



SIBENZYME

The main research activities of company are search, isolation and study of new enzymes for site-specific DNA cleavage. SibEnzyme develops the new enzymes application in epigenetic studies and diagnostic techniques.

For more than 20 years company becomes one of the world leaders in production of restriction endonucleases and the only producer of new enzymes – methyl-directed site-specific DNA endonucleases (MD-endonucleases). Company holds more than 15 patents.

Company sells products in Russia, USA, EU, Japan, China, India, Australia, Malaysia, Korea, Turkey, etc.

SibEnzyme developed and patented a method of GLAD-PCR-Assay.



SYGMA. NOVOSIBIRSK NANOTECHNOLOGY CENTRE

The SYGMA.Novosibirsk provides a full range of services for the development of nanotech startups.

Twenty-one high-tech projects are being realized at the SYGMA-Novosibirsk nanocentre and 20 more are under development.

«SYGMA-Novosibirsk is part of the network of nanocentres created by RUSNANO.

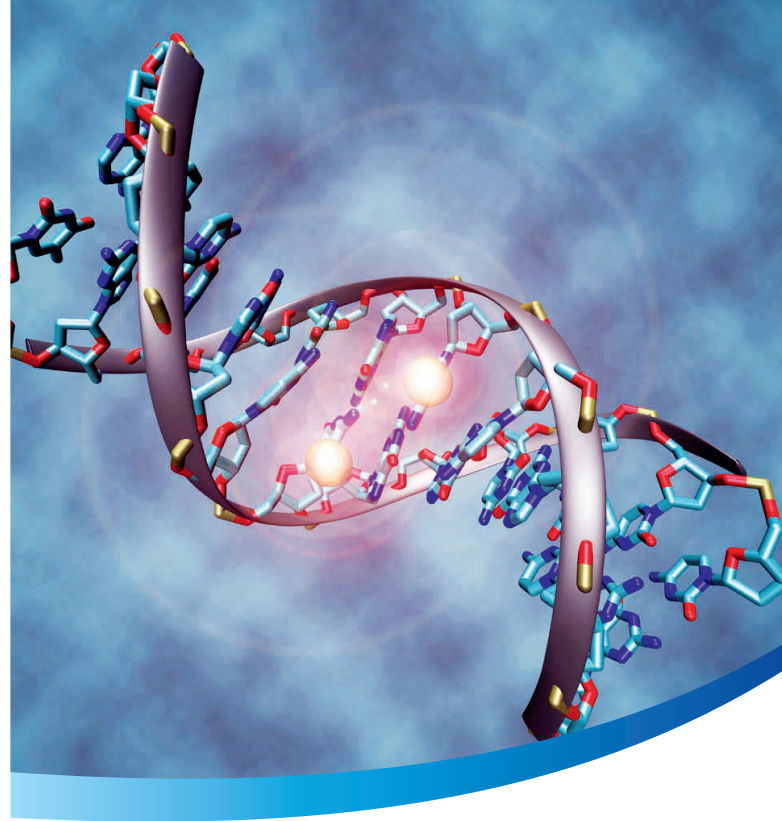


THE STATE RESEARCH CENTER OF VIROLOGY AND BIOTECHNOLOGY VECTOR

Center was founded in 1974. Basic research is focused on generating new scientific knowledge in molecular biology, virology, genetic engineering, biotechnology, epidemiology and ecology. VECTOR comprises several research institutes, production units, and other departments. Moreover, the VECTOR is an associated member of several unions and associations, both in Russia and internationally. VECTOR is one of the leading world centers, developing Ebola vaccine.

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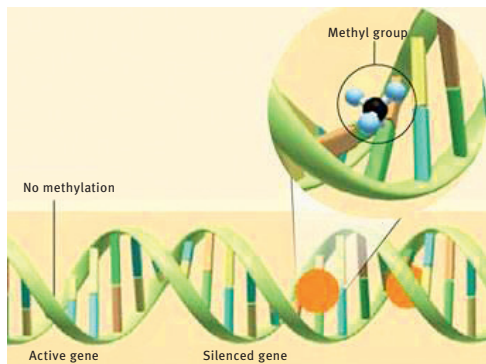
Early cancer detection

Epigenetic test based on GLAD-PCR-Assay allows detection of cancer on most early stages

epigene

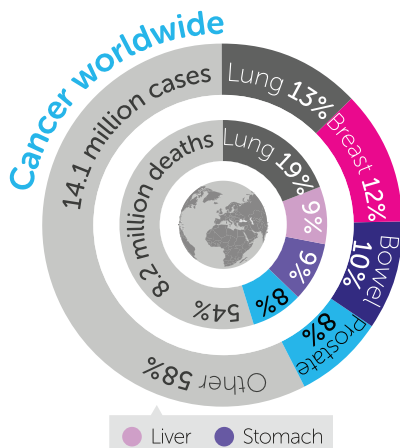
How cancer is forming?

On molecular biology level the cancer disease is began when an aberrant methylation of tumor suppressor genes takes place and these genes are switched off. Determination of silent tumor suppressor genes allows to detect cancer on early stages when still there are no clinical indications of disease.



Early detection

Early detection of cancer diseases allows applying an effective treatment and saving a life of patient. Recently developed epigenetic methods of cancer diagnostic allow to detect the disease at early stages. However, these epigenetic test-systems are based on method of bisulfite conversion, which is quite complicated and often results in false-positive/negative data. That is why such tests are not widely used.



CANCER RESEARCH UK, 2014

SibEnzyme's innovation

Method of early cancer diagnostics, developed by SibEnzyme, is based on a new epigenetic detection technology — GLAD-PCR-Assay. Recently SibEnzyme has found unique enzyme and (based on this enzyme properties) developed a new technique, which allows finding such silent genes with very high accuracy and sensitivity. Based on a method of GLAD-PCR-Assay a development of a first test system for detection of colorectal cancer is in progress now in The State Research Center of Virology and Biotechnology VECTOR — one of the leading Russian molecular biology institutions. Nowadays we accomplish selection of genes panel, specific for colorectal cancer. We estimate that test system will be ready for a federal certification by the beginning of 2017.

Source of DNA:
phlegm for lung cancer, urine for prostate
or kidney cancer, smear for colorectal
cancer or blood as universal source
for DNA isolation

**4-6
hours**

Very high
sensitivity
(from
several
DNA
copies)

**1 tube,
3 simple
stages,
standard
RT-PCR**

Regular
laboratory staff

**from
30 Euro**

cost
for patient

