



Senesco Technologies, Inc.

NYSE AMEX: SNT

NYSSA's 2011 Biotech-Specialty Pharma Conference

November 30th, 2011



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NYSEAMEX: SNT

Value Proposition for Patients and Investors



Senesco is the Leader in eIF5A

- **Senesco has proprietary platform for eIF5A modulation**
 - Eukaryotic translation initiation Factor 5A is highly conserved
 - Mechanistic pathways elucidated by Senesco

- **Aberrant cell growth and cell death can cause disease**
 - Programmed cell death is a natural process
 - Eliminates redundant and defective cells
 - Can turn on too early (inflammation) or too late (cancer)

- **Products to re-program cell death and survival**
 - Partners with on-going field trials
 - Internal focus on human disease especially cancer



Senesco Value Proposition

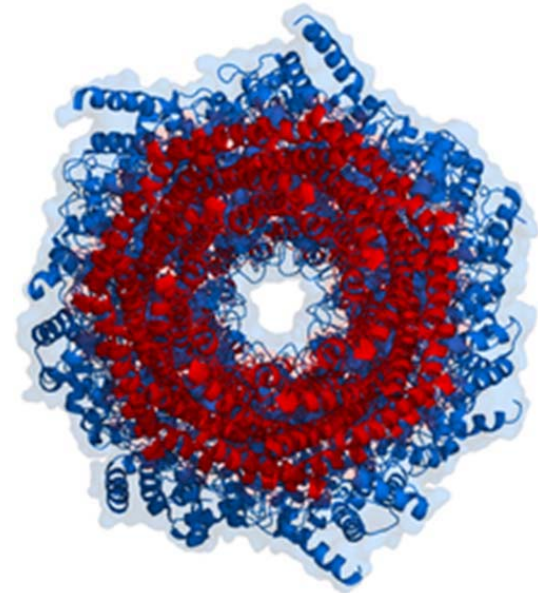
- **Innovation – targeting cell death and survival**
 - Multiple product opportunities from proprietary platform
 - Large commercial opportunity in multiple myeloma
 - Further application for same drug in other cancers
 - Multiple milestone and royalty bearing licenses today
 - Exceptional IP protection – 99 issued patents

- **Evaluation in First Indication is On-going**
 - Open IND for SNS01-T in multiple myeloma
 - Study running at the Mayo Clinic
 - Safety and efficacy results over the next 12 months



Multiple Myeloma Needs New Options

- ▶ Multiple myeloma is an incurable cancer of plasma cells – “B-cell” cancer
- ▶ Orphan disease – with ~20,000 new cases annually in US
- ▶ Prevalence is ~60,000 in the US
- ▶ Median survival time from first treatment is 2½ to 5 years
- ▶ Market projected at \$6 billion in 2018



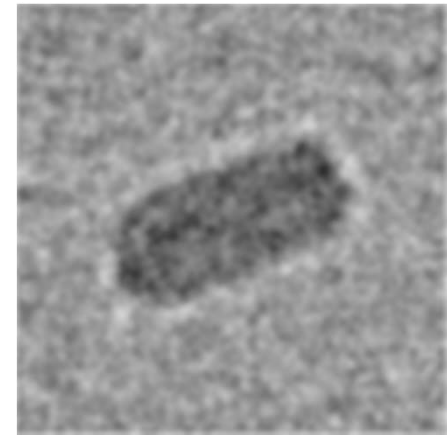
How SNS01-T was designed to work
“Reprogramming Tumor Cells”



SNS01-T Targets B-Cell Cancers

➤ Applying eIF5A platform to treat human disease

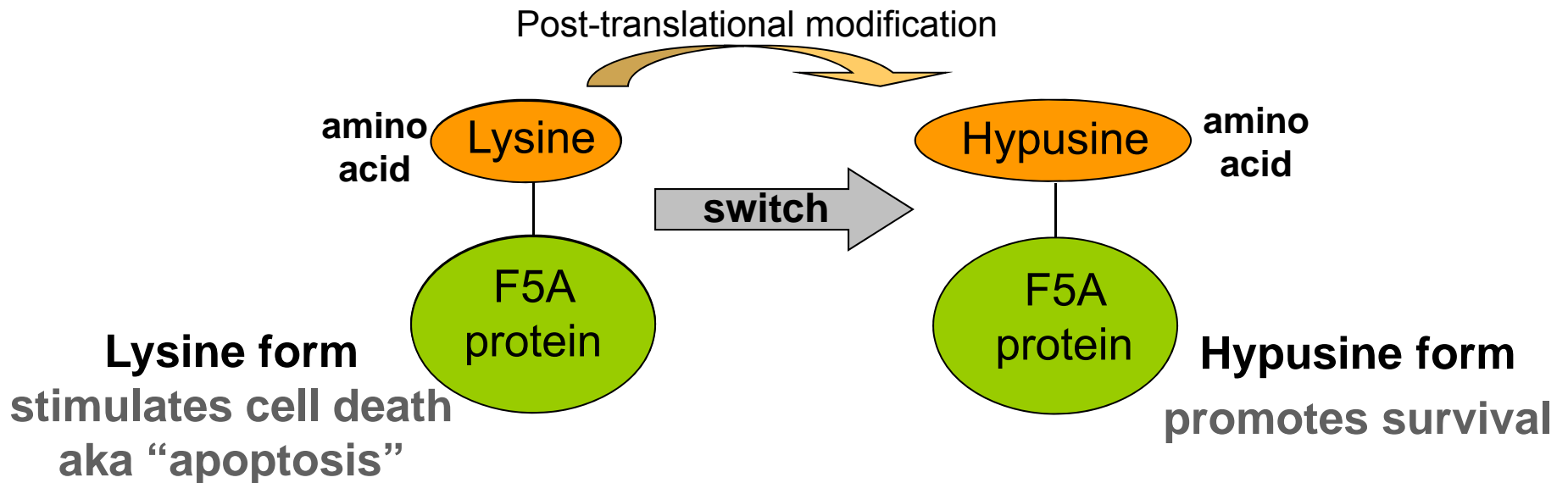
- SNS01-T is a nanoparticle
- Designed to treat B-cell cancers
- Down-regulates NF-kB – validated target
- Up-regulates p53 – ‘guardian of the genome’
- Next generation for other diseases like diabetes



SNS01-T nanoparticle
~ 40 x 70 nM

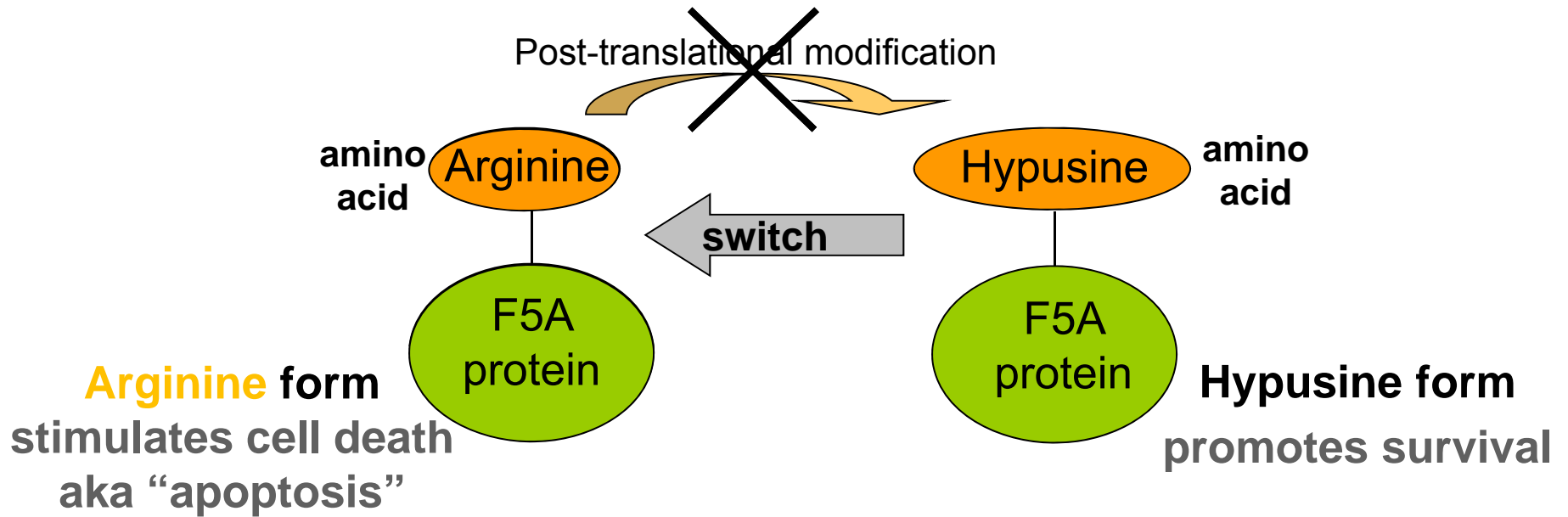
Factor 5A – Cell Growth Switch

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



Factor 5A – Cell Growth Switch

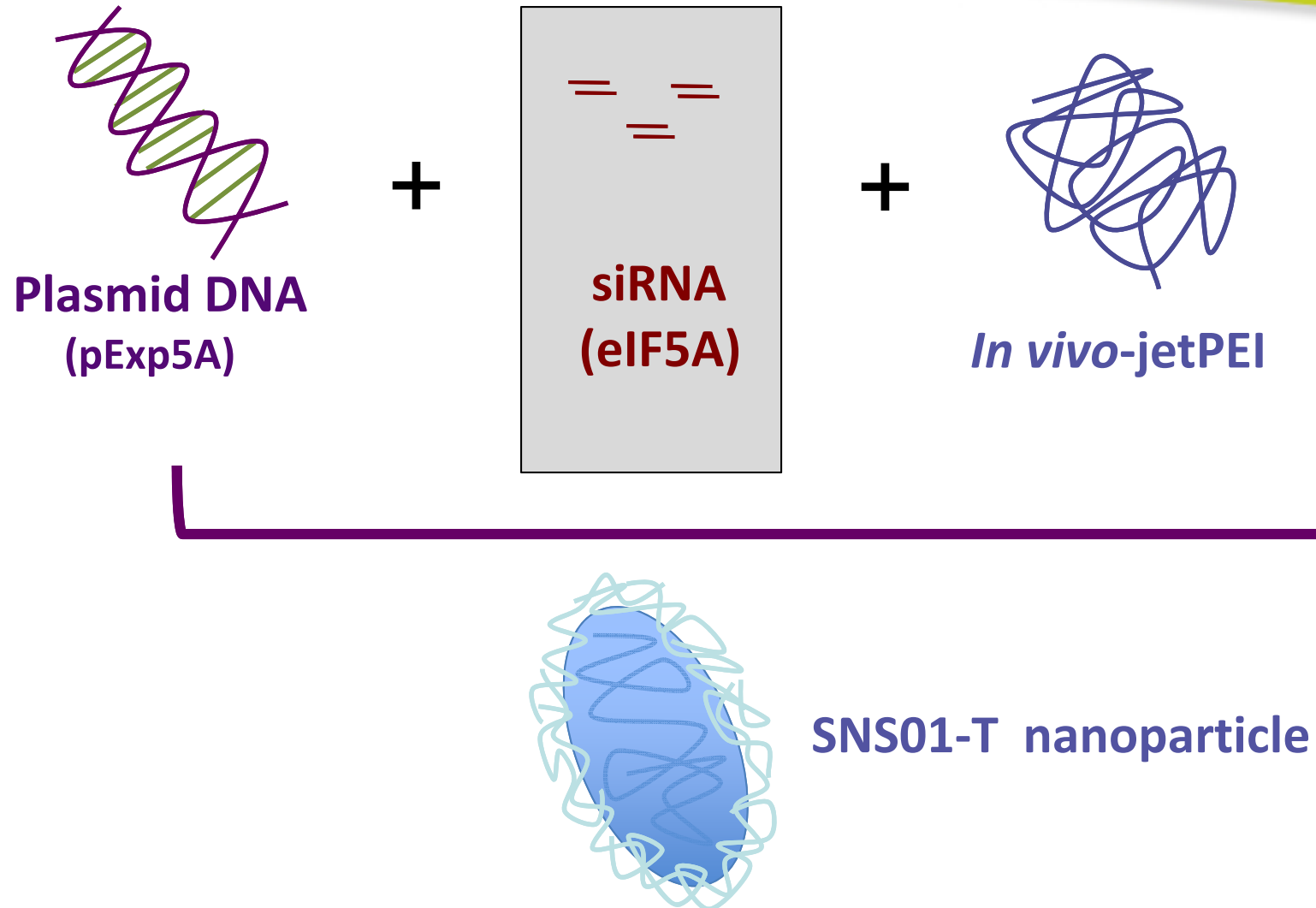
Factor 5A protein has two different forms that act as a biological switch to promote cell death or survival



- Replace hypusine with arginine
- Switch from survival to cell death

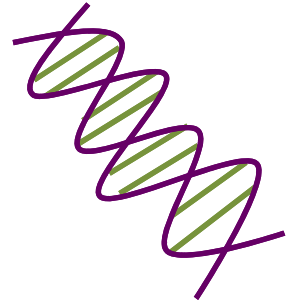


SNS01-T has three components



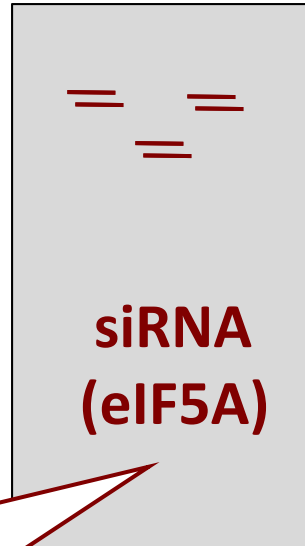


SNS01-T has three components



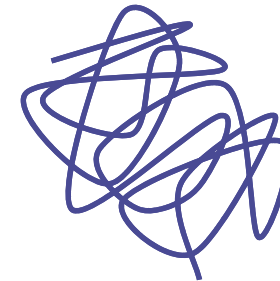
Plasmid DNA
(pExp5A)

+



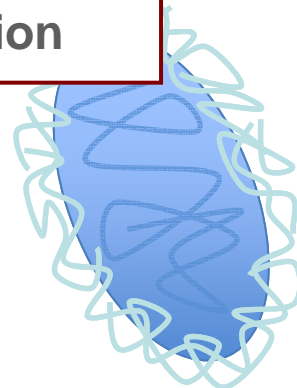
siRNA
(eIF5A)

+



In vivo-jetPEI

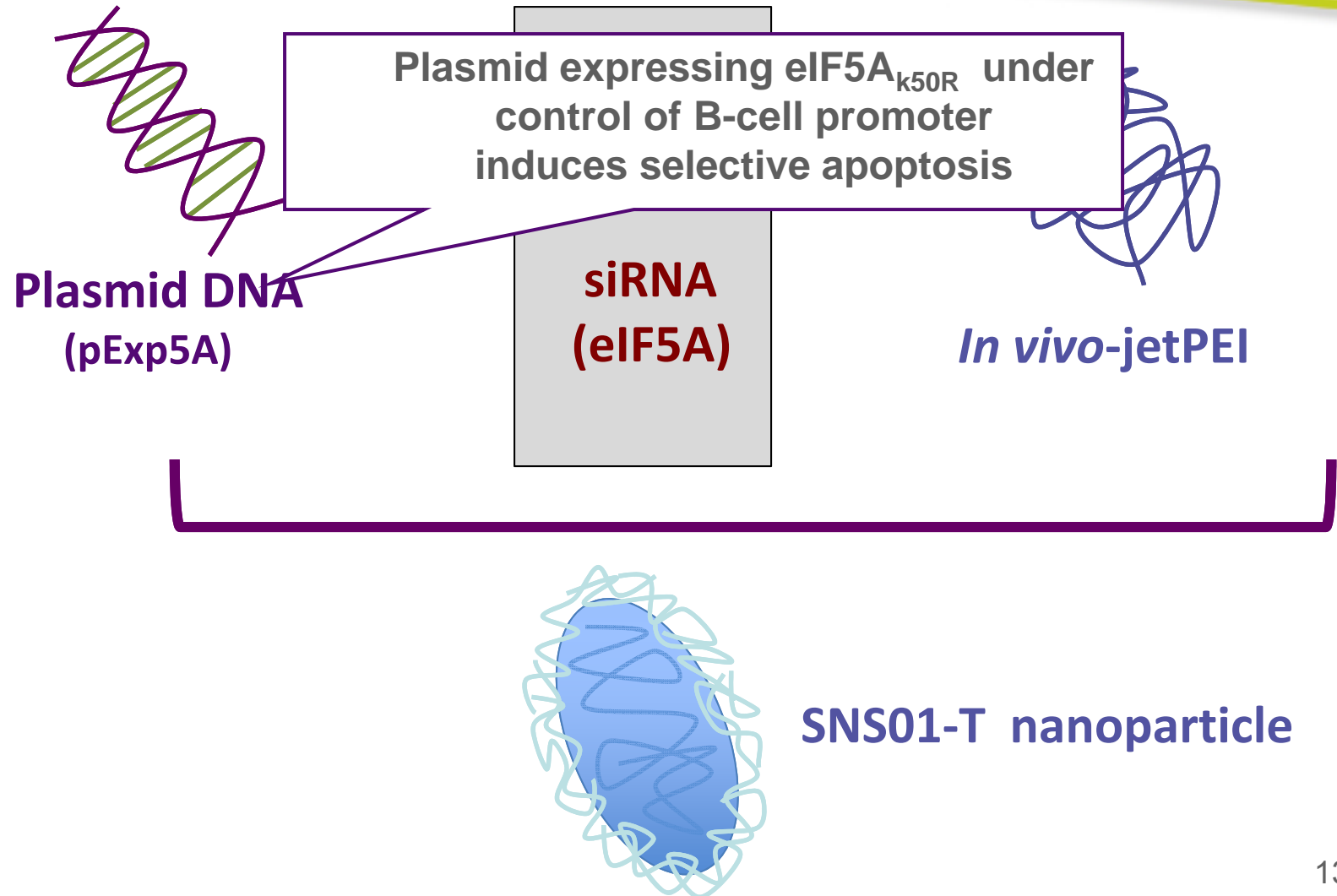
siRNA suppresses pro-survival
hypusine – eIF5A resulting in
inhibition of NF-kB activation



SNS01-T nanoparticle

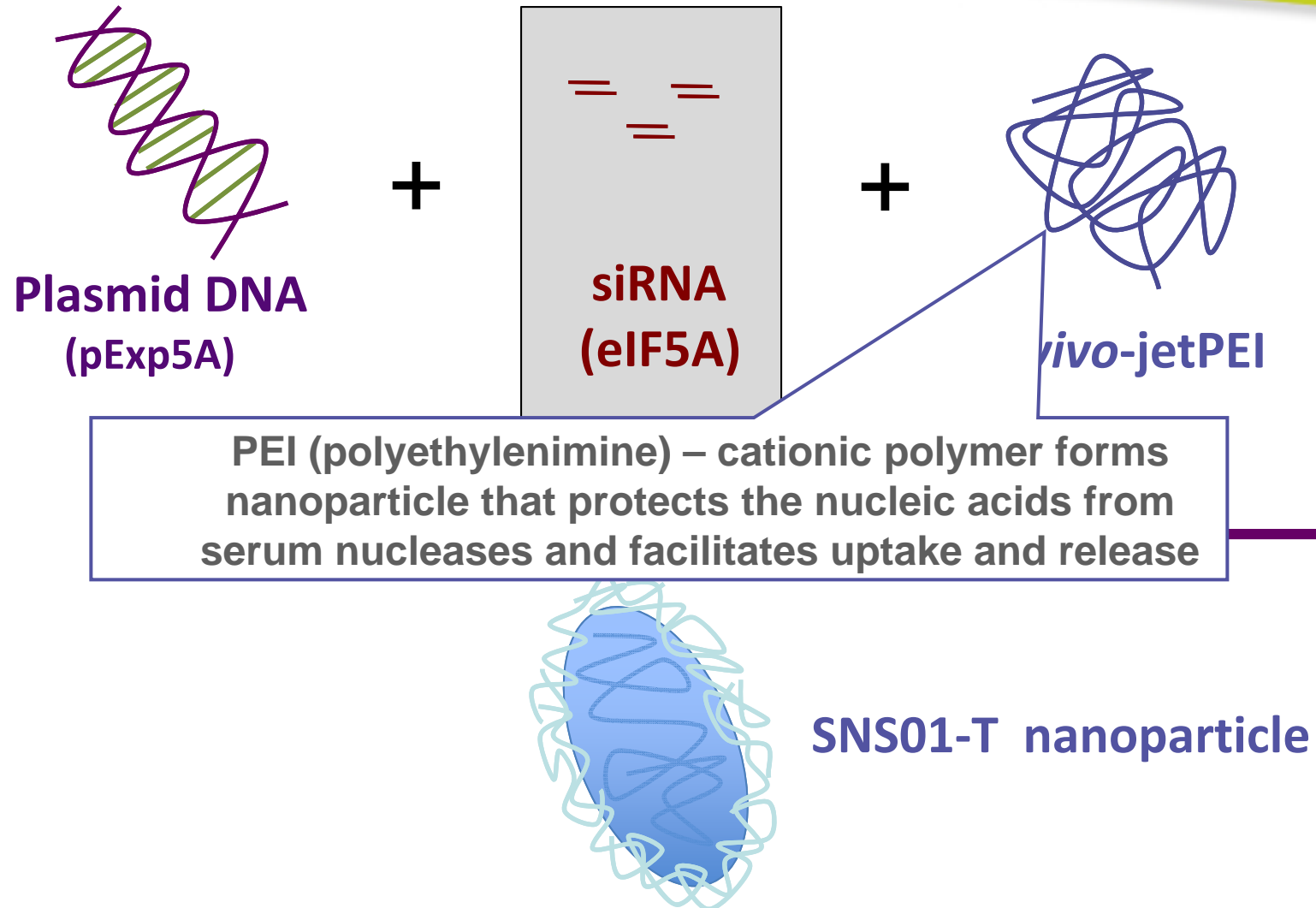


SNS01-T has three components





SNS01-T has three components



Targeting Multiple Myeloma and Other Cancers



Multiple Myeloma

Large Market & High Unmet Medical Need

Company	Drug	2010 Sales
Takeda	bortezomib	\$1,463 MM
Celgene	lenalidomide	\$2,466 MM
Celgene	thalidomide	\$387 MM

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



Active in All Tumor Cell Lines Tested

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

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



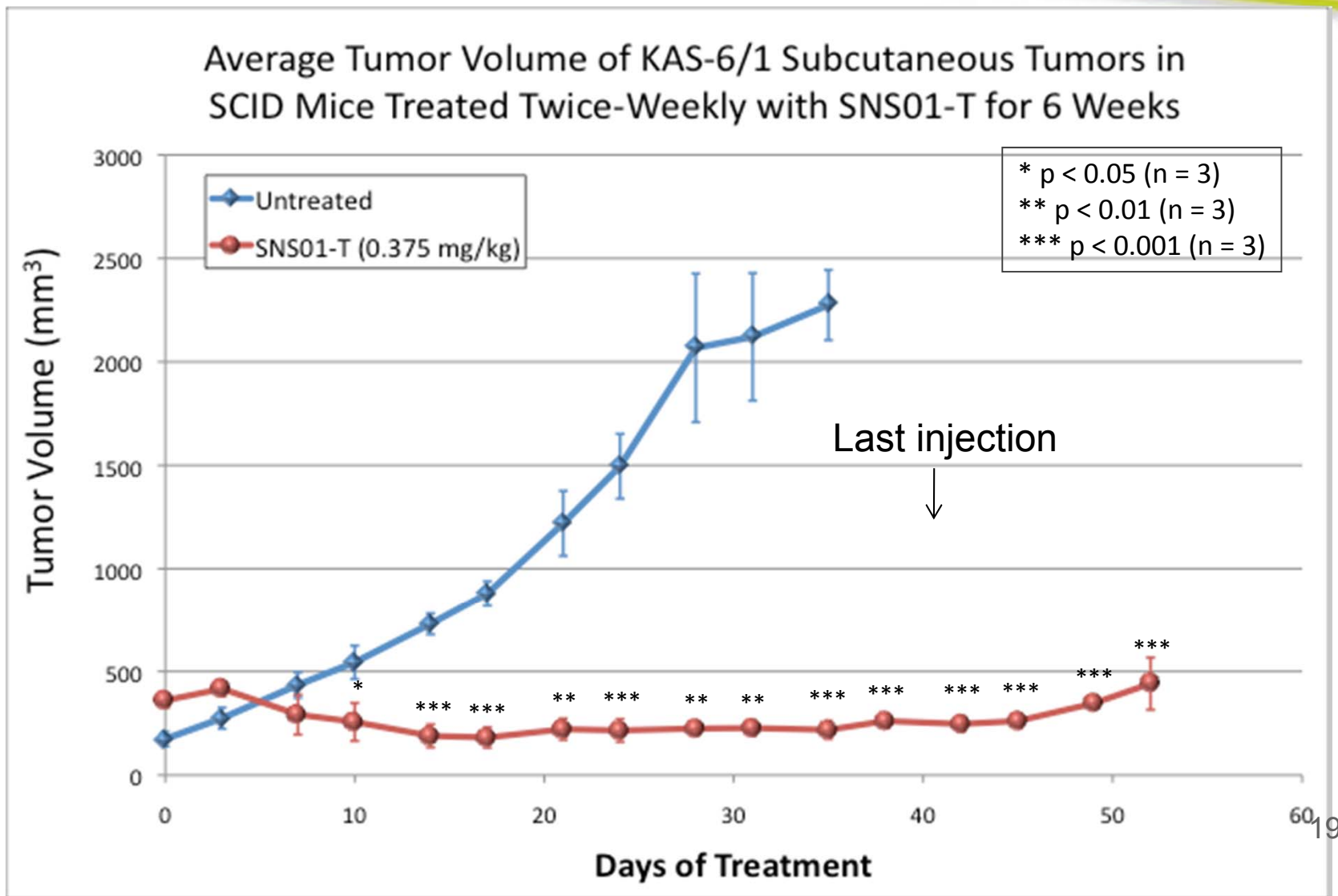


Extensive *In Vivo* Confirmation of Activity

➤ Efficacy in multiple disease models including:

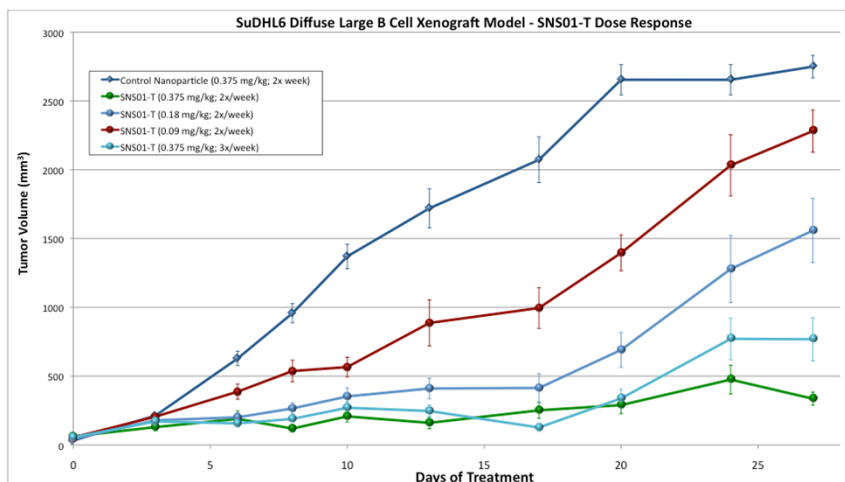
- Melanoma (B16-F0) tumor growth inhibition in mice
- Inhibition of disseminated melanoma (B16-F10) tumors in mouse lung [Gene Ther Mol Biol **12**, 207-218 (2008)]
- Dose dependent growth inhibition of human B-cell tumors in mouse xenograft models
 - > 90% in human multiple myeloma tumors
 - > 85% in human mantle cell lymphoma
 - > 85% in human diffuse large B-cell lymphoma

>90% Inhibition of Human Myeloma Tumors in Mice



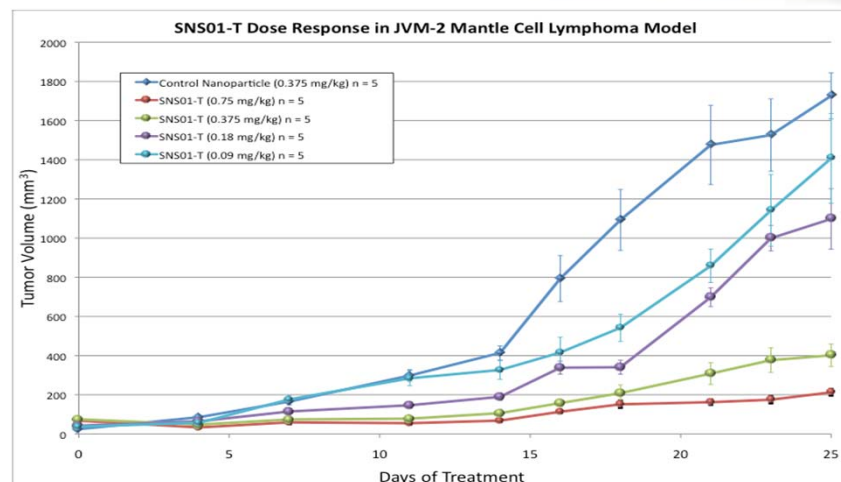


>85% Inhibition of Human Diffuse Large and Mantle Cell Tumors in Mice



SuDHL6 DLBCL

0.09, 0.18, 0.375 mg/kg (2x/week)
>85% inhibition at 0.375 mg/kg
($p \ll 0.0001$)

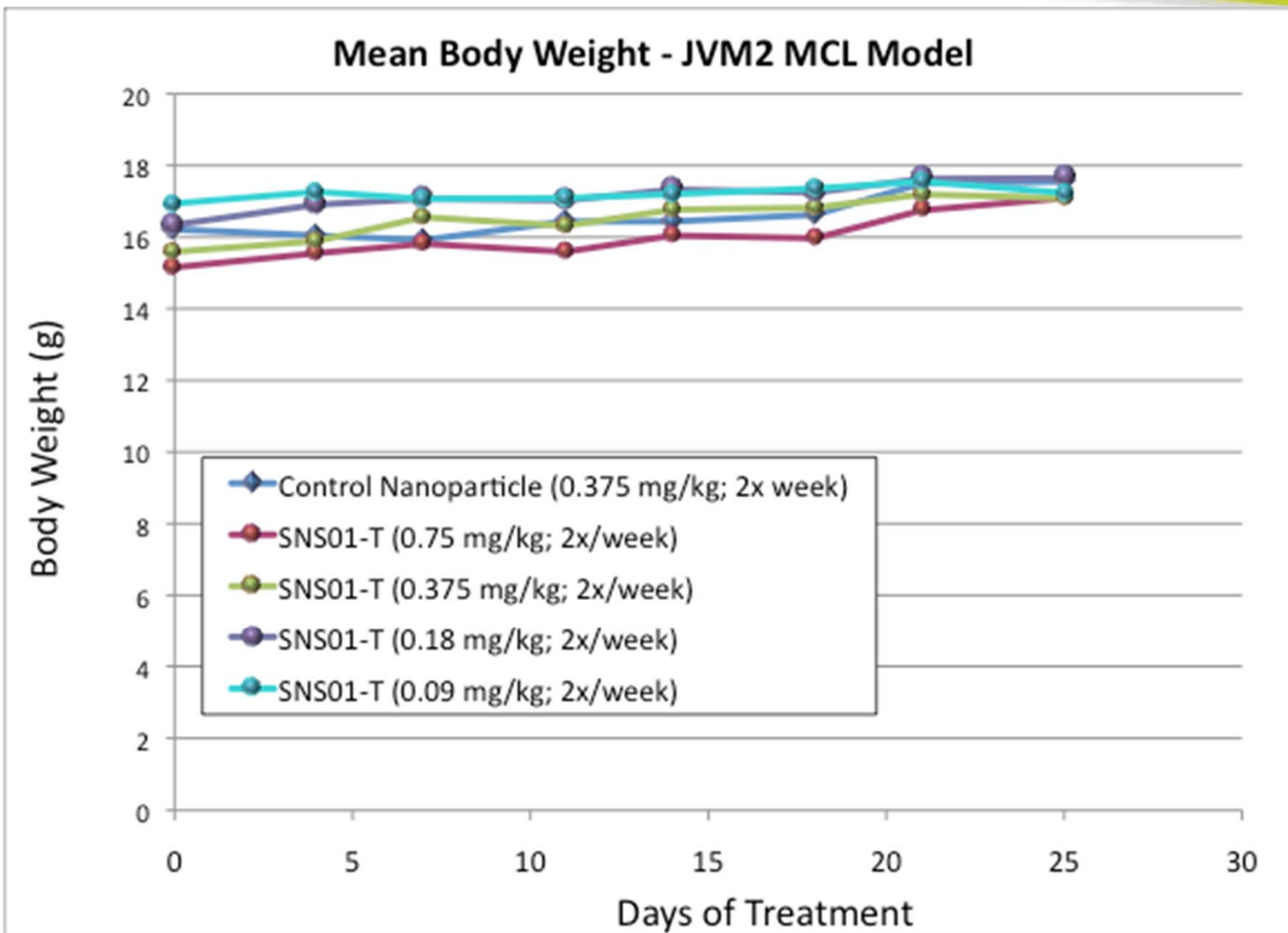


JVM2 MCL

0.09, 0.18, 0.375, 0.75 mg/kg (2x/week)
>85% inhibition at 0.75 mg/kg
($p = 0.0001$)

- Dose-response relationship
- Highly significant inhibition of tumor growth
- 100% survival at ≥ 0.375 mg/kg during treatment

No Dosing Effect on Weight Gain in Mice





Combination with SNS01-T Increases Potency of Marketed Products

	IC50	IC50 with IC20 SNS01-T
Cell lines	Bortezomib, nM	Bortezomib, nM
KAS-6/1	7.31	2.64 (~2.8X less)
U266	2.86	0.83 (~3.4X less)
RPMI-8226	2.12	1.51 (~1.4X less)

	IC50	IC50 with IC20 SNS01-T
Cell lines	Lenalidomide, uM	Lenalidomide, uM
KAS-6/1	69.78	2.37 (~29X less)
U266	62.05	1.42 (~43.7X less)
RPMI-8226	84.94	3.28 (25.9X less)

Lenalidomide works up to 40 times better with SNS01-T



Clinical Portfolio Status

Program	Lead Selection	Preclinical		Clinical Phase			NDA
		Optimization	Development	I	II	III	
SNS01-T Multiple Myeloma							~2016
SNS01-T Other B-cell cancers							~2018

SNS01-T can be extended to other B-cell cancer studies without significant additional pre-clinical investment

Clinical Trial Status



Clinical Study Plans

- **First dose in patients at Mayo** **November, 2011**
- **Open second site** **4Q-2011**
- **Premier multiple myeloma clinical sites**
 - John Lust, M.D. at Mayo Clinic, Rochester, MN





Phase 1b/2a: Open-label, Multiple-dose, Dose-escalation

➤ Study Design

- Relapsed/refractory multiple myeloma
(failure on two standard regimens)
- Total of ~15 patients
- Dose escalation
- Twice-weekly i.v. infusions
- 6 consecutive weeks

Group	Dose (mg/kg)	Patients
1	0.0125	3
2	0.05	3
3	0.2	3
4	0.375	6



Phase 1b/2a: Open-label, Multiple-dose, Dose-escalation

➤ Study Endpoints

- Safety and tolerability
- Plasmid DNA and siRNA pharmacokinetics
- Time to relapse or progression
- Tumor response (IMWG) including
 - Serum/urine levels of monoclonal (M) protein and C-reactive protein
 - kappa and lambda free light chain (FLC)



Management

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formerly CEO Pharmacoepia, Novartis

Joel Brooks

CFO & Treasurer
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John E. Thompson, Ph.D.

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

Richard S. Dondero

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



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Financial Summary

Stock Exchange	NYSE/AMEX - SNT
52 Week Range:	\$0.16 - \$0.36
Shares Outstanding (10/31/2011):	80.8 million
Fully Diluted (10/31/2011):	168.2 million

	Year ended June 30,	
	2011	2010
Revenue	\$ <u>-</u>	\$ <u>140,000</u>
Operating expenses		
General and administrative	\$2,610,222	\$2,349,116
Research and development	\$ <u>3,720,394</u>	\$ <u>2,637,407</u>
Total operating expenses	\$ <u>6,330,616</u>	\$ <u>4,986,523</u>
Cash and cash equivalents	\$ <u>3,609,954</u>	\$ <u>8,026,296</u>
Cash and cash equivalents (9/30/11)	\$ <u>2,841,974</u>	



Milestones and News Flow

- ✓ **First dose in patients** **Nov 2011**
- ▶ **Presentation of SNS01-T at ASH** **4Q-2011**
- ▶ **Initial safety results from clinical study** **4Q-2011**
- ▶ **Results from dosing groups starting** **1Q-2012**
- ▶ **Complete study enrollment** **1H-2012**
- ▶ **Topline results** **2H-2012**
- ▶ **Extend to other B-cell cancers** **2H-2012**



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