

**ANDREI GOLOVKO, Ph.D., MBA**

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A highly motivated and results-oriented Biologist with with exceptional organizational skills, and proven ability to lead interdisciplinary research teams. Outstanding analytical, creative problem solving abilities, and demonstrated success in Business Administration and Product Development. Skilled in many aspects of biotechnology with significant experience in DNA and RNA manipulation and analysis, genetic transformation, transgenic analysis, cell and tissue culture techniques and animal models. Multilingual: English- Russian-Ukranian.

**PROFESSIONAL EXPERIENCE**

***RESEARCH & DEVELOPMENT***

**SCHERING-PLOUGH CORP., Kenilworth, NJ**

*Scientist I*

**2002-present**

- Designed, created and analyzed several lines of genetically modified mice carrying null mutations for various potential drug targets including NPC1L1, the proven target for Schering's blockbuster drug Zetia.
- Constructed vectors and used them to achieve RNAi-mediated down-regulation of several murine genetic targets both *in-vitro* and *in-vivo*.
- Developed and successfully used Taqman-based gene expression profiling assays.
- Genotyped and maintained more than 60 transgenic and knockout mouse lines.

**ICON GENETICS, Princeton, NJ**

*Senior Research Biologist*

**2001**

- Developed fast and inexpensive method that allows produce up to a milligram of high purity pharmaceutical proteins in just a week at one-tenth of the regular costs.
- Generated a number of proprietary scientific concepts and filed two Records of Invention.

**AMERICAN CYANAMID/BASF CORPORATION, Princeton, NJ**

*Research Biologist*

**1995-2001**

- Directed an intradepartmental team in the successful completion of four Transgene Management projects resulting in three patents and four Records of Invention.
- Engineered a very reliable system for transcriptional and translational control of transgene expression.
- Constructed more than 200 vectors that were used in projects on promoter optimization and transcriptional and translational control of transgene expression.
- Developed several novel methods for soybean and sugar beet tissue culture manipulation.

**INSTITUTE OF CELL BIOLOGY AND GENETIC ENGINEERING, KIEV, UKRAINE**

Research Biologist

**1992-1995**

- Achieved genetic transformation of sugar beet (a crop that is still considered as almost impossible to transform) and analyzed transgene expression in transgenic crops using DNA and protein-based methods.
- Established protocols for analysis of transgene expression in transgenic crops using DNA and protein-based methods.

**CENTER FOR BIOENGINEERING, MOSCOW, RUSSIA**

Technician

**1991-1992**

- Created a novel method for identification of *Bacillus thuringiensis / cereus* subspecies using plasmid profiling.
- Screened for insect-pathogenic strains and isolated genes responsible for delta-toxin synthesis.

***BUSINESS ADMINISTRATION***

**LANDVISER, INC, Westampton, NJ**

Financial Manager

**2001-present**

- Developed a business concept and wrote a 100+ pages business plan including a 5 year marketing plan and financial projections that became a cornerstone of the business.
- Served as a bookkeeper.
- Prepared and filed tax returns.

**DIAMOND TRAVEL SYSTEM, Westampton, NJ**

General Manager

**2001-present**

- Established the business and then managed the day-to-day activities.
- Set up the credit card acceptance system and used it to bring more individual customers: the sales rose from \$5,000 to \$150,000 in three years.
- Prepared and filed tax returns.

**EDUCATION**

Ph.D., Biotechnology

**2003**

Institute of Cell Biology and Genetic Engineering, Kiev, Ukraine;

MBA, Marketing

**2001**

Rutgers University, Graduate School of Management, Newark, NJ

M.S., Microbiology with Honors

**1998**

Moscow State University, Moscow, Russia

## MAJOR SKILLS

- **DNA Techniques**

Vector construction, PCR and primer design, Southern blot analysis, DNA fingerprinting, automated DNA sequencing and sequencing data analysis, genomic and plasmid DNA isolation and purification, genotyping.

- **RNA / Expression Analysis Techniques**

Total RNA and mRNA isolation, RT-PCR, expression analysis via Taqman, SYBR green Northern blot methods, *in vitro* transcription to generate RNA probes (DIG labeled probes).

- ***In Vitro* and *In Vivo* Techniques**

Mouse embryonic fibroblast isolation and cultivation, ES cell transfection and maintenance, pancreatic islet isolation and cultivation, EAE animal model, necropsy and tissue collection, animal colony management.

- **Other biological techniques**

SDS-PAGE, Western blot, ELISA, microscopy (light, phase-contrast, electronic, laser scanning confocal fluorescence), nuclei isolation, particle gun bombardment, electroporation and other methods for direct DNA transformation into cells, various plant genetic transformation and tissue culture techniques.

- **Computer techniques**

- o Systems: IBM or Macintosh
- o Software: Microsoft Office, Adobe PhotoShop, Prizm, FileMaker
- o Programming language: BASIC
- o Bioinformatics: Clone Manager, Primer Designer, Vector NTI, various DNA or protein sequence alignment and analysis software. Knowledge of database searches (e.g. Gene bank, EST and Blast search) and web-based molecular analysis tools

## MANAGEMENT SKILLS:

- *Project management*: supervision of multiple projects simultaneously
- *Personnel management*: experience in managing scientists
- Excellent presentation and communication skills

## MARKETING SKILLS:

- *Market analysis*: market segmentation, consumer behavior
- *Marketing research*: survey preparation, MDS, conjoint analysis, cluster analysis
- *Marketing strategy*: product positioning and pricing
- *R&D strategy*: PLC, theory of disruptive technologies

## AWARDS AND GRANTS

*Schering Plough President's award* (Role of NPC1L1 protein in intestinal cholesterol absorption). 2004  
*International Soros Science Education Program* competitive grant 1995  
*Academy of Science of Ukraine* competitive grant for young scientists 1995  
Winner of Moscow State University Annual Chemical Olympiad 1987

## PATENTS AND PUBLICATIONS

- **Golovko A.** Methods for somatic embryo formation and plant regeneration of *Beta vulgaris*. United States Patent 6,555,375, April 29, 2003
  - **Golovko A,** Hall G Jr. Modified tet-inducible system for regulation of gene expression in plants. United States Patent Application 20030084484, May 1, 2003
  - Bascomb N, Bossie M, Skarjinskaia M, Hirayama L, Hall G, Petty T, **Golovko A,** Campo M. Commercial use of *Arabidopsis* for production of human and animal therapeutic and diagnostic proteins. United States Patent Application 20050034187, February 10, 2005
  - Co-PI on additional 6 Records of Invention in Cell Biology, Biotechnology, and Genetic Engineering
1. Kowalski TJ, Spar BD, Markowitz L, Maguire M, **Golovko A,** Yang S, Farley C, Cook JA, Tetzloff G, Hoos L, Del Vecchio RA, Kazdoba TM, McCool MF, Hwa JJ, Hyde LA, Davis H, Vassileva G, Hedrick JA, and Gustafson EL. 2005. Transgenic overexpression of neuromedin U promotes leanness and hypophagia in mice. *J. Endocrinol.*, V. 185, pp. 151-164.
  2. Reich EP, Cui L, Yang L, Pugliese-Sivo C, **Golovko A,** Petro M, Vassileva G, Chu I, Nomeir AA, Zhang LK, Liang X, Kozlowski JA, Narula SK, Zavodny PJ, Chou CC. 2005. Blocking ion channel KCNN4 alleviates the symptoms of experimental autoimmune encephalomyelitis in mice. *Eur J Immunol.*, V. 35, No 4, pp. 1027-1036.
  3. Altmann SW, Davis HR Jr, Zhu LJ, Yao X, Hoos LM, Tetzloff G, Iyer SP, Maguire M, **Golovko A,** Zeng M, Wang L, Murgolo N, Graziano MP. 2004. Niemann-Pick C1 Like 1 protein is critical for intestinal cholesterol absorption. *Science*, V. 303, No 5661, pp. 1201-1204.
  4. Funes S, Hedrick JA, Vassileva G, Markowitz L, Abbondanzo S, **Golovko A,** Yang S, Monsma FJ, Gustafson EL. 2003. The KiSS-1 receptor GPR54 is essential for the development of the murine reproductive system. *Biochem Biophys Res Commun.*, V. 312, No 4, pp. 1357-63.
  5. **Golovko A.** 2001. Genetic variability of somatic embryogenesis in tissue cultures of sugar beet breeding lines. *Cytology and Genetics*, V. 35, No 6, pp. 10-17.
  6. Bannikova MA, **Golovko AE,** Khvedynich OA, Kuchuk NV, Gleba YY. 1995. Regeneration of sugar beet (*Beta vulgaris L.*) plants in *in vitro* culture. Histological analysis of regeneration. *Cytology and Genetics*, V. 29, No. 6, pp. 14-21.
  7. Girich AM, Chrep NN, Skarzhinskaya MV, **Golovko AE,** Gleba YY. 1995. Genetic transformation of oil rapeseed (*Brassica napus L.*) using *Agrobacterium tumefaciens*. *Cytology and Genetics*, V. 29, No. 2, pp. 20-25.
  8. **Golovko AE,** Golyshin PN, Ryabchenko NF. 1993. *Bacillus thuringiensis* in the environment and experiment. *Plant Biotechnology and Molecular Biology*, Russian Academy of Sciences Publications, pp.27-35.
  9. **Golovko AE,** Golyshin PN, Ryabchenko NF. 1993. Significance of *Bacillus thuringiensis* in natural biocenoses. 1993. *The Journal of Microbiology*, v.55, No. 3, pp.110.
  10. Ostroumov SA, **Golovko AE.** 1992. Biotest of toxicology of an active substance (sulfonol) using rice as a test-object. *Hydrobiological Magazine*, v. 28, No. 3, pp. 72-75.