



# **Senesco Technologies, Inc.**

NYSE AMEX: SNT

## **The 13th Annual BIO CEO & Investor Conference**

Waldorf=Astoria, New York City  
February 14<sup>th</sup>, 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; 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**
  - affordable entry price
- **Novel platform targeting cell death and survival**
  - multiple disease opportunities
- **Strong IP**
  - exceptional patent protection
- **IND submitted for multiple myeloma**
  - clinical results 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
- **Royalty bearing licenses – Monsanto, Bayer, etc.**
- **Partners with on-going field trials**



*Senesco*



# Senesco Therapeutic Progress

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

- Gene regulation control
- SNS01-T targets cancer cells
- Next generation for other diseases



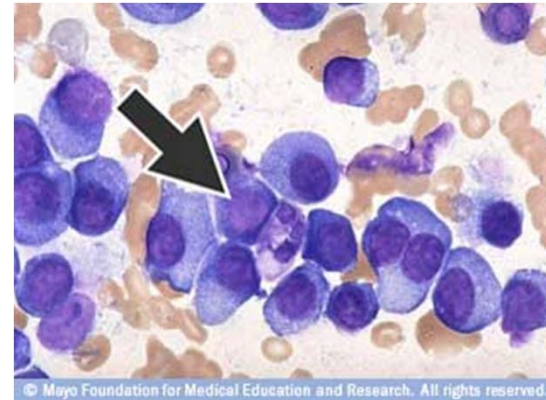
## ➤ **First clinical program**

- 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., 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



## 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***

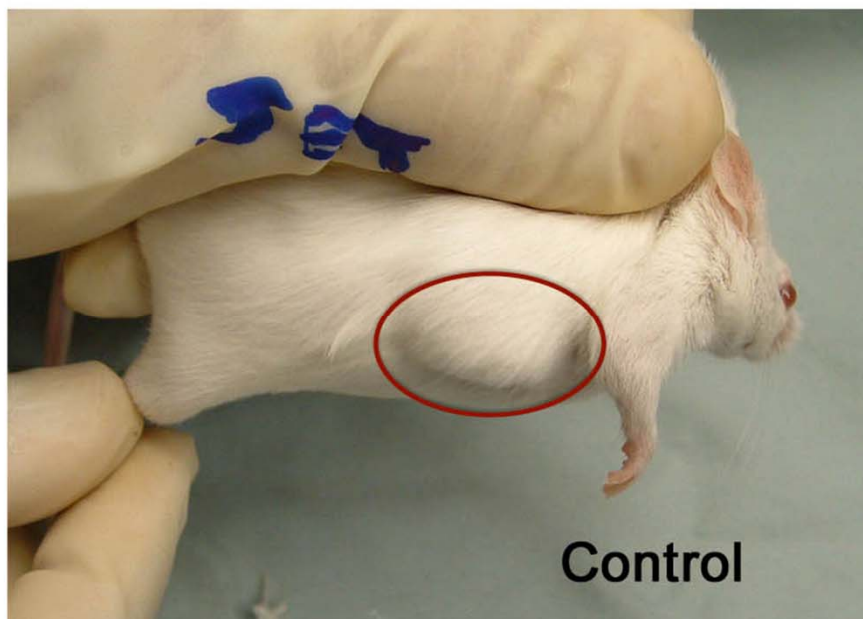


# Strong Intellectual Property

- **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”**

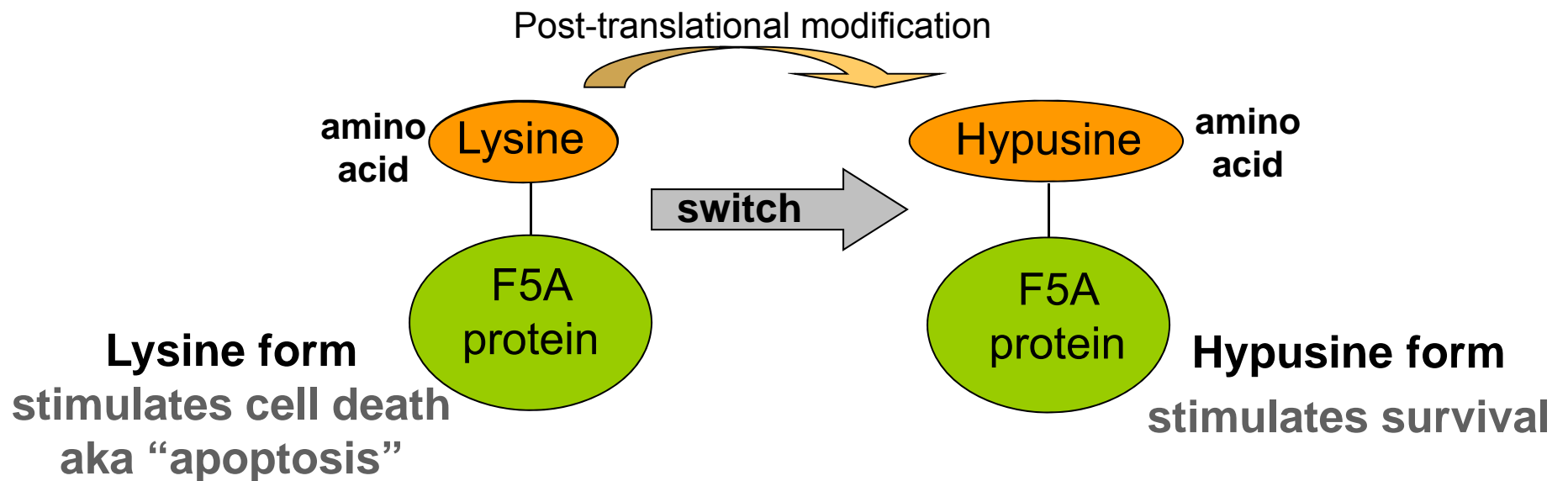


# Programmed Cell Death - Apoptosis

- **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**

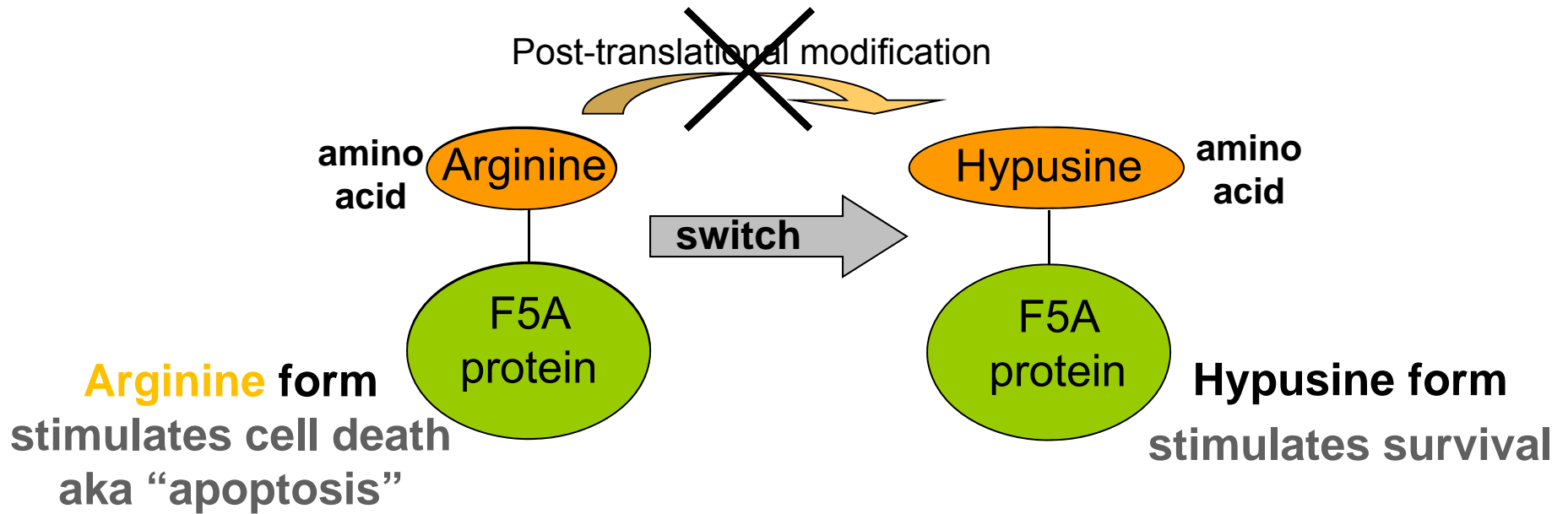
# Factor 5A – Cell Growth Switch

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



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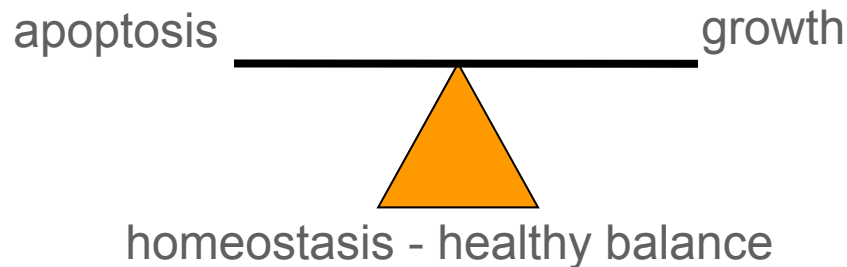


- Arginine form induces cell death
- But no conversion to Hypusine

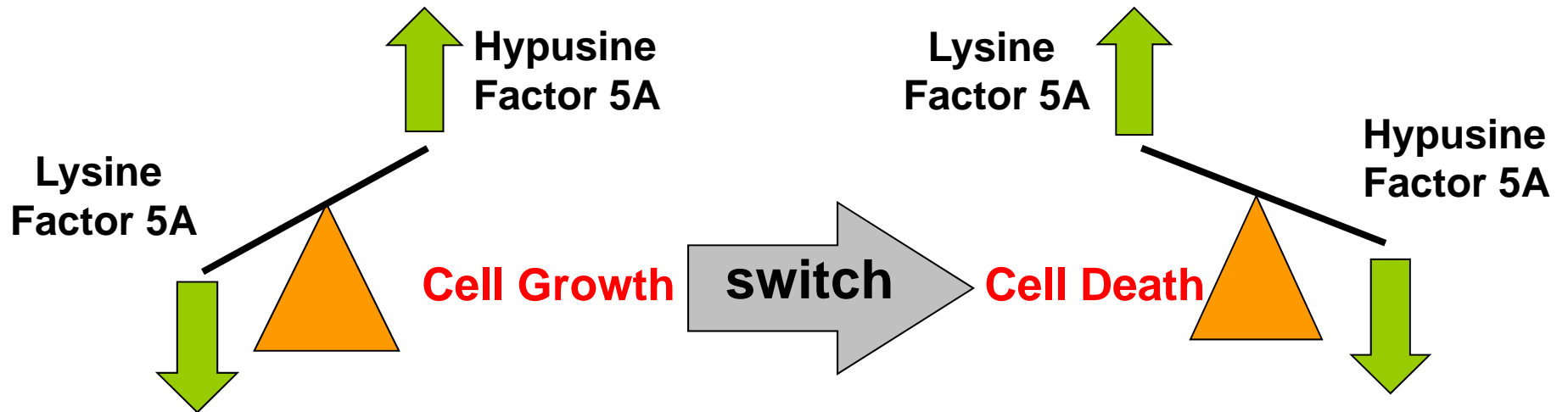


# Factor 5A Therapeutic Strategy

In health a balance exists between growth and apoptosis

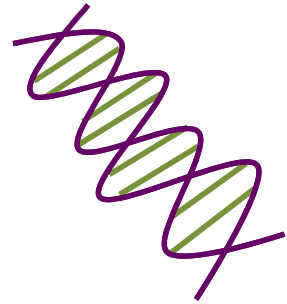


Balance is lost in disease including cancer



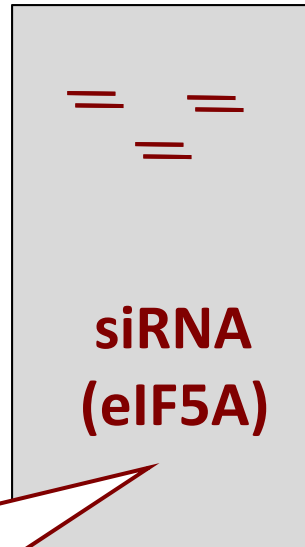


## SNS01-T has three components



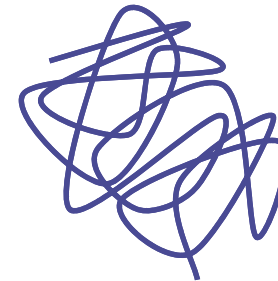
**Plasmid DNA**  
(pExp5A)

+



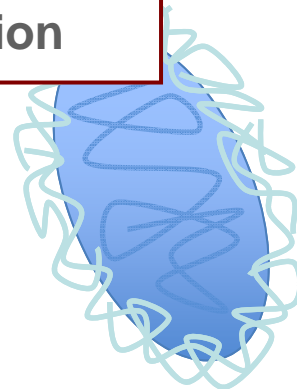
**siRNA**  
(eIF5A)

+



***In vivo-jetPEI***

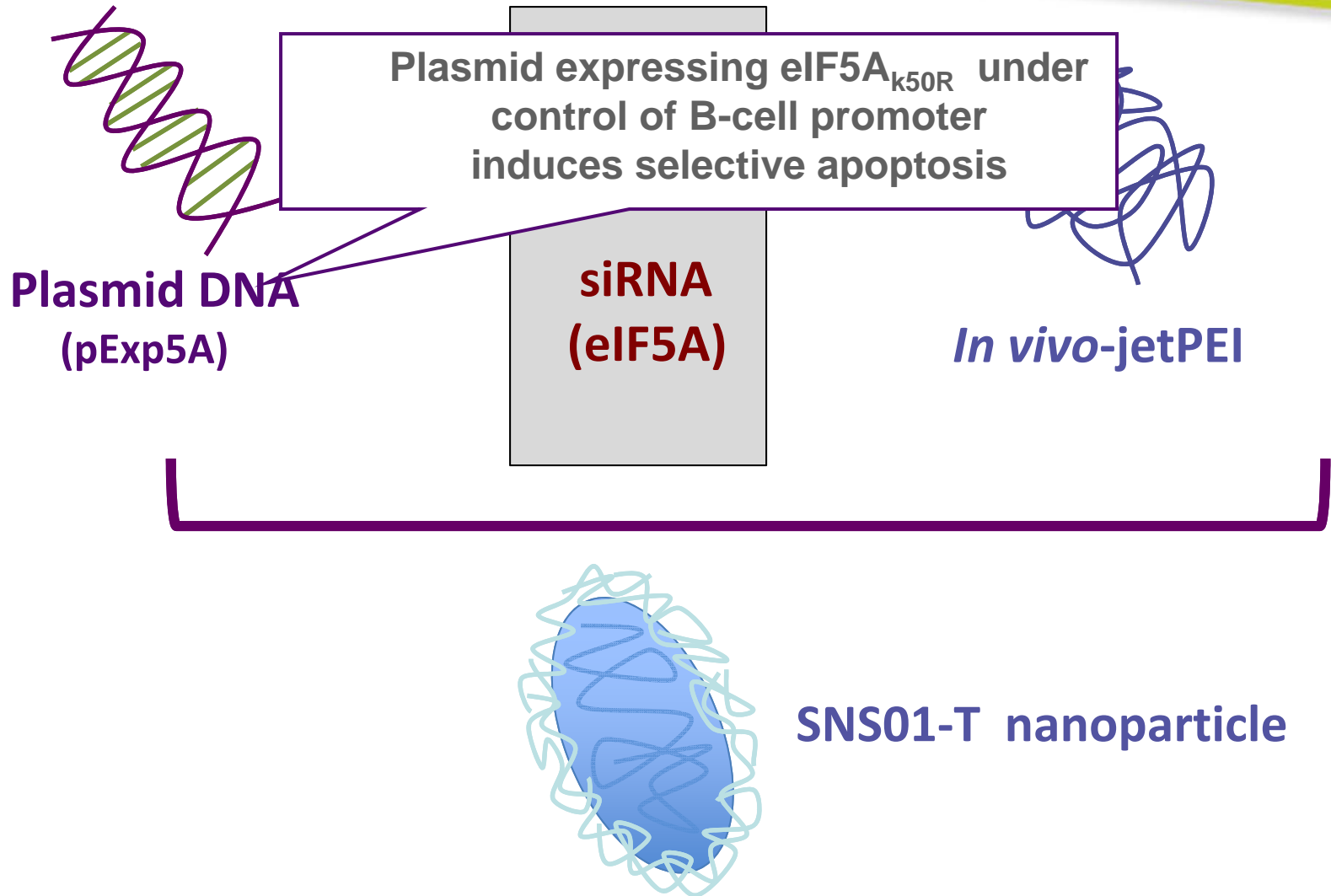
siRNA suppresses pro-survival  
hypusine – eIF5A resulting in  
inhibition of NF-kB activation



**SNS01-T nanoparticle**

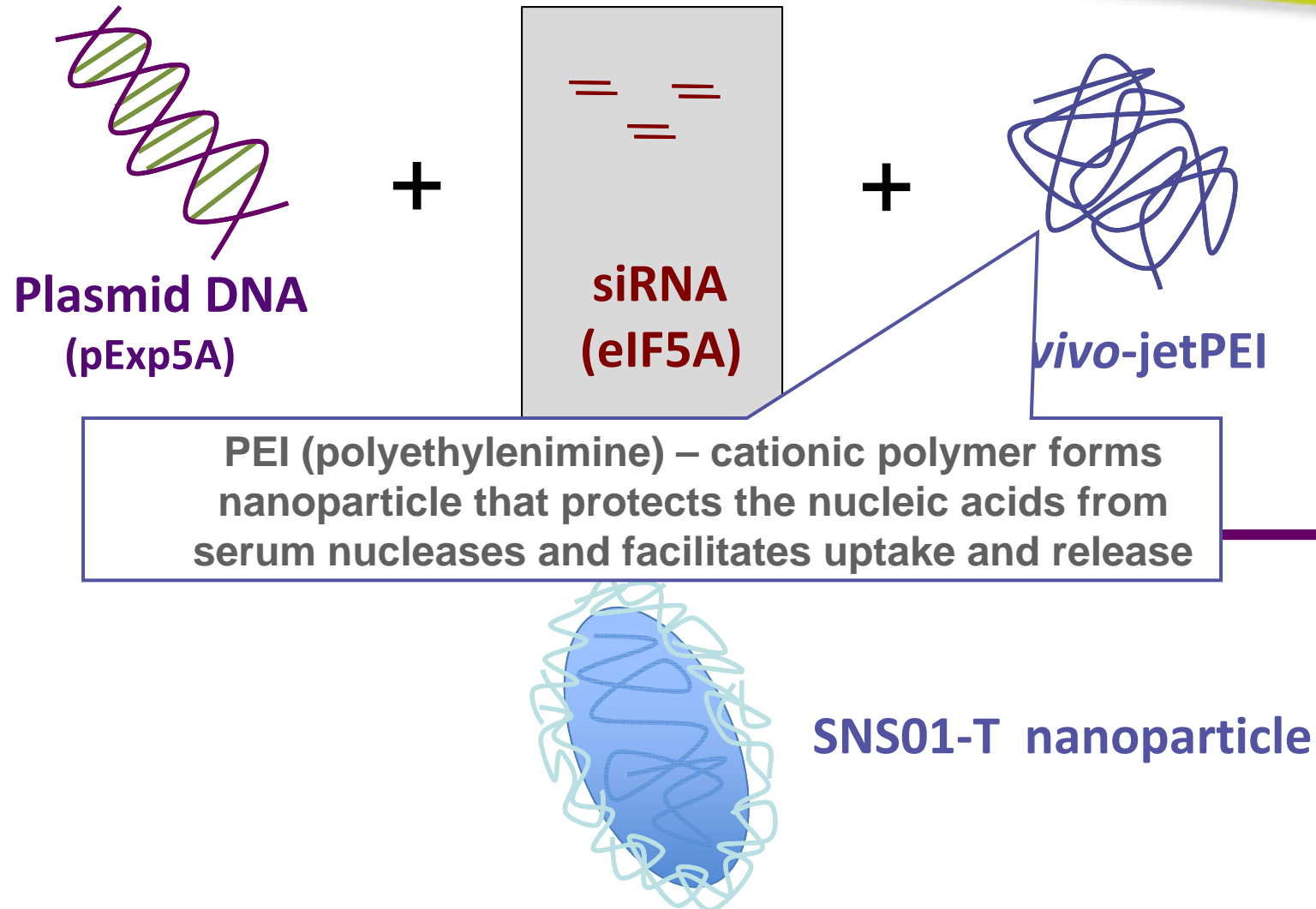


## SNS01-T has three components





## SNS01-T has three components





S E N E S C O

# Targeting Cancer and Multiple Myeloma

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## SNS01-T and the Factor 5A Switch

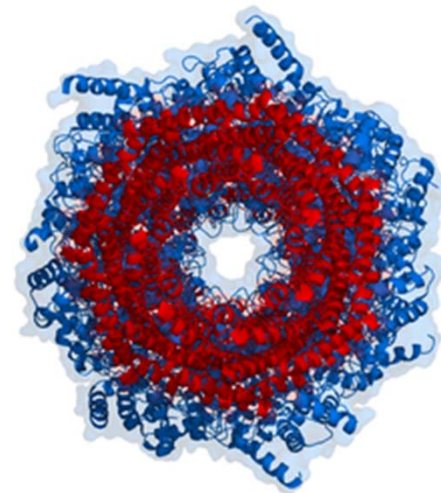
- SNS01-T promotes programmed cell death - *Lysine Factor 5A*
  - Activates programmed cell death
  - Up-regulates pro-apoptotic proteins - regulate
  - Activates caspase enzymes – execute
  
- SNS01-T blocks cell survival and growth - *Hypusine Factor 5A*
  - Inhibits NF-kappa B – Velcade does this
  - Down-regulates anti-apoptotic proteins
  - Down-regulates growth factor release



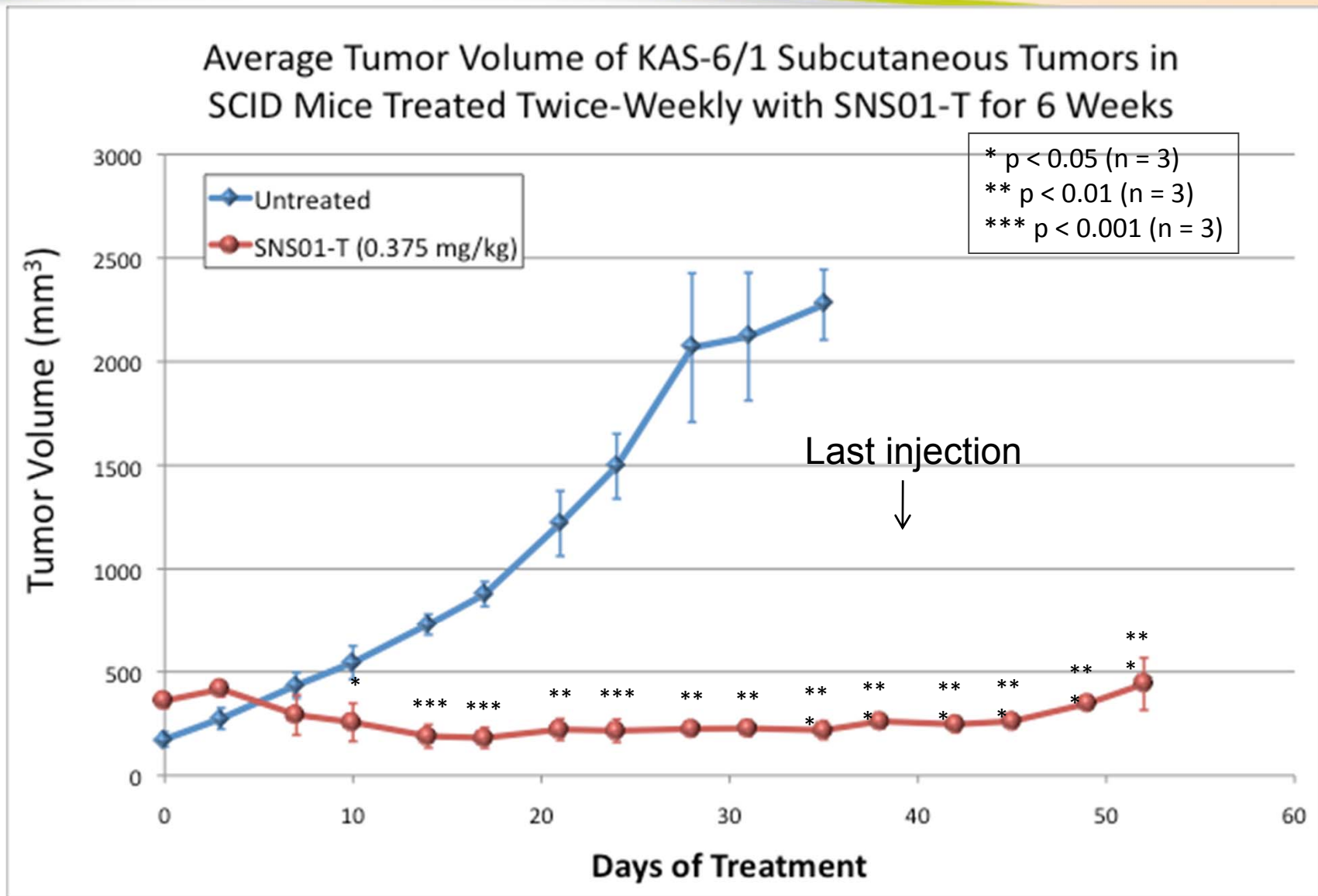
# Human Factor 5A in Cancer

➤ **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





# Tumors Under Skin Following Sacrifice

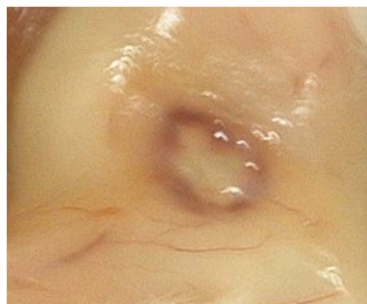
Control Nanoparticle



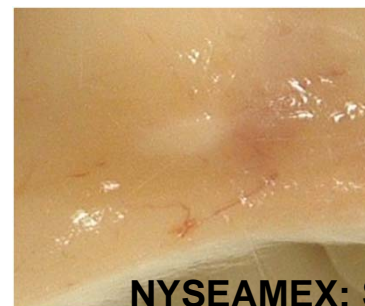
eIF5A siRNA



eIF5A(K50R) plasmid



SNS01



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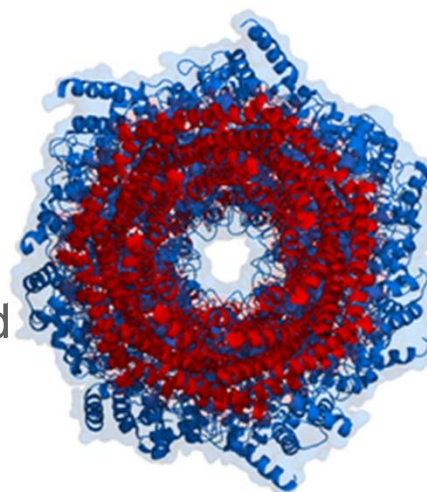
# SNS01-T Phase 1b/2a Clinical Trial

## ➤ Multiple myeloma clinical site

- John Lust, M.D. at Mayo Clinic, Rochester, MN

## ➤ Dose escalation study

- refractory multiple myeloma patients (failure on two standard regimens)
- measurable disease
  - serum M protein  $\geq$  1g/dL
  - kappa or lambda serum FLC  $\geq$  10mg/d
  - hemoglobin  $\geq$  8.5 g/dL
- 3 cohorts, 4-5 patients per cohort
- 6 week therapy per patient
- Twice-weekly, 3 hr IV infusions
- doses up to 0.375 mg/Kg





# Clinical Measurements

## ➤ Safety

- Frequency, severity, and duration of treatment-emergent AEs
- Chemistry and hematology
- ECGs, PE, vitals
- Immunogenicity

## ➤ Pharmacokinetics

- Assessments at weeks 1, 2, 6, 10, 14, 18
- 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



## Board of Directors

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<b>Jack Van Hulst</b>	Operating Partner, SK Capital Partner



# Financial Summary

<b>Stock Exchange</b>	<b>NYSE/AMEX - SNT</b>
<b>52 Week Range:</b>	<b>\$0.22 - \$0.75</b>
<b>Shares Outstanding (1/31/2011):</b>	<b>74.8 million</b>
<b>Fully Diluted:</b>	<b>153.3 million</b>

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



## Investment Opportunity

- ▶ **Clinical development stage biotech with newsflow**
- ▶ **Raised \$11.5 million in 2Q-10**
- ▶ **Granted orphan drug status**
- ▶ **Submitted IND January, 2011**
- ▶ **Initiate clinical study in multiple myeloma by 1H-11**
- ▶ **Initial results of safety and efficacy during 2011**





## Corporate Information

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[www.senesco.com](http://www.senesco.com)

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