetic peptides, which were used in animal model studies. The studies showed tumor burden reduction of up to 70% in nude mouse models. The Company is currently seeking a partner to accelerate product development and clinical development including:

- Completion of additional animal model studies to select clinical disease target, formulation and dosing;
- Preclinical studies of ANUP peptide to support IND filing;
- Initiation of Phase I trials; and
- Research to identify mechanism of action and establish a recombinant production system.

The second short-term revenue focus is the marketing of the Company's patent portfolio through license agreements. In 2003, the Company was issued a patent covering the Gene-Testes Technology and in early 2004, the Company received, through its license agreement, a notice of allowance on a cloning patent. The cloning patent covers techniques for the reprogramming of somatic cell nuclei (often referred to as cloning by nuclear transplantation) for the generation of cloned and/or transgenic animals. Because the patent has a filing date of February 3, 1993, the Company believes it has priority over numerous activities currently being undertaken in the industry. The Company has begun to notify potential licensees of its patent position.

The third short-term revenue focus is in the area of biodefense. The Company believes its avian transgenic platform technology has significant application in the areas of biodefense and vaccine production. The Company has submitted several grant proposals in the area and has begun discussion with several potential collaborators who are active in this space.

The Company's primary focus continues to be on developing its avian transgenic platform. While progress has been slower than anticipated, significant progress has been made on both the direct-egg and Gene-Testes Technology. Specifically:

- The achievement of expression levels of 6 ng/ml of Human Serum Albumin (HSA) in chimeric eggs as announced in May 2003.
- Developing germline transgenic chickens for HSA, Insulin and one partner's monoclonal antibody. These transgenic chickens are currently being bred with the objective of producing founder birds for each product. If successfully bred, these founder birds could be used initially to generate material for clinical trials and then for commercial production.
- Developing second-generation transgenic technology with the objective of reducing development time by 50% and improving the percentage of transgenic birds produced.

The Company's focus in 2004 is on:

- Seeking an ANUP strategic funded partnership to accelerate development and support entry into clinical trials as described above.

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- Commercialization of the HSA and Insulin products, through geographic and product specific licensing, upon achievement of commercial levels of expression.
- Establishment of collaborations and partnerships for its vaccine projects, including application in the biodefense area.

To achieve the Company's research and commercialization efforts, TranXenoGen needs to obtain additional funding. The Company is seeking funding from three sources:

- The Company, on its own behalf and in collaboration with third parties, is seeking funding through biodefense and other government grant programs;
- Funding from potential partners for the commercialization efforts as outlined above; and
- Capital markets.

## FINANCIAL REVIEW

TranXenoGen finished 2003 with an unrestricted cash position of \$2.2 million. For the year ended December 31, 2003, TranXenoGen reported a net loss of \$4.4 million, or \$0.14 per share, compared to a net loss of \$4.4 million, or \$0.14 per share for 2002. On a cash basis (net loss excluding (i) the non-cash charge related to the issuance of stock options granted to directors and employees prior to the Initial Public Offering in 2000, (ii) depreciation and (iii) amortization), the net cash loss was \$3.4 million in 2003 as compared to \$3.3 million in 2002.

While the cash loss was basically unchanged in 2003 vs. 2002, the components did vary. Research and Development ("R&D") expense declined \$224,000 reflecting a reduction in the Company's animal care cost resulting from the 2002 consolidation of the animal care operation into the Shrewsbury facility, partially offset by higher R&D spending. Offsetting these savings was a \$137,000 increase in Selling, General and Administrative ("SG&A") expense and higher net interest expense. The higher SG&A expense reflects higher professional fees and insurance cost. The higher net interest expense reflects lower interest income due to lower funds invested (as cash was used to fund operations) at lower rates.

The Company had 20 employees as of December 31, 2003 and 2002.

## SCIENCE UPDATE

In 2003, the Company made steady progress in both the development of its avian transgenic technology and its cancer therapeutic known as Anti-Neoplastic Urinary Protein ("ANUP"). Research efforts were focused on demonstrating the effectiveness of ANUP as an antitumor therapeutic and on the generation of transgenic chickens for key programs to achieve commercial expression levels and the development of a more rapid and efficient transgenic process.

The process for the production of germline transgenic chickens was improved through:

- Improvements made to the direct egg-transfection technology including the pre-selection of eggs and efficiency improvements in the method of gene delivery;
- Streamlining the breeding of chimeric chickens by more stringent transgene analysis of the chimeric chickens; and
- Semen analysis of the roosters.

Germline transgenic chickens have been generated for Insulin, HSA and one monoclonal antibody. As these transgenic chickens mature, the hens will be screened for expression of the protein in their eggs while the roosters will be bred with the objective of producing second-generation transgenic hens.

In an effort to reduce the timeframe of the transgenic process and increase the efficiency of generating transgenic chickens, the Company has continued experimentation on both the Primordial Germ Cell ("PGC") and Gene-Testes Transfection technologies. Research on PGC technology has focused mainly on the development of new conditions for maintaining the cells in culture for extended periods of time. The identification of long-term culture conditions would allow for precise genetic manipulation of the cells and more efficient production of transgenic chickens. In the case of the Gene-Testes Technology, the objective has been to shorten the transgenic process timeline by incorporation of the transgene into the sperm of a rooster. Initial experiments have successfully demonstrated the ability to deliver the transgene to the testes of the rooster and identify roosters producing transgenic sperm. The objective of the Gene-Testes Technology research is to demonstrate the production of a transgenic chicken from the breeding of a gene-testes rooster. The Gene-Testes Technology, if successful, has the potential to reduce development times up to 50% since one whole breeding cycle is removed from the process.

Significant progress has been made on the ANUP program with the in vivo and in vitro testing of two ANUP derived synthetic peptides. Animal model studies, using human cervical cancer, demonstrated the ability of the peptides to reduce tumor burden by up to 70% as compared to control animals. The data confirms previously published results for the ANUP protein in a similar mouse model study and its potential as a cancer therapeutic. Further testing indicated that the ANUP peptides appear to act on blood vessel formation inhibiting both angiogenesis and infiltration. Angiogenesis, the formation of new blood vessels, is a key therapeutic target for the treatment of several diseases such as cancer, diabetic retinopathy and age-related macular degeneration. Additional experimentation in the ANUP program will involve testing of the ANUP peptides against various tumor cell types to identify the best clinical target and identification of the gene for recombinant production of the ANUP protein. One objective of the program is to develop the ability to produce the ANUP product using our transgenic avian platform.

In addition, the Company initiated research to evaluate the potential production of protein-based vaccine candidates using its avian technology for biodefense and infectious diseases, such as influenza. Initial experiments used a yeast-based expression system to determine if difficult to express viral proteins could be genetically engineered for production and to generate small quantities for collaborators interested in funding the further development. Using three vaccinia viral proteins, which could potentially be candidates for a smallpox vaccine, TranXenoGen researchers were able to successfully produce the recombinant viral proteins in yeast system. This was the first step in a process to demonstrate to potential collaborators the capabilities of producing these vaccine candidates in the Company's avian transgenic system. Presently, experiments are targeting expression of potentially more serious infectious disease influenza and the production of the viral protein known as hemagglutinin. If successful, the research could lead to a more stable supply of vaccine for administration to at risk populations and the control of infectious disease outbreaks.

## SUMMARY

The fund raising and revenue generation efforts are progressing. In order to provide additional time to execute on these initiatives, the Company implemented the following actions in March 2004 to reduce its cash burn rate:

- The Non-Executive Directors agreed to defer payment of their director fees for twelve months.
- The Chief Executive Officer's salary was reduced to \$60,000 per year reflecting a reduced level of activity.
- Salaries were reduced for the three senior management personnel.

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- The workforce was reduced by 30%.
- Spending in other areas was reduced correspondingly.

Based on these reductions, our cash burn rate as of April 2004 was decreased to approximately \$650,000 per quarter. We believe our current cash position should fund operations through August 2004 at this reduced burn rate. The achievement of the outlined revenue programs should further reduce the cash burn rate and extend the period of operation supported by our current cash balance. As a result of these reductions, the Company will reduce its efforts in non-science areas and activities related to unfunded research.

The Company has made significant progress over the last several years as it has developed its product candidate pipeline. The Company's well-balanced strategy of developing generic products and proprietary novel therapeutic products, licensing of its intellectual property and contract manufacturing provides a variety of commercialization opportunities. We look forward to updating our shareholders on our fundraising and revenue efforts at the Company's annual general meeting in June.

### **George Uveges**

President and Chief Executive Officer