



Senesco Technologies, Inc.

NYSE AMEX: SNT

ROTH 23rd Annual OC Growth Stock Conference

Ritz-Carlton Laguna Niguel, CA
March 15th, 2011

NYSEAMEX: SNT



Safe Harbor Statement

Certain statements included in this press release are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Actual results could differ materially from such statements expressed or implied herein as a result of a variety of factors, including, but not limited to: the ability of the Company to consummate additional financings; the development of the Company's gene technology; the approval of the Company's patent applications; the successful implementation of the Company's research and development programs and collaborations; the success of the Company's license agreements; the acceptance by the market of the Company's products; the timing and success of the Company's preliminary studies and preclinical research; competition and the timing of projects and trends in future operating performance, the Company's ability to continue to comply with the continued listing standards of the NYSE/AMEX, as well as other factors expressed from time to time in the Company's periodic filings with the Securities and Exchange Commission (the "SEC"). As a result, this press release should be read in conjunction with the Company's periodic filings with the SEC. The forward-looking statements contained herein are made only as of the date of this press release, and the Company undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

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Senesco Investment Highlights

- **Public company in transition**
 - attractive entry price

- **Novel platform targeting cell death and survival**
 - multiple product opportunities

- **Strong IP**
 - exceptional patent protection

- **IND submitted for multiple myeloma**
 - safety and efficacy results expected in 2011



Senesco Technology Validation

- **Founded 1998, located New Brunswick, NJ**
 - **Based on eukaryotic translation initiation Factor 5A (eIF5A)**
 - **Factor 5A induced enhancements in plants**
 - Increased biomass production
 - Increased growth rates
 - Enhanced shelf life
 - Protection against drought, salinity
 - Disease resistance
 - Reduced fertilizer needs
 - **Partners with on-going field trials**
 - **Royalty bearing licenses – Monsanto, Bayer, etc.**
 - **Opportunity for future revenues**



Senesco



Senesco Therapeutic Progress

➤ **Applying Factor 5A platform to treat human disease**

- Gene regulation control
- SNS01-T targets cancer cells
- Down-regulates NF-kB
- Up-regulates p53
- Next generation for other diseases



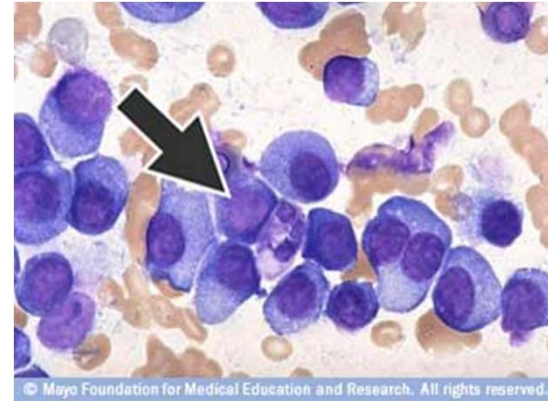
➤ **First clinical program**

- IND submitted – January 2011
- Granted orphan drug status by FDA – December 2010
- First study planned in multiple myeloma patients
- Extend later to other B-cell cancers, e.g., MCL, DLBCL, CLL



Targeting Multiple Myeloma: SNS01-T

➤ Multiple Myeloma



- liquid tumor of the bone marrow
- damage to healthy bone and immune system
- ~ 2/3 of patients survive less than 5 years
- surrogate biomarkers of disease, e.g. M-protein
- potential proof of concept in first study



Multiple Myeloma Represents Large Market Opportunity

Company	Drug	2009 Sales
Takeda	bortezomib	\$1,463 MM
Celgene	lenalidomide	\$1,706 MM
Celgene	thalidomide	\$437 MM

Primary market needs: *treatment for refractory patients and fewer side effects especially peripheral neuropathy*



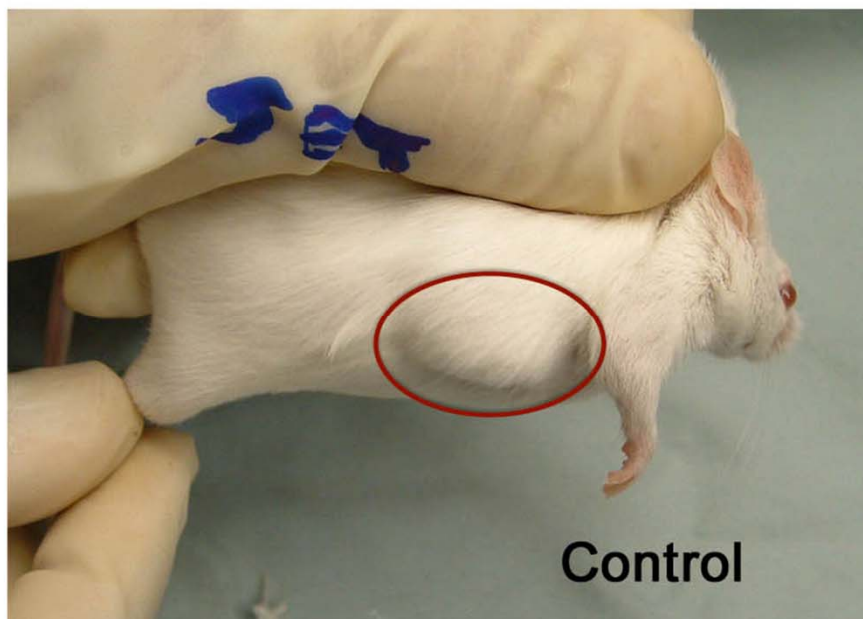
Strong Intellectual Property

- **78 Issued Patents**
 - **US – 21**
 - **Foreign – 57**
 - **Agriculture – 52**
 - **Human therapeutics – 25**

- **Multiple Myeloma protected till 2026**
 - **Agriculture – 2019 in US and 2024 in ROW**
 - **Core human – 2021 in US and 2025 in ROW**
 - **Multiple myeloma – 2026 in both US and ROW**

Numerous additional applications in US and ROW

Tumor Growth Control



**Human multiple myeloma tumors shrunk
up to 95% by SNS01 treatment**



How SNS01-T was designed to work

“Reprogramming Tumor Cells”



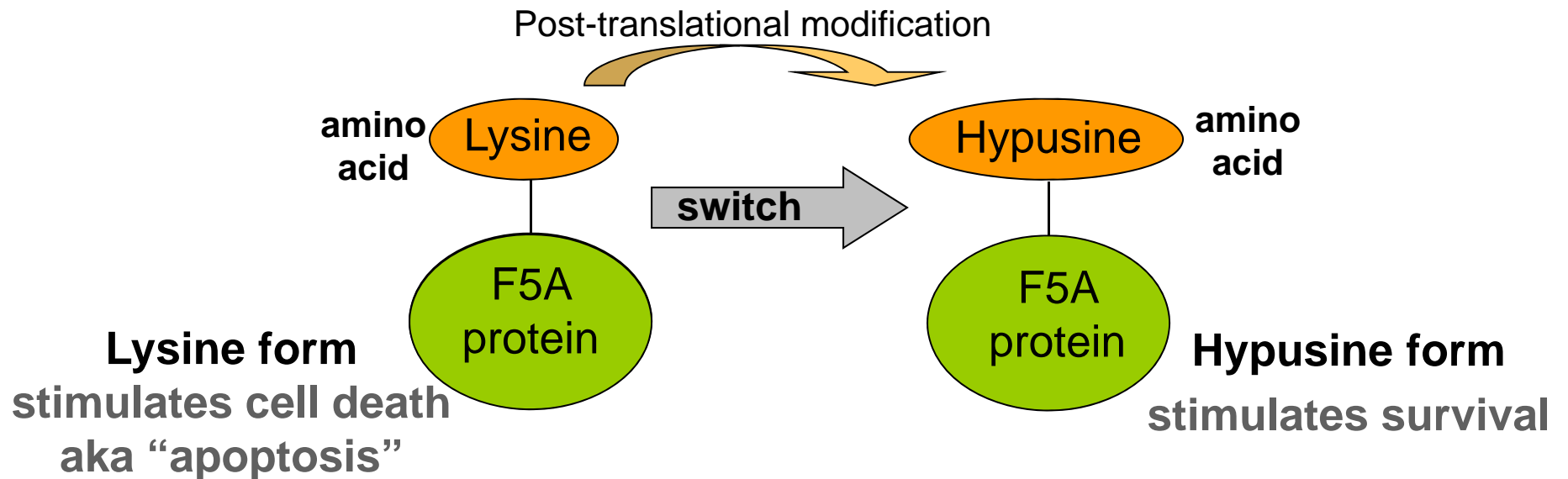
Programmed Cell Death - Apoptosis

- **Normal cellular function of all cells**
 - **Eliminates redundant and defective cells**
 - **Orderly efficient process**
 - **Cancer cells possess multiple defects**

- **Cancer cells evade programmed cell death**
 - **Most new anti-cancer drugs target a single defect responsible for tumor growth**
 - **Senesco's approach is to restore their mortality**
 - **SNS01-T is designed to reprogram cancer cells**

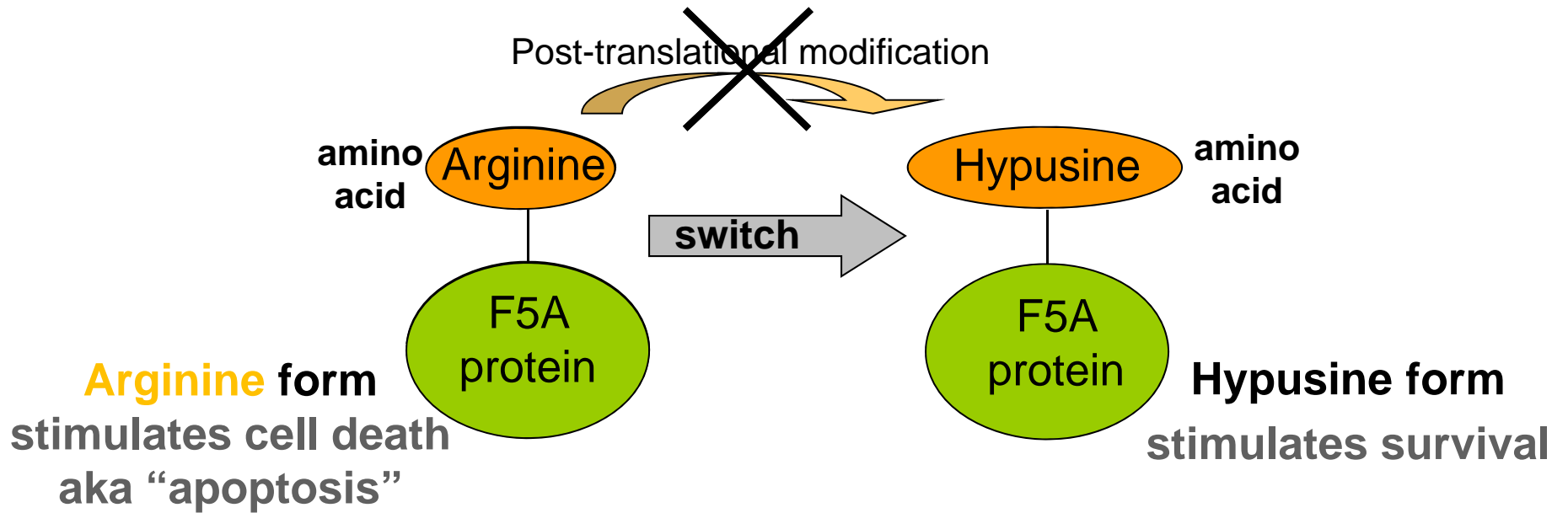
Factor 5A – Cell Growth Switch

Factor 5A protein has two different forms that act as a biological switch to promote cell death or survival



Factor 5A – Cell Growth Switch

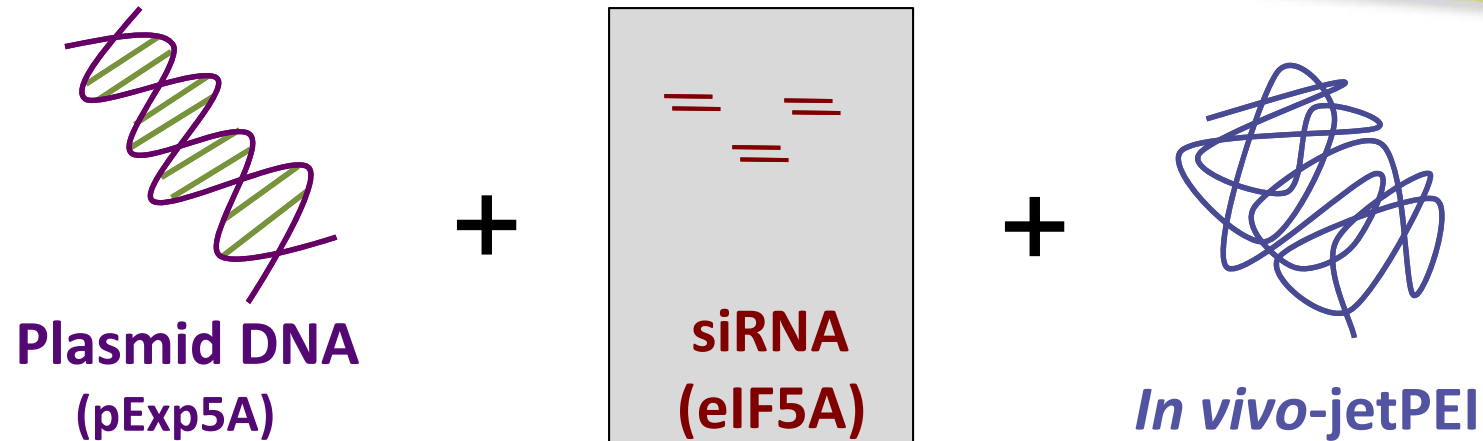
Factor 5A protein has two different forms that act as a biological switch to promote cell death or survival



- Arginine form induces cell death
- But no conversion to Hypusine



SNS01-T has three components

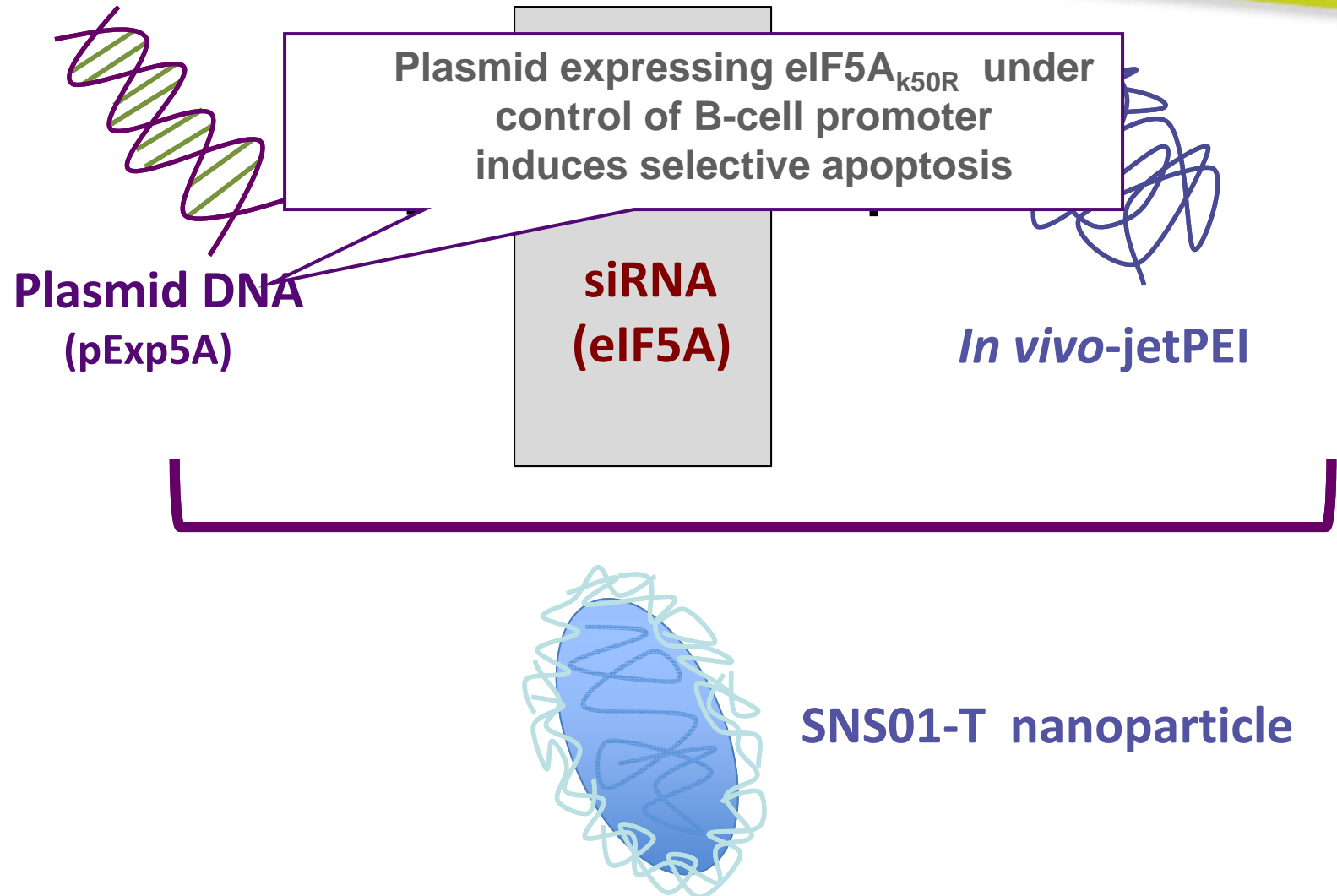


siRNA suppresses pro-survival hypusine – eIF5A resulting in inhibition of NF-kB activation

SNS01-T nanoparticle

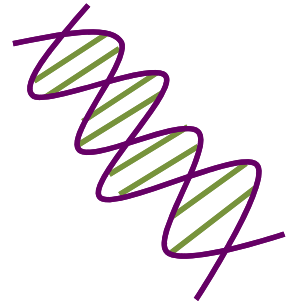


SNS01-T has three components





SNS01-T has three components



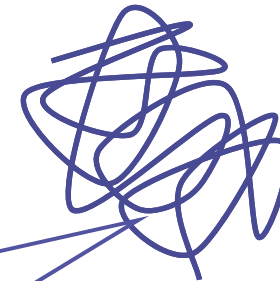
Plasmid DNA

+



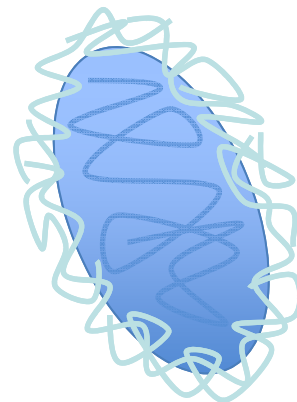
siRNA

+



jetPEI

PEI (polyethylenimine) – cationic polymer forms nanoparticle that protects the nucleic acids from serum nucleases and facilitates uptake and release



SNS01-T nanoparticle



S E N E S C O

Targeting Cancer and Multiple Myeloma

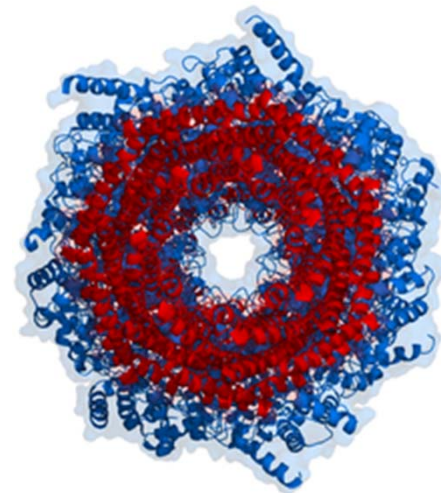
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Human Factor 5A in Cancer

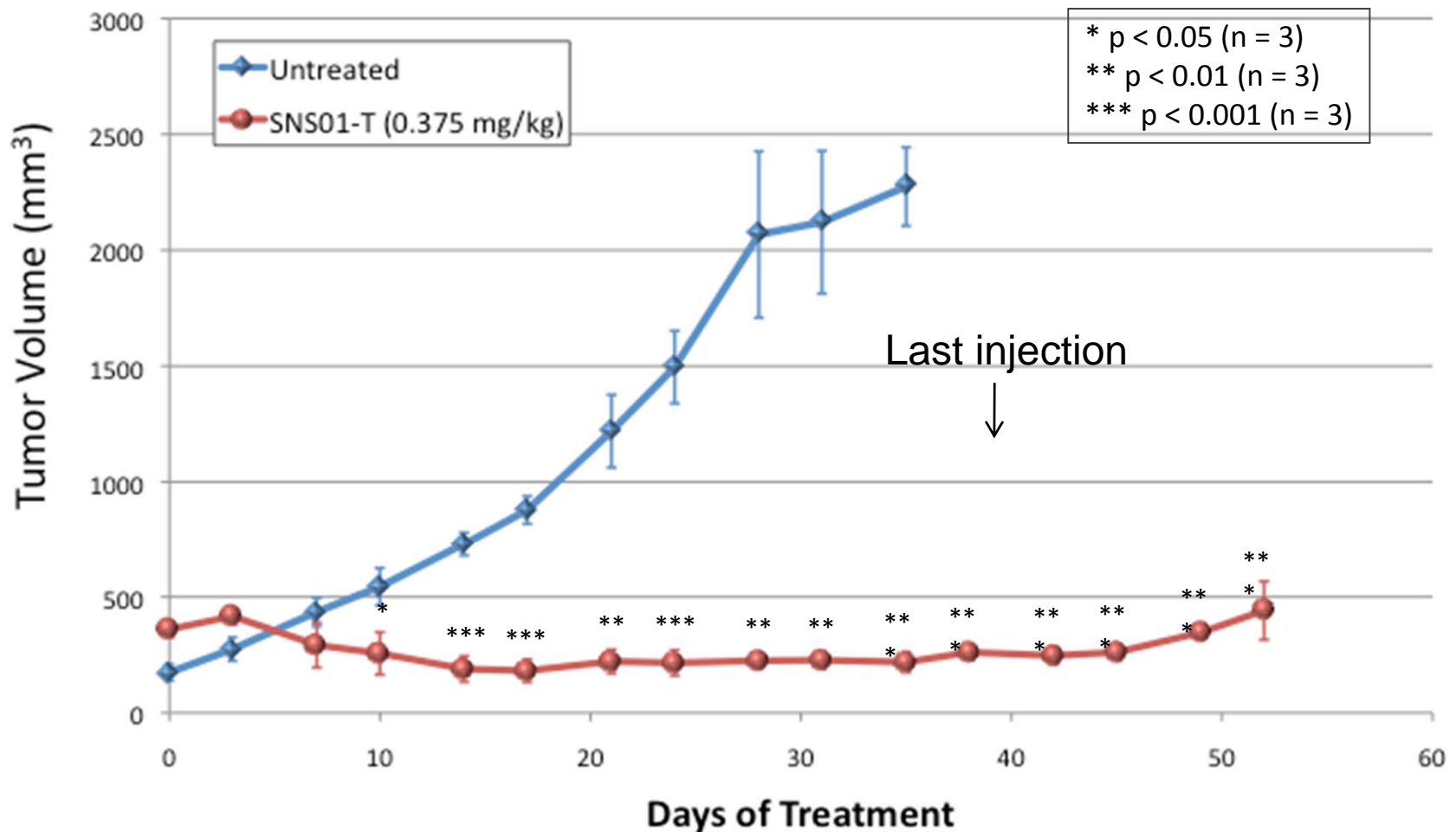
➤ **Factor 5A has broad activity in all cancer cell lines tested to date:**

- human multiple myeloma
- human melanoma
- human nasal pharyngeal cancer
- human colon carcinoma
- human cervical cancer
- human lung carcinoma
- human ovarian cancer
- human bladder carcinoma



Human Tumor Growth Control in Mice

Average Tumor Volume of KAS-6/1 Subcutaneous Tumors in SCID Mice Treated Twice-Weekly with SNS01-T for 6 Weeks





Tumors Under Skin Following Sacrifice

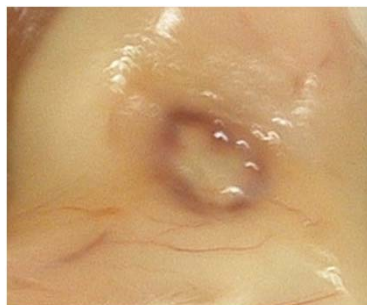
Control Nanoparticle



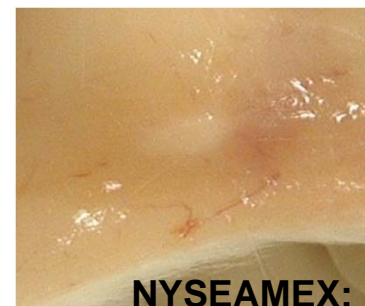
eIF5A siRNA



eIF5A(K50R) plasmid



SNS01



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IND Submission

- **IND received by CBER - January 27th**

- **CBER verbally informed Senesco - February 25th**
 - Study delayed until vendor's Drug Master File is updated
 - DMF amendment in preparation by vendor
 - No other significant, outstanding issues to hold up starting



Clinical Study Plans

- **Plan to treat first patient in 2Q-2011**
- **Premier multiple myeloma clinical sites**
 - John Lust, M.D. at Mayo Clinic, Rochester, MN
 - Saad Usmani, M.D. at U Arkansas Medical Center, Little Rock, AR

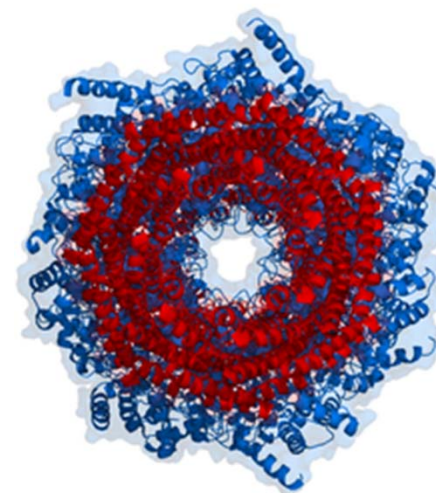




SNS01-T Phase 1b/2a Clinical Trial

➤ Dose escalation study

- Relapsed/refractory multiple myeloma patients (failure on two standard regimens)
- 4 groups, 3-6 patients each
- 6 week, twice-weekly, IV infusions
- Doses up to 0.375 mg/Kg





Clinical Measurements

➤ Safety

- Frequency, severity, and duration of adverse events
- Hematology and immunogenicity
- ECGs, PE, vital signs

➤ Pharmacokinetics

- Assessments at weeks 1, 2, 6, and 4, 8, 12 post treatment
- Distribution of DNA plasmid and siRNA

➤ Preliminary efficacy

- Serum/urine levels of M protein, C-reactive protein
- Quantitative Ig (IgG, IgA, IgM)
- Bone marrow plasma cell levels



Management

Leslie J. Browne, Ph.D.

President & CEO,
formerly CEO Pharmacoepia, Novartis

Joel Brooks

CFO & Treasurer
formerly Goldstein, Golub, Kessler LLP

John E. Thompson, Ph.D.

Founder, EVP, R&D, FRS of Canada
Dean of Science, U of Waterloo

Richard S. Dondero

Vice President, R&D
formerly VP Operations Cistron, J&J



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Jack Van Hulst	Operating Partner, SK Capital Partners



Financial Summary

Stock Exchange	NYSE/AMEX - SNT
52 Week Range:	\$0.22 - \$0.75
Shares Outstanding (1/31/2011):	74.8 million
Fully Diluted:	158.3 million

	Year ended June 30,	
	2010	2009
Revenue	<u>\$140,000</u>	<u>\$275,000</u>
Operating expenses		
General and administrative	\$2,349,116	\$2,205,739
Research and development	<u>\$2,637,407</u>	<u>\$2,353,962</u>
Total operating expenses	<u>\$4,986,523</u>	<u>\$4,559,701</u>
Cash and cash equivalents	<u>\$8,026,296</u>	<u>\$1,430,569</u>
Cash at December 31, 2010	<u>\$4,837,477</u>	

Milestones

- ✓ Raised \$11.5 million in 2Q-10
- ✓ Granted orphan drug status
- ✓ Submitted IND January, 2011



- ▶ Initiate study in multiple myeloma 2Q-2011
- ▶ Initial results of safety and efficacy 2H-2011
- ▶ Complete study enrollment 1H-2012
- ▶ Topline results mid- 2012



Senesco Investment Highlights

- **New approach by enhancing normal growth control**
- **Multiple product opportunities in several diseases**
- **IND submitted for multiple myeloma**
- **Safety and efficacy results expected in 2011**
- **Attractive entry price**
- **Daily trading volumes > 450,000**



Corporate Information

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