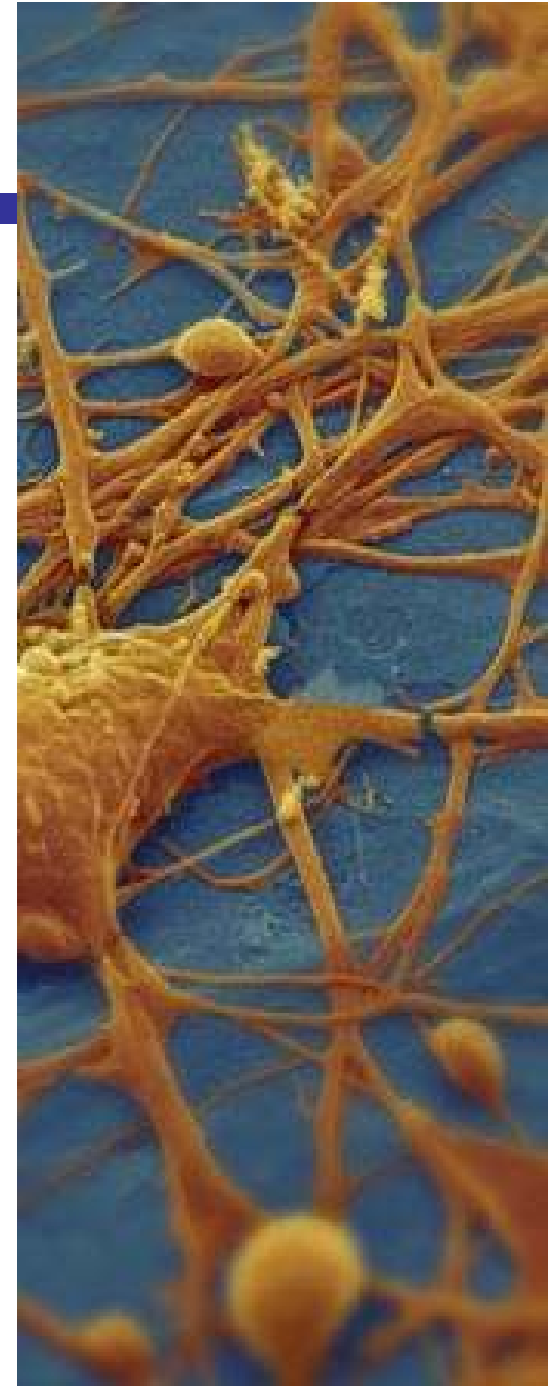
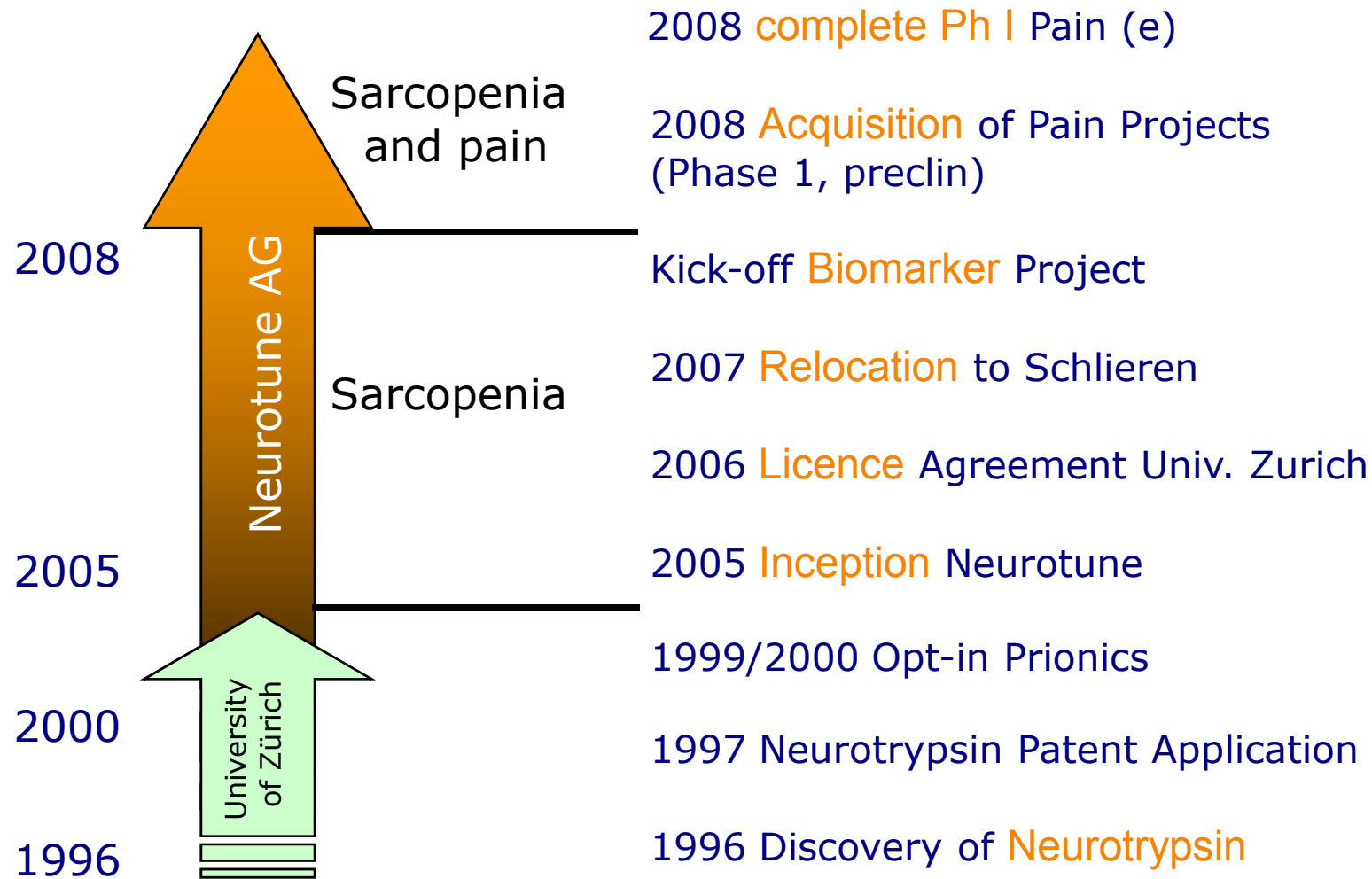
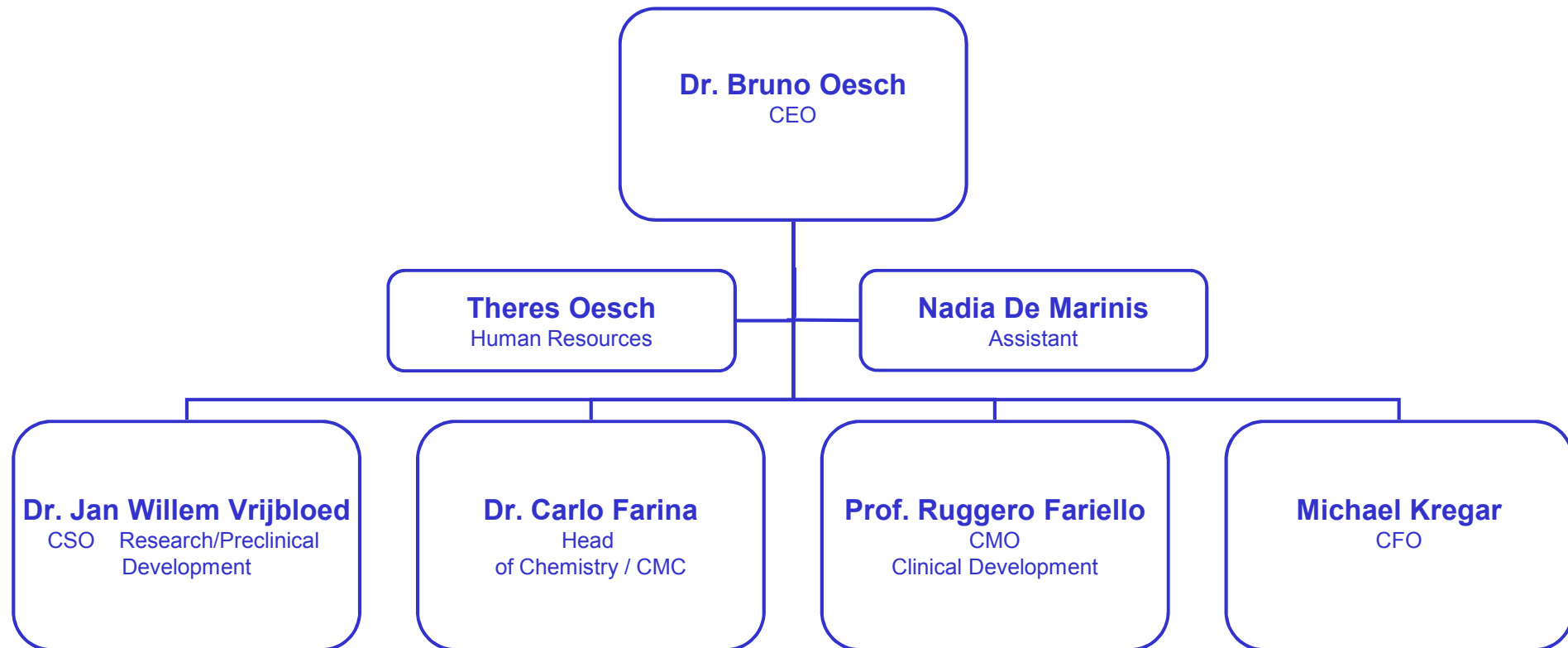

Presentation
Lugano Communication Forum
April 22nd, 2009



Corporate History



Neurotune's Management Team



Neurotune's Pipeline

Area	Product	Indication	Research	Preclinical Research	Preclinical Development	Clinical Phase I	Clinical Phase II	Clinical Phase III
Pain	NT-11624	HIV-associated Pain	█	█	█	█	█	
Pain	NT-11624	Osteoarthritis Pain	█	█	█	█		
Pain	NT-13317	Chemotherapy induced Pain	█	█	█			
Pain	NT-13317	Diabetic Neuropathy	█	█	█			
Neuromuscular	NT-345	Sarcopenia	█	█				
Diagnostic	ELISA	Sarcopenia Biomarker	█	█	█	█	█	n.a.

Therapeutic Focus – Neuropathic Pain

Nociceptive pain
(functional pain)

vs

Neuropathic pain
(non-functional pain)

Nociceptive pain: caused by stimulation of nociceptors, due to chemical, thermal (heat, cold), or mechanical damage

- Superficial somatic pain (or cutaneous pain) caused by injury to the skin.
- Deep somatic pain originates from e.g. tendons, bones, blood vessels.
- Visceral pain originates from body's viscera, or organs.

Neuropathic (or neurogenic) pain: caused by damage to the nervous system.

- can continue for months or years and is often described as "burning", "electric", "tingling" or "shooting."
- is a type of chronic pain. It is a result of damage to the nervous system following infection, disease, or certain medications.

Therapeutic Areas in Neuropathic Pain

Neurotune aims at developing the new compounds in one or more of the following **sub-indications** of pain or may find **other sub-indications** even more promising in the course of the execution of the clinical program.

Types of Neuropathic Pain to be considered

- Neuropathic low back pain (NLBP)
- Post-herpetic Neuralgia (PHN)
- Osteoarthritis Pain (OAP)
- HIV-associated Neuropathy (HIV NP)
- Fibromyalgia (FM)
- Diabetic Neuropathy (DNP)
- other Neuropathies (associated with Stroke, Multiple Sclerosis, Chemotherapy)

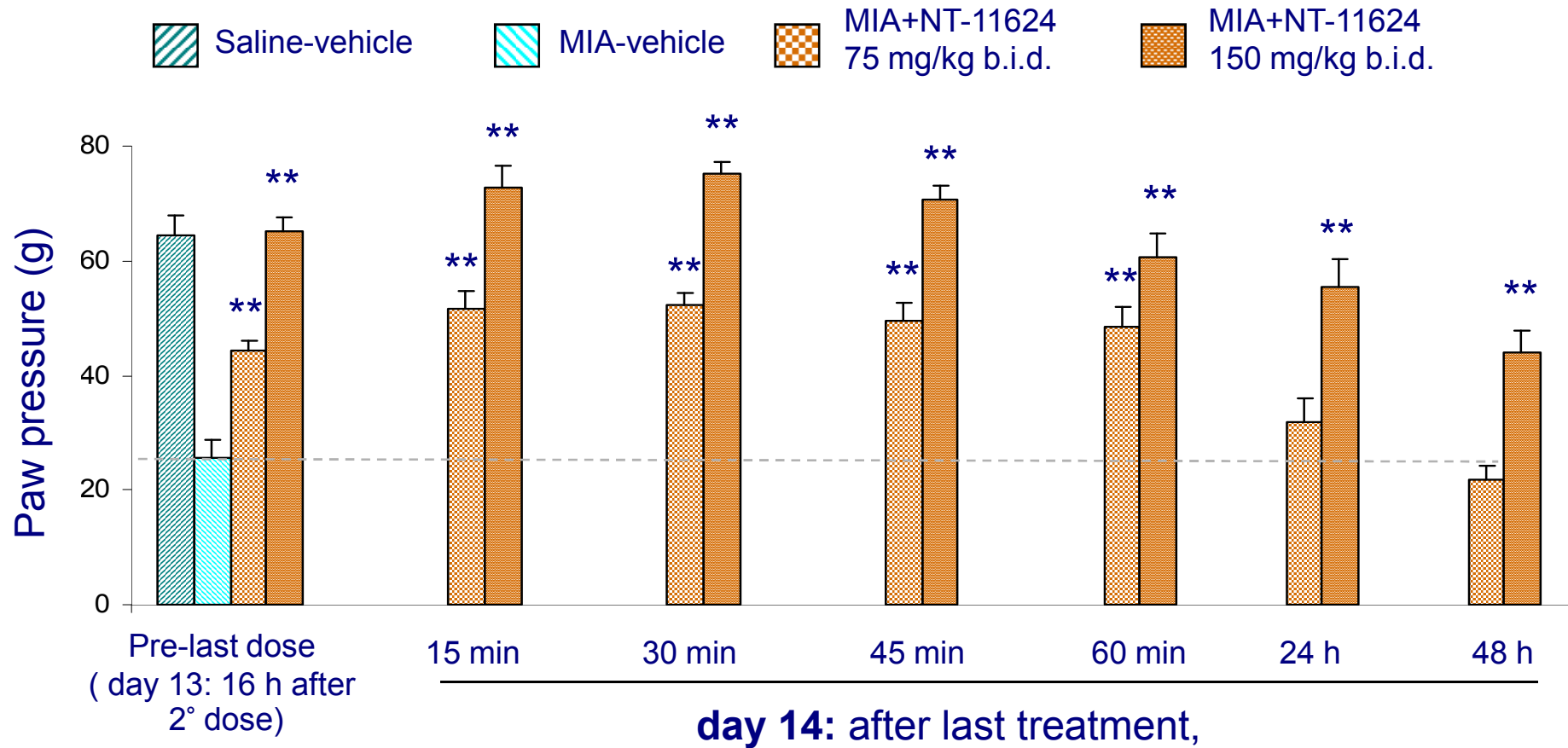


Market Potential – NT-11624

Market Potential		
EU, USA, CA, JA	Osteoarthritic pain	HIV-associated pain
Number of Patients	~ 36 Mio	~ 0.43 Mio
Standard Treatment	e.g. NSAIDs, Corticosteroids, Anticonvulsants, Local anaesthetics	
Current Market	\$ 26 Billion	
Market Growth	↗ ↗ ↗	↗
Competition	25 in var. pipeline stages	no direct treatment
Product Revenue Potential for Neurotune*	~ € 380 Mio	~ € 65 Mio

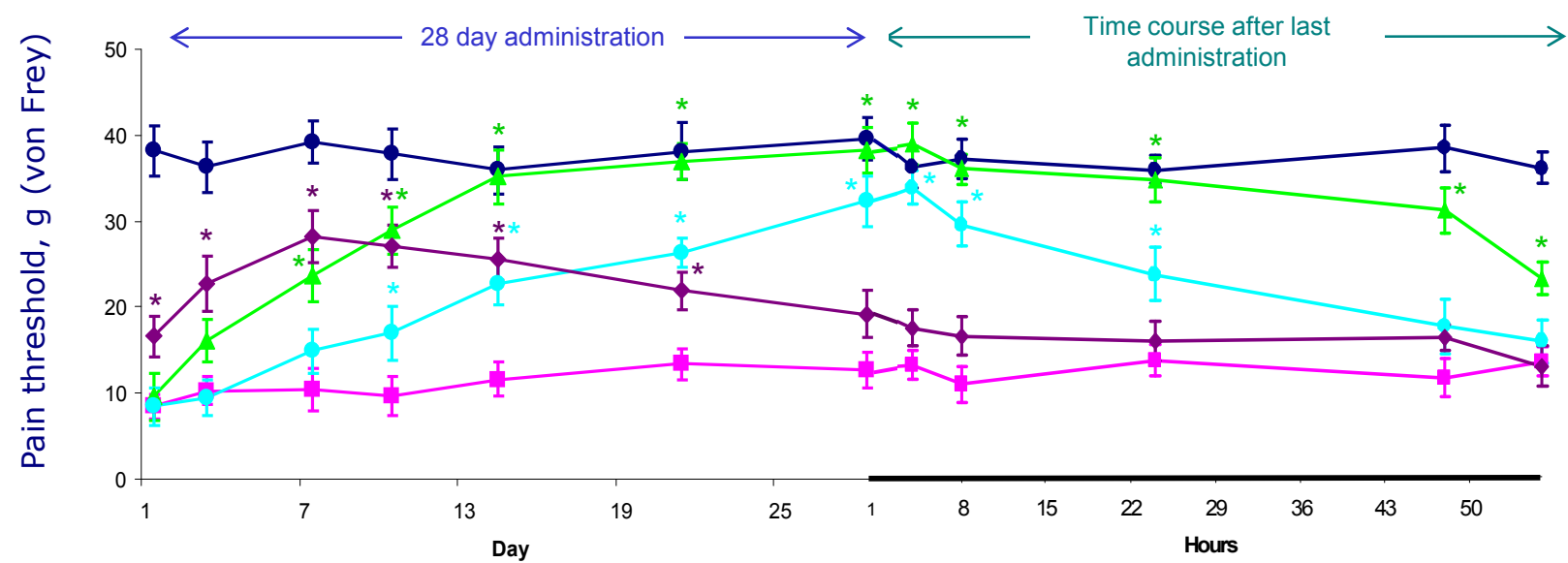
* Product revs for Neurotune are based on single digit or low double digit royalties income from licensed product sales

Chronic NT-11624 is highly effective in MIA-induced Osteoarthritis



**P < 0.01 versus MIA-vehicle treated rats (n=8).

Chronic NT-11624 vs Pregabalin in antiviral (ddC)-induced Neuropathic Pain



		1st week	2nd week	3rd week	4th week
NT-11624 dose 1	Morning	100	100	50	50
	Evening	100	100	50	
NT-11624 dose 2	Morning	50	50	50	50
	Evening	50	50	50	50
pregabalin	Morning	15	15	15	15
	Evening	15	15	15	15

● saline/vehicle
■ ddC/vehicle

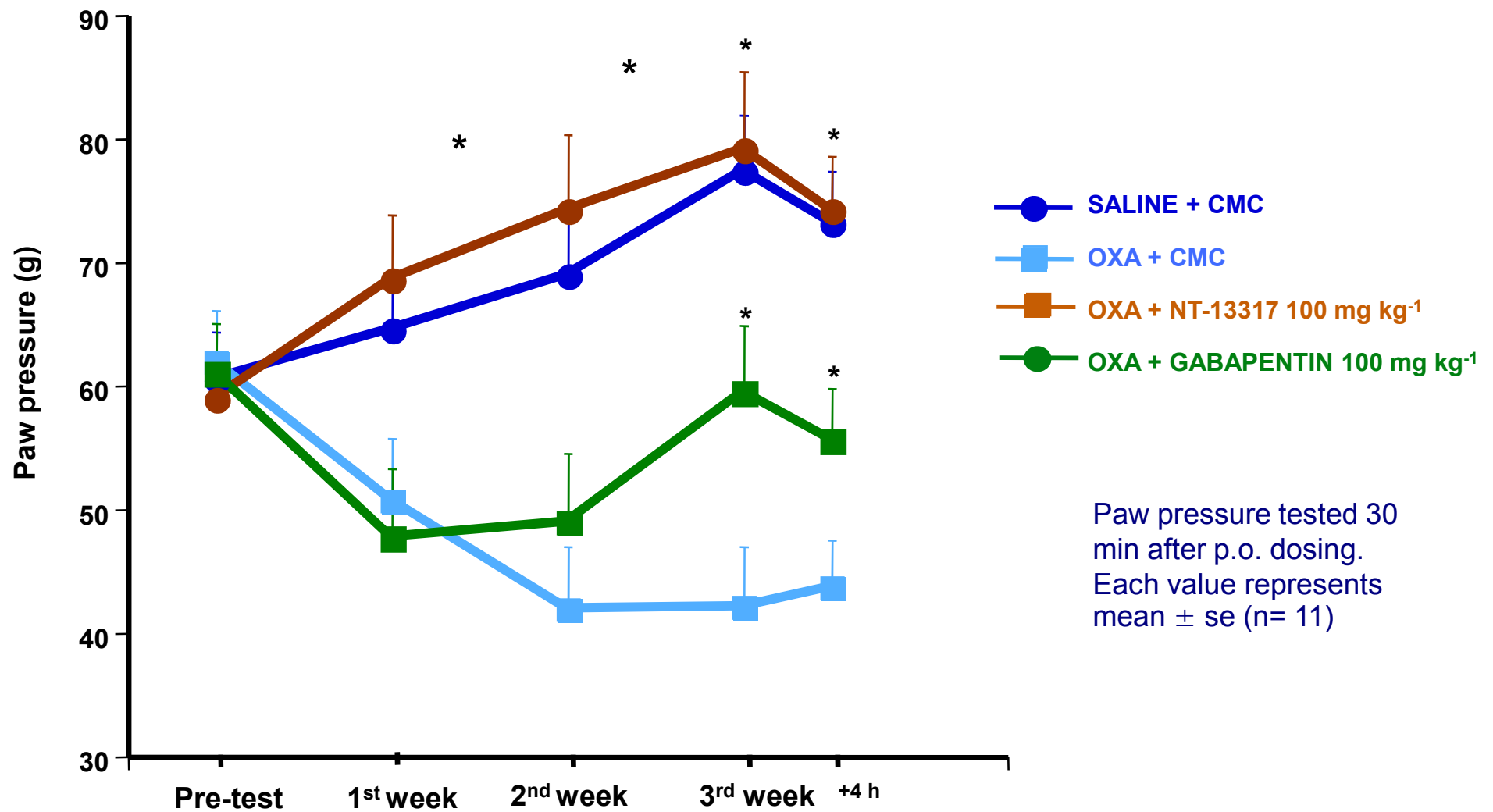
*: p < 0.01

Market Potential – NT-13317 (et al.)

Market Potential		
USA & Western World	Diabetic neuropathy	Chemotherapy-induced neuropathy
Number of Patients	~ 13 Mio	~ 1 Mio
Standard Treatment	e.g. NSAIDs, Anticonvulsants, Local anaesthetics, Antidepressants	
Current Market	up to several hundred million \$	
Market Growth	↗ ↗ ↗	↗ - ↗ ↗
Competition <small>(adjusted for probability)</small>	var. pipeline stages	var. pipeline stages
Product Revenue Potential for Neurotune*	~ € 200 Mio	~ € 600 Mio

* Product revs for Neurotune are based on single digit or low double digit royalties income from licensed product sales

NT-13317: Oxaliplatin-induced neurotoxicity in rats



* P<0.01 vs OXALIPLATIN treated rats

Paw pressure tested 30 min after p.o. dosing. Each value represents mean ± se (n= 11)

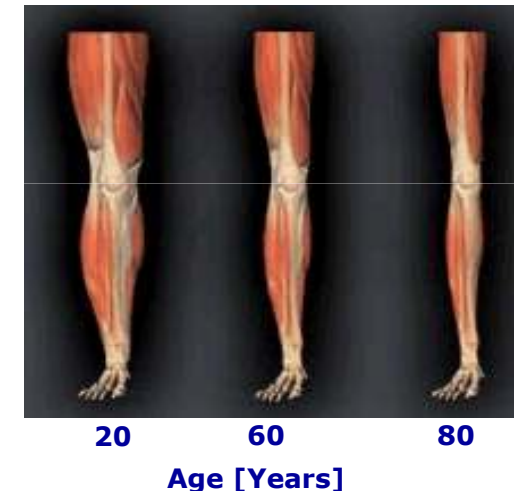
Neurotune's Pipeline

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Pain	NT-13317	Chemotherapy Induced Pain	█	█	█			
Pain	NT-13317	Diabetic Neuropathy	█	█	█			
Neuromuscular	NT-345	Sarcopenia	█	█				
Diagnostic	ELISA	Sarcopenia Biomarker	█	█	█	█	█	n.a.

Therapeutic Focus – Neuromuscular

Loss of skeletal muscle mass and function during aging

- loss of muscle fibers
- greater heterogeneity of fiber size
- reduced contractile strength
- accumulation of internal nuclei in muscle fibers
- denervation of muscle fibers
- fiber type grouping
- infiltration of fat and connective tissue



Sarcopenia (age-related muscle wasting):

- loss of motor neurons
- other factors: decreased physical activity, altered hormonal status, inflammatory mediators, altered protein turnover

Market Potential - Sarcopenia



Age [Years]

Current Status

Lead compounds

- 8 independent pharmacophores
- some are active in the nM range

Selection of preclinical candidate(s) in mid 2010

Market Potential

Europe & America	Sarcopenia
Number of Patients	~27 Mio
Economic Burden	€80-90 Bn
Current Market	None yet
Market Growth	↗ ↗ ↗
Competition	early to mid stage pipeline
Product Revenue Potential for Neurotune *	€ 2500 Mio

* Product revs for Neurotune are based on single digit or low double digit royalties income from licensed product sales

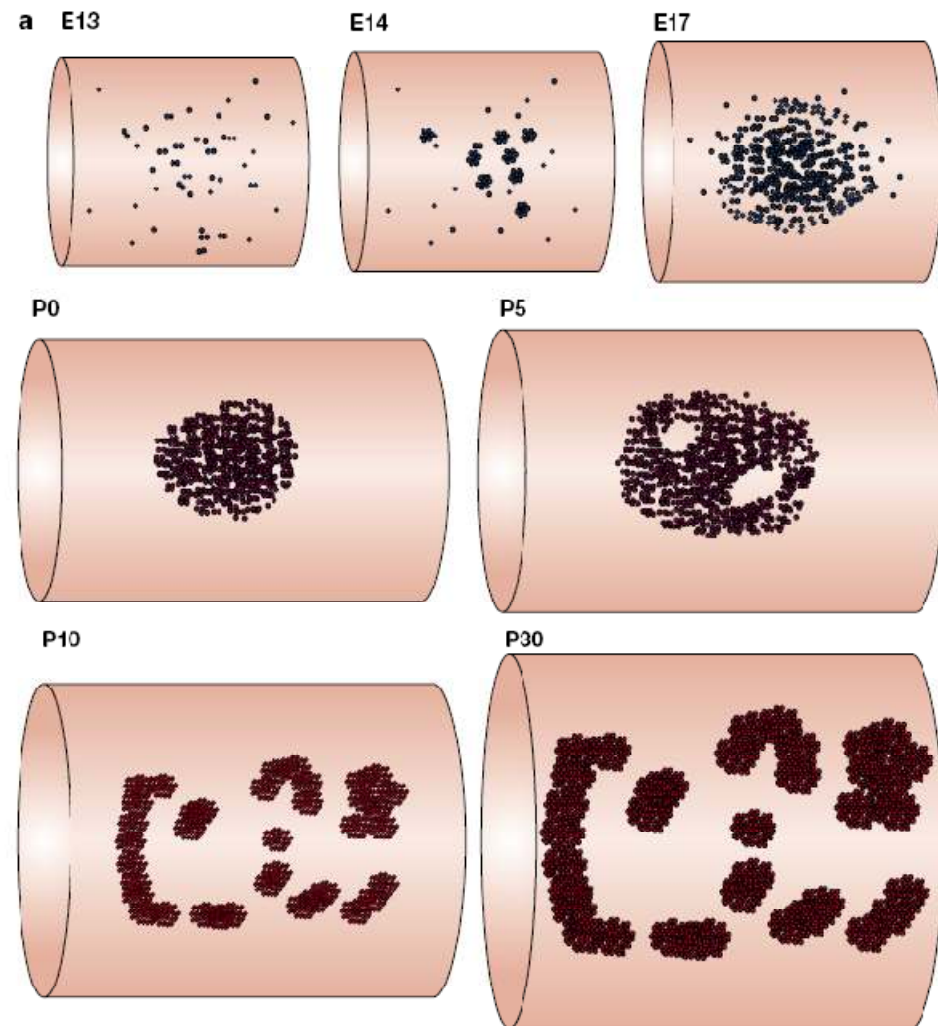
Overview Agrin

Agrin: a synaptic organizer

Development of NMJs

- insertion of a nerve terminal
- clustering of AChRs
- maturation of NMJs
- mature, pretzel like NMJs

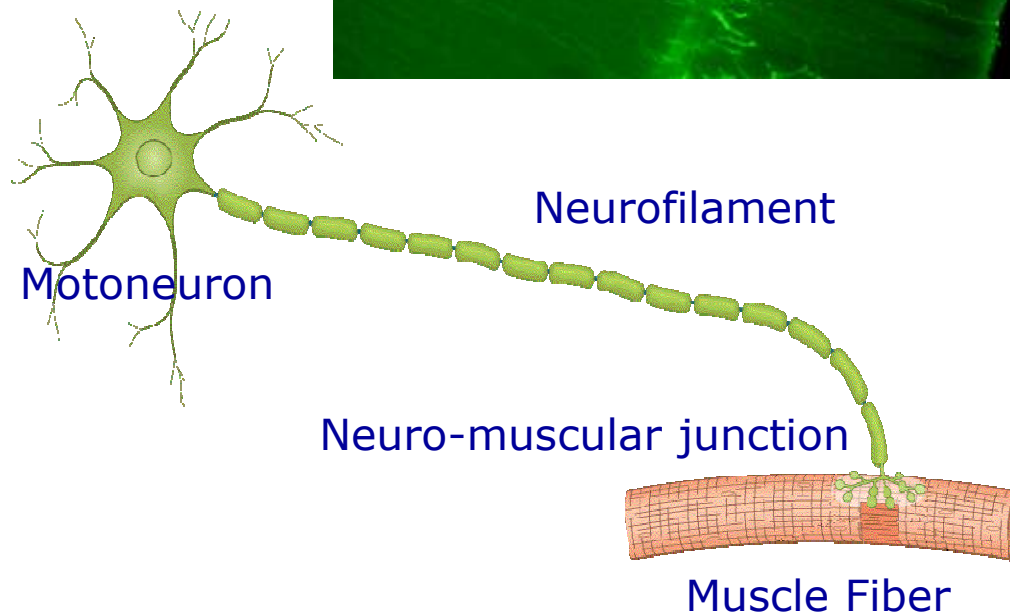
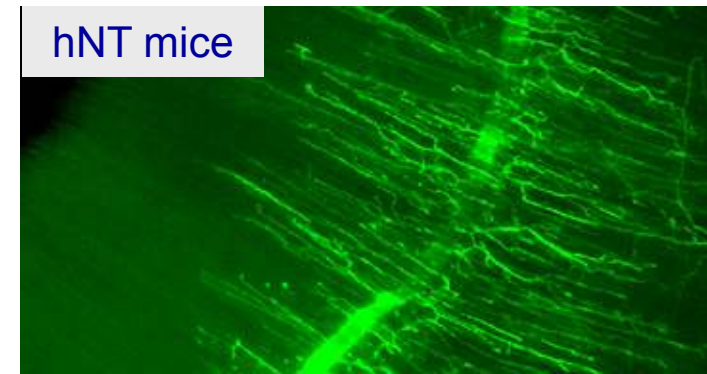
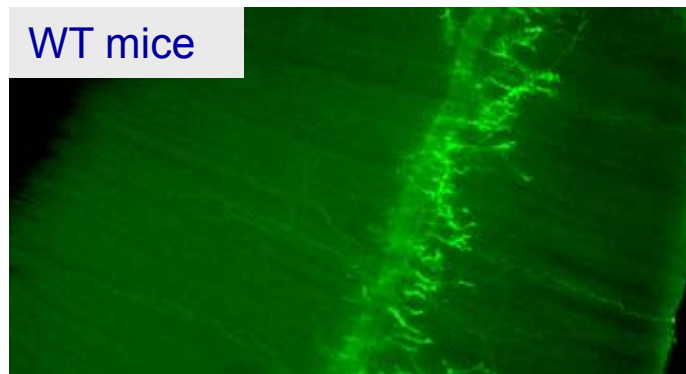
Agrin mediates clustering of AChR via MuSK and LRP4



Sanes and Lichtman, 2001, Nature reviews

Effect of Neurotrypsin overexpression

Transgenic mice were constructed that over-express Neurotrypsin under the Thy-1 promoter (Motoneurons)

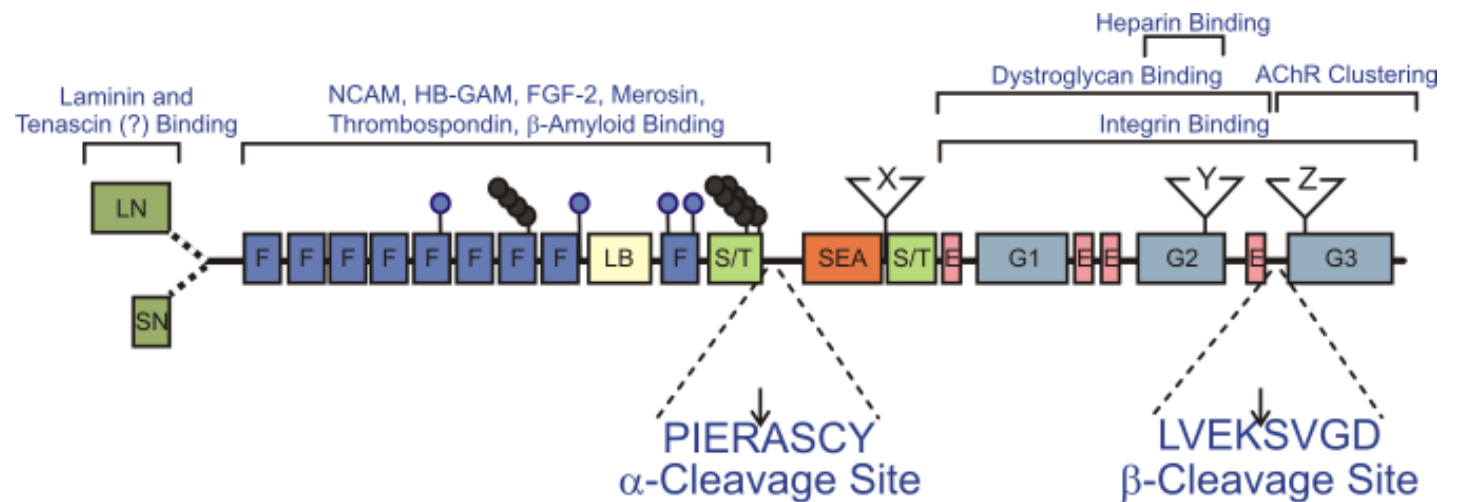
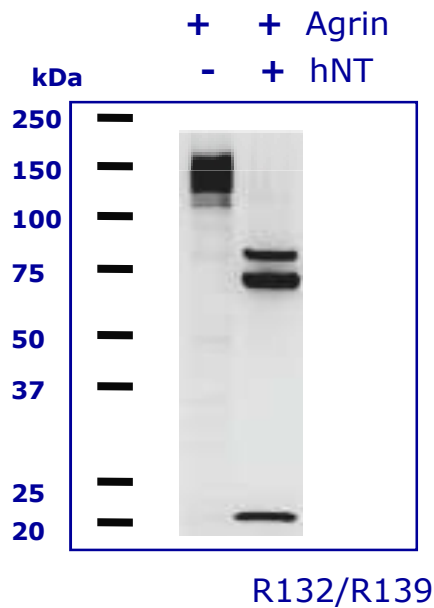


Staining of diaphragms of mice (neonatal) show elongated neurofilaments

Introduction to Agrin: structure

Agrin is cleaved by neurotrypsin *in vitro* and *in-vivo*

- Two cleavage sites for neurotrypsin are identified in agrin
- Agrin fragments are absent in Neurotrypsin-knockout mice



A) Biomarker

- ✓ Neurotune can detect in the blood an Agrin fragment (CAF) that is uniquely produced by neurotrypsin
- ✓ This may become the gold standard for diagnosis of sarcopenia

B) Treatment

- ✓ Neurotune has synthesized NCE leads that inhibit neurotrypsin (sub μM IC_{50})
- ✓ P.o.C. is sought on proprietary genetically modified Nt-OE mice (Muslik) where neurotrypsin inhibition should revert muscle weakness

Market Potential - Biomarker

ELISA Biomarker Assay



Current Status

- a Sandwich ELISA established
- Optimization/Validation ongoing
- Clinical Study in Sarcopenia Patients ongoing

Market Potential

Europe & America	Biomarker
Number of Patients	~27 Mio
Economic Burden	n.a.
Current Market	no clinical diagnostic Test
Market Growth	↗ ↗ ↗
Competition	only indirect methods
Product Revenue Potential for Neurotune*	~€180 Mio

* Product revs for Neurotune are based on single digit or low double digit royalties income from licensed product sales

Conclusions

Neurotune has focused its attention on neurologic disorders in particular neuropathic pain and neuromuscular disease such as sarcopenia.

Neuropathic Pain:

- one compound completed phase I, entering phase II, strong medical need
- another compound to enter phase I in 2010

Sarcopenia:

strong medical need, unique patent position. **Opportunity for being the undiscussed leader in the field**

Small, efficient organization located in Zurich-Schlieren and Lugano-Bioggio

„drugs for muscles and brains“

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Thank you for your interest !

Neurotune's Pipeline



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