



RUSNANO
Russian Corporation of Nanotechnologies

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RUSNANO Life Sciences Investment Projects



What is RUSNANO?

- RUSNANO is a state corporation established in 2007 with approx. €3.25 billion in initial capital for the development of Nanotechnology in Russia
- RUSNANO acts as a Private Equity / Venture Capital investment fund
- Our primary focus is investment activity
- RUSNANO is also engaged in infrastructure and educational activities as well as in scientific foresight, certification, legislation development, international cooperation and public activity (Rusnanotech International Forum)

«Nanotechnology is one of the most promising sectors of the rapidly developing innovation economy. The total amount of Nanotechnology funding has already reached \$15 billion world-wide. In the next 5-6 years, experts say the industry will grow to the stunning sales figure of \$2 trillion». –



Anatoly Chubais, Chairman of the Executive Board and CEO at RUSNANO



RUSNANO Life Sciences Department – Our Scope

Medicine – focus areas:



Pharmaceuticals



Biotechnology



Cell technology



Implants

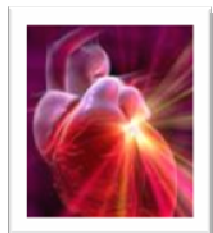


Diagnostics



Nuclear medicine

Diseases:



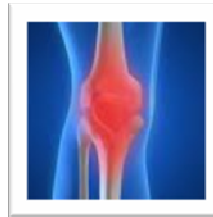
Cardiovascular



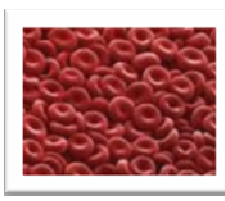
Respiratory



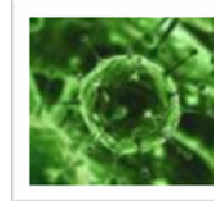
Endocrinology



Musculoskeletal



Hematological



Infectious



Investment criteria

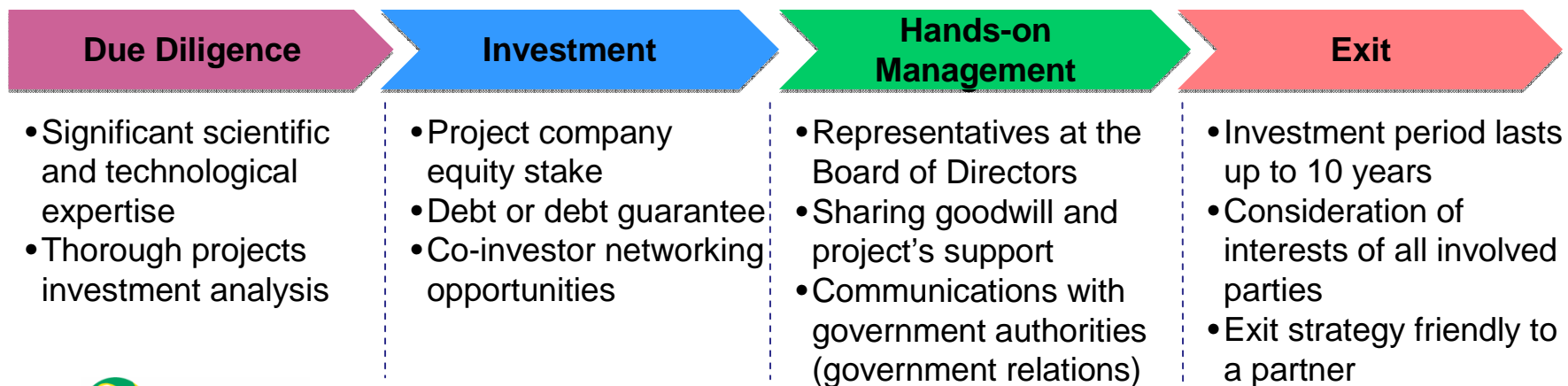
Requirements to a project:

- Relation to Nanotechnology
- Must have completed scientific and technological feasibility studies (with the proof-of-concept clearly defined)
- Should have completed preclinical trials
- Overall positive investment appeal
- Revenue of at least €6 mln by the 5th year of project development

High priority projects:

- First-in-class therapies, innovative devices and technological platforms
- Acquisition of new market segments and introduction of new services
- Exceed technical and economical parameters of competitive products and technologies, achieve better consumer properties
- Completion of clinical trials (or phases I or I and II)

Investment Process in Brief



Investment financing

Project Financing	Equity Financing	<ul style="list-style-type: none">■ RUSNANO stake in a project company usually does not exceed 50% - 1 share■ Upon decision of the Supervisory Council at RUSNANO (exceptional cases) does not exceed 75% - 1 share
	Debt Instruments	<ul style="list-style-type: none">■ Provision for a loan or a loan guarantee on preferential terms■ Use of various forms of debt to finance project company operations (bonds, convertible bonds)■ Leasing operations
Co-investment Engagement		<ul style="list-style-type: none">■ State and private institutions■ Individual investors■ Financial institutions■ Private equity and venture funds
Provision of a Favorable Exit		<ul style="list-style-type: none">■ M&A with a strategic investor■ IPO■ Management/other stakeholders buyout and other strategies
Investment Period		Up to 10 years (preferably 4-6 years)



Project Pipeline

Project Advancement

Total pipeline	113
Submitted applications (active)	68
Due diligence	36
Approved Projects	9

Commitments

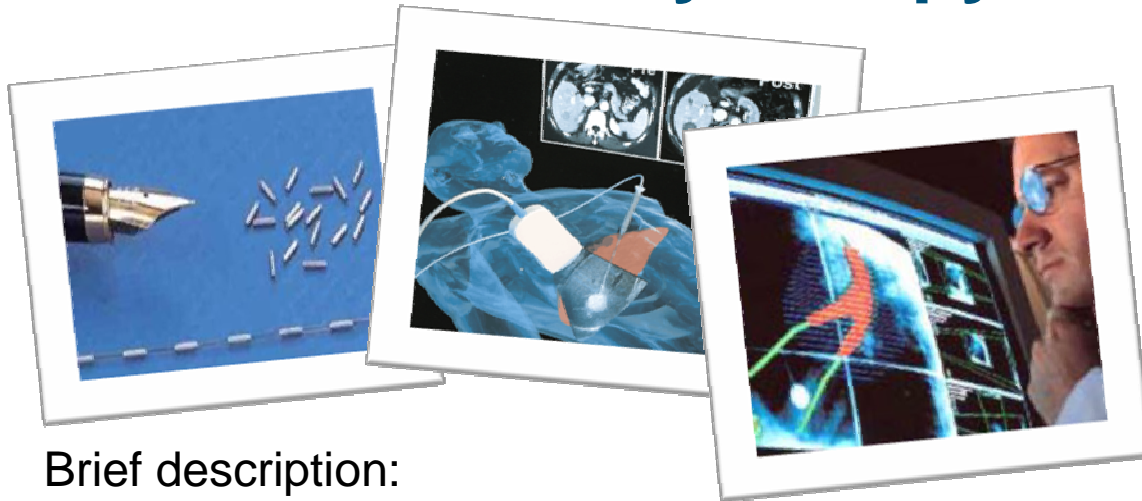
Total budget of the approved projects	Approx. €400 mln
Incl. RUSNANO's share	Approx. €200 mln

Approved Projects

1. The Skulachev Ions Feb 2010
2. Liposomal Anticancer Drugs Dec 2009
3. Phospholipids Nanodrugs Dec 2009
4. Tri-leaflet Cardiac Valve Dec 2009
5. Hemostatis Diagnostics Sept 2009
6. Nanovaccines Jul 2009
7. Reagent Store Feb 2009
8. Cascade Plasmafiltration Nov 2008
9. Seeds for Brahytherapy Sept 2008

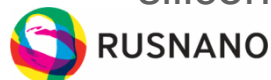


Seeds for Brachytherapy



Brief description:

- Considerably decreased side effects and hospital rehabilitation period
- High treatment efficacy: 5-year survival rate is more than 90%
- Products:
 - Seeds – Titanium microcapsules containing Iodine-125 isotope. Seeds' surface modified and heavy metal inside is used for better ultrasound / x-ray visualization
 - Ceramic microspheres with Yttrium-90 and silicon microspheres with Phosphorus-32



Slide 7

Key Figures

Area: Nuclear Medicine

Total Investment: €24 mln

incl. RUSNANO: €18.5 mln

Production Capacity (per annum):

Seeds: 250 000 Pieces

Microspheres: 2 000 Pieces

Expected Revenue (2015): €23 mln

**Expected EBITDA (2015):
€15.9 mln**

Project Parties

Project Company:

NanoBrachyTech, CJSC

Shareholders:

Santis, Ltd. – 50%

RUSNANO – 35%

IBt Bebig – 15%

Cascade Blood Plasma Filtration and other Efferent Therapy



Brief description:

- Unique cascade filtration technology based on the technology of track-etched membranes (nuclear physics)
- 10 times lower procedure cost as compared to existing technologies (fiber filters)
- Low costs makes the procedure more competitive and easily affordable for more patients
- Unique spectrum of extracorporeal procedures within one device



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Slide 8

Key Figures

Area: Misc. Efferent Therapy

Total Investment: €67 mln

incl. RUSNANO: €32 mln

Production Capacity (per annum):

Disposable filtering cartridges:

800 000 pieces

Equipment: 1 500 units

Expected Revenue (2014):

€98 mln

Expected EBITDA (2014):

€35.4 mln

Project Parties

Project Companies:

Trackpore Technology, CJSC

Nano Cascade, Ltd.

Shareholders:

Individuals – 52%

RUSNANO – 48%

Science and Technology

Cooperation:

Joint Institute for Nuclear Research

Chem/Biochem Reagents Supply Service



Brief description:

- Market-demanded infrastructural solution – a bank of high quality chemical and biochemical reagents for Pharmaceutical and Biotech industries
- Logistics of chemicals within Russia
- Basic material supply for the Russian/CIS science, clinics and high-tech businesses

Key Figures

Area: Nanotechnology Infrastructure

Total Investment: €2.4 mln
incl. RUSNANO: €1.3 mln

Storage Capacity:
25 000 different articles of high-pure chemicals by 2015

Expected Revenue (2015): €10 mln

Expected EBITDA (2015): €1.1 mln

Project Parties

Project Company:

RusChemBio, Ltd.

Shareholders:

Individual Person – 52.4%

RUSNANO – 47.6%

Nanovaccines



Brief description:

- The genetic vaccines produced in cell culture do not cause allergic effects
- Production cycle based on the original technology is twice faster as compared to the conventional one
- Genetic vaccine can be artificially synthesized without obtaining physical copies of the WHO viral strains
- Products:
 - Flu vaccine
 - Bird flu vaccine
 - Immunomodulators (miscellaneous)



Key Figures

Areas: Immunology, Infectious Diseases

Total Investment: €35 mln
incl. RUSNANO: €33 mln

Production Capacity (per annum):
50 mln doses

Expected Revenue (2015):
€32 mln

Expected EBITDA (2015):
€27.8 mln

Project Parties

Project Company:

NT Pharma, CJSC

Shareholders:

Prom-Bi, Ltd. – 20.3%

Co-Investors pool – 30.7%

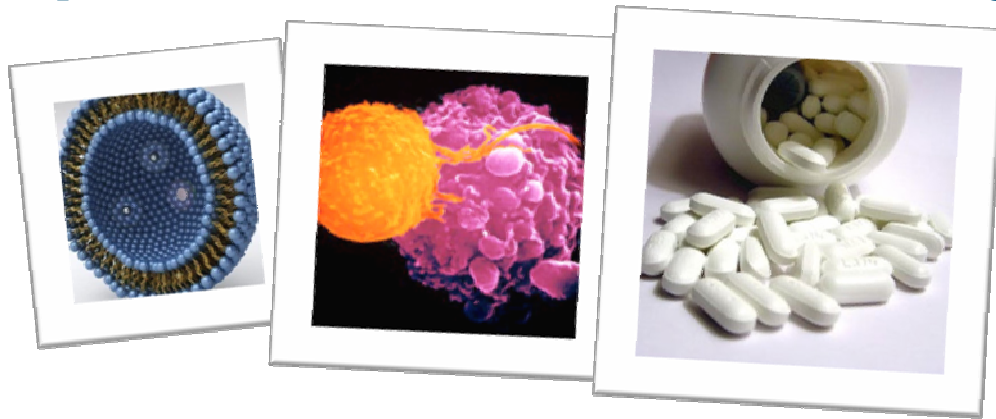
RUSNANO – 49%

Science and Technology

Cooperation:

Hamaley Institute

Liposomal Anticancer Drugs



Brief description:

- Nanostructured antitumor drugs with target delivery system enables high selectivity of accumulation in tumor and high efficacy of treatment
- Decrease in common toxicity, side effects, and quick excretion from the tissues
- Products:
 - Liposomal forms of medications (“Liposomes”)
 - Antitumor monoclonal antibody medications (“Immunoliposomes”)
 - Medications based on antibodies for malignant diseases treatment (“Nanoplantibodies”)



Slide 11

Key Figures

Area: Oncology

Total Investment: €99.5 mln

incl. RUSNANO: €33.1 mln

Production Capacity (packs per annum):

Liposomal Drugs – 300 000

Immuno-liposomal Drugs – 200 000

Nanoplantibodies – 10 000

Expected Revenue (2015):

€233 mln

Expected Net Income (2015):

€104.9 mln

Project Parties

Project Company:

TBD

Shareholders:

MedSintes, Ltd. – 51%

RUSNANO – 49%

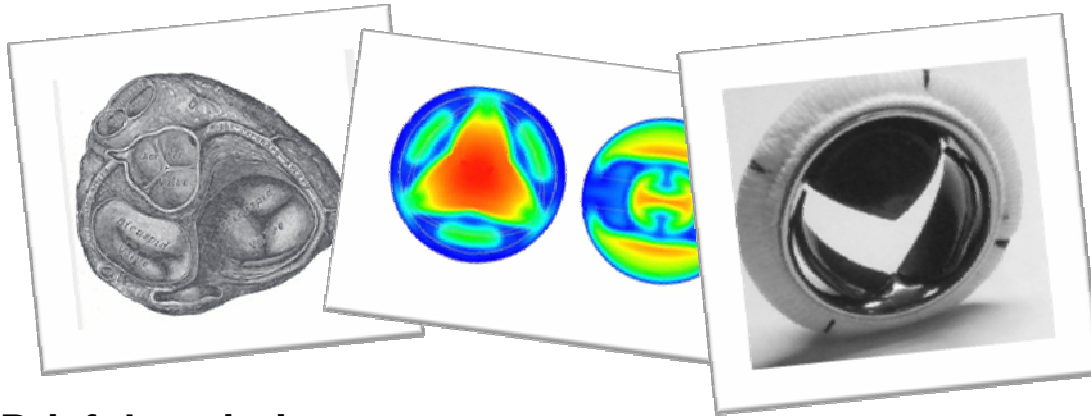
Science and Technology

Cooperation:

N.N. Blokhin Russian Cancer

Research Center

Tri-leaflet Cardiac Valve



Brief description:

- Cutting-edge tri-leaflet cardiac valve mechanical prosthesis (made of pyrolytic carbon) successfully passed clinical trials and licensed for serial production/marketing (in Russia)
- Original tri-leaflet design (similar to the natural form) enables a central blood flow very similar to natural, dramatically reducing risk of thrombosis, enabling better patient rehabilitation
- Products:
 - 1st stage: Tri-leaflet cardiac valve with cusps made of pyrolytic carbon;
 - 2nd stage: Tri-leaflet cardiac valve with cusps made of polyamide with eluting anticoagulant (now under R&D)



Slide 12

Key Figures

Areas: Cardiac Surgery, Implants

Total Investment: €28 mln

incl. RUSNANO: €23 mln

Production Capacity (per annum):

Carbon prosthesis – 11 500 units

Polyamide prosthesis – TBD

Expected Revenue (2015):

€49 mln

Expected EBITDA (2015): €24 mln

Project Parties

Project Company:

Emitron, Ltd.

Shareholders:

Individual Person – 25%

Moscow Venture Company, Ltd. –
12.5%

RUSNANO – 62.5% (exceptional
case)

Project Shortlist (Due Diligence and Deal Negotiations)

Approved by Scientific and Technical Board

1. Novel breast cancer medicine in nanoliposomal delivery form
2. Transdermal drug delivery systems
3. Cardiac valve made of nanomaterials
4. Preclinical trials center of excellence
5. Coronary drug eluting stents
6. Platform for development and commercialization of innovative medical products

RUSNANO Life Sciences team constantly evaluates innovative projects to be added in our fast growing portfolio and welcomes new project applications via:

- JV (direct financing)
- VC funds (indirect financing)

Projects with international participation

Approved by the Supervisory Council

1. Seeds for Brachytherapy EU (GER)

At Due Diligence

2. Therapeutic nanoproducts for treatment of cancer and cardiovascular diseases USA
3. Endoscopic system for peptic ulcer disease and obesity treatment USA
4. Radiotherapy for cancer USA
5. Cancer detection and management USA
6. Nano-liposome center of excellence USA/Israel
7. Biological pacemaker USA
8. Diagnostics platform based on roman spectroscopy USA
9. Orthopedic implants with nanocoating Canada
10. Center of excellence in preclinical trials USA

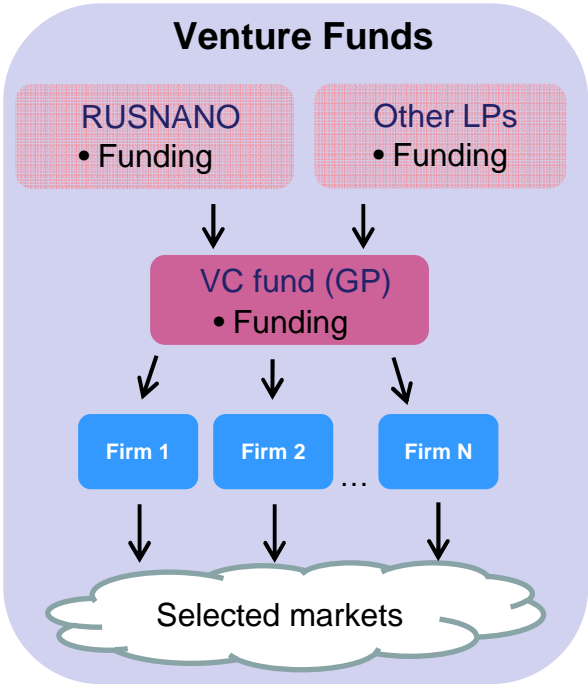
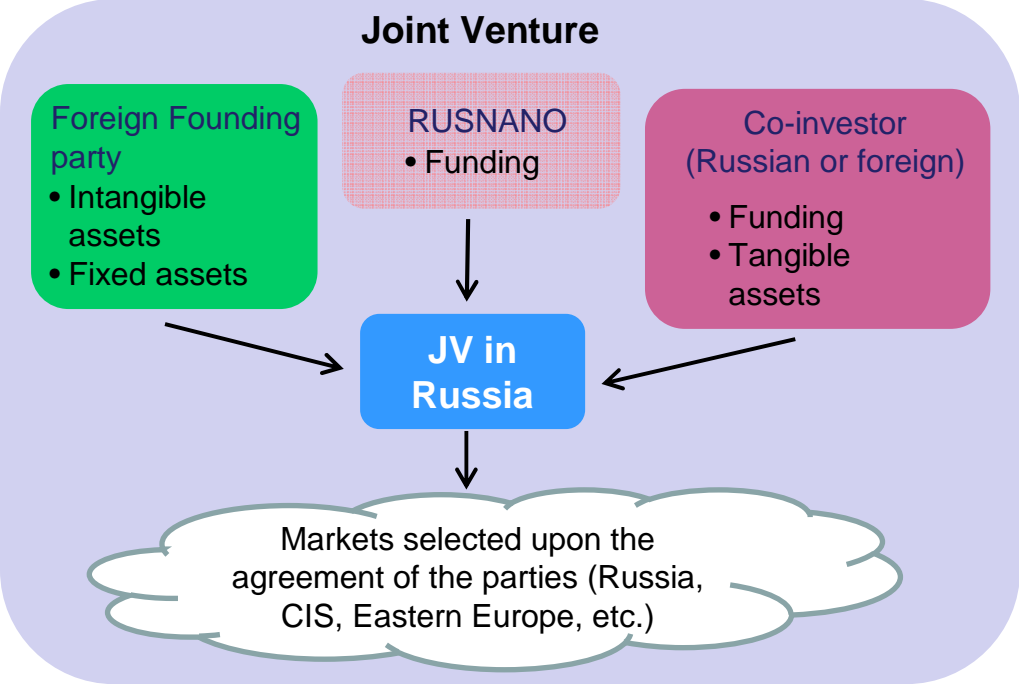


Deal Structuring

What we provide funds for?

- 1. To conduct clinical trials (completed preclinical trials are required) and M&A a startup
- 2. To commercialize intellectual property (IP) assets
- 3. To expand an existing production
- 4. To enter promising emerging markets – establish production and sales facilities in Russia/CIS via a joint venture

We offer 2 investment vehicles:



Advantages of partnering with RUSNANO

RUSNANO:

1. Promotes foreign products and brands to the Russian market
2. Helps to penetrate administrative barriers and build a successful business
3. Provides expert's support at any stage of a project development
4. Offers preferred terms of project financing
5. Flexible in structuring and deal negotiations
6. Takes minority equity stake
7. Uses a wide variety of financial instruments
8. Provides long-term project financing (up to 10 years)



Thank You for Your Attention!

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