

## ATTOMETRIX LTD

Volume of investments required: **\$ 1 000 thousand**

Intended use of investment required:

<b>R&amp;D (microchip for DNA assay)</b>	<b>10%</b>
<b>Marketing</b>	<b>25%</b>
<b>Approval and validation</b>	<b>5%</b>
<b>Fixed assets acquisition (DNA microchip production, scanner and laboratory for DNA microarray)</b>	<b>60%</b>

Company profile:

1. Date of establishment - April 1, 2004
2. Stage of development - Seed
3. Size and source of investment to date - \$ 1,000 th. Research and development of biosensing materials, devices and computer software have been supported by International Scientific and Technology Center (ISTC), U.S. Civilian Research and Development Foundation (CRDF), US Department of Energy (Initiative for Proliferation Prevention - IPP program), Russian Foundation for Assistance to Small Innovative Enterprises (FASIE).
4. Industry - Bioanalytical devices, nanobiotechnology
5. Target market - food industry, medicine, ecology, veterinary science
6. Sales in 2003 - none
7. Description and value of assets - \$ 1 000
8. Intellectual property rights - the company owns 3 Russian patents and is in the process of applying for new patents.
9. Signs of public recognition - winner the 3-rd Competition of Russian Innovations in 2004, winner of the Russian "START" program supported by the Foundation for Assistance to Small Innovative Enterprises (FASIE).

Owners:

5 natural persons **21,25%, 21,25%,  
15,00%, 21,25%,  
21,25%**

Share of  
government **0%**  
property

Management and key personnel:

Eremenko, Arkadi V. - General Manager, 44, PhD in biochemistry, specialist in biosensors technology and biochemical analysis. Responsible for financial management of projects.

Kurochkin, Ilya N. - Deputy General Manager, 47, professor in chemistry, specialist in modern bioanalytical methods and nanobiotechnology, responsible for R&D management in company.

Komarov, Andrey B. - Deputy General Manager, 44 years, specialist in genetic analysis and industrial engineering of devices and reagent kits, head of technical engineering and marketing departments.

Products characteristics:

The product is microsensor element containing molecules for DNA recognition in combination with a device for reading and data processing of analytical signal. The developed technology based on new artificial polymers is used of microsensor element production. The potential markets DNA chips and microarrays include: medicine (diagnostic of human diseases, including cancer, AIDS, virus hepatitis and many others), pharmaceutical and food industries (identification of genetically modified products and microorganisms), veterinary medicine (diagnostic of animal diseases), agriculture (certification of variety of plants and hybrids).

Comparative analysis with existing alternatives:

Characteristics	DNA microchip, year of bringing to market 2005 r	TaqMan (Applied Biosystems, USA, year of bringing to market 2000 r.)	Complex for PCR analysis with electrophoresis (Company "Biokom", Russia, year of bringing to market 2001.)
Mode of analysis	Semi-automatic	Automatic	Long time to get final result
Time of analysis, min	<b>60-80</b>	<b>40-60</b>	<b>120-150</b>
Pricing \$ for device	3 000	60 000	5 000
Pricing \$ for one analysis	<1	2,5	1,5

Microchip for DNA array is alternative of the both analogs. The last steps including the reading results and data processing of analysis are simpler with regard to analog produced by company "Biokom". The cost of analysis is cheaper in comparison with the both analogs. The advantages proposed technology are follows:

Easy to work in micro size level and operate with micro volumes that is more effective the analysis

Making of highly specific cells on microchip is a reason for high accuracy of analysis

Easy to change properties of microchip is a way to wide application of technology

Markets/Competition:

	Characteristics	DNA microchip for GMO analysis	Taq Man	Complex for PCR analysis with electrophoresis
2004	Geographical Region- Russia Market size \$ 10000 th.			
	Company market share \$ thousand/%	0/0	2 000/20%	1 000/10%
2008	Geographical Region-Russia Market size \$ 20000 th.			
	Company market share \$ thousand/%	4 000/20%	6 000/30%	3 000/15%

The global market of DNA chips and microarrays will be about 4 billion dollars in year 2004. (according to information obtained from Greiner bio-one company). No special market research in Russia for analysis GMO (genetic modified objects) has been conducted. However according to our experience the Russian market will be proliferate in this area for next 4-6 years following introduction of legislative control based on molecular and biological analysis of transgenic plants and genetic modified organisms as a part of certification foods and agriculture products.