



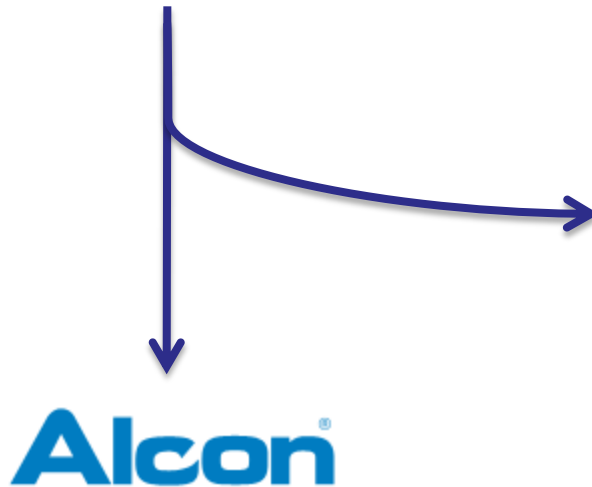
## The Future of Antibody Fragments

Swiss Equity Biotech Day  
Tuesday April 13<sup>th</sup> 2010

## Company Formation



Ophthalmic business acquired by Alcon for \$589m  
(\$150m upfront / \$439m milestones) in Sep 2009  
Other indications spun out to create NewCo



## Company Profile

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- Start-up biotech company with a validated technology and IP estate
- Focused on therapeutic application of antibody fragments
- Enabling local/topical administration across a wide range of significant clinical indications
- Legacy preclinical & clinical assets provide multiple short term business and partnering opportunities
- New product developments provide longer term commercial potential
- Established office and lab facilities in the Zürich-Schlieren biocluster
- Currently completing A Round financing

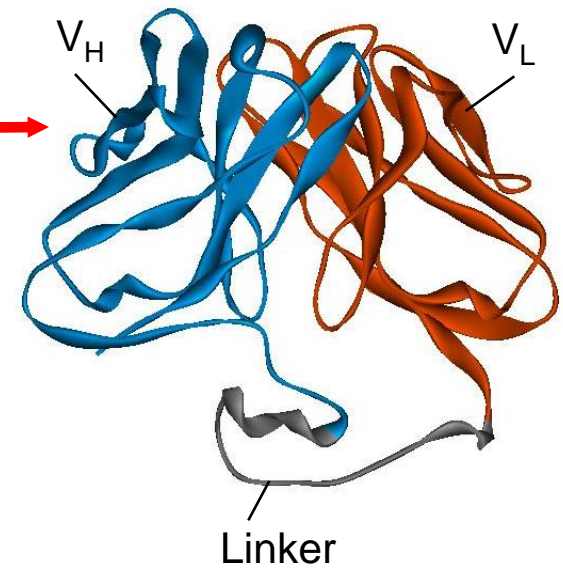
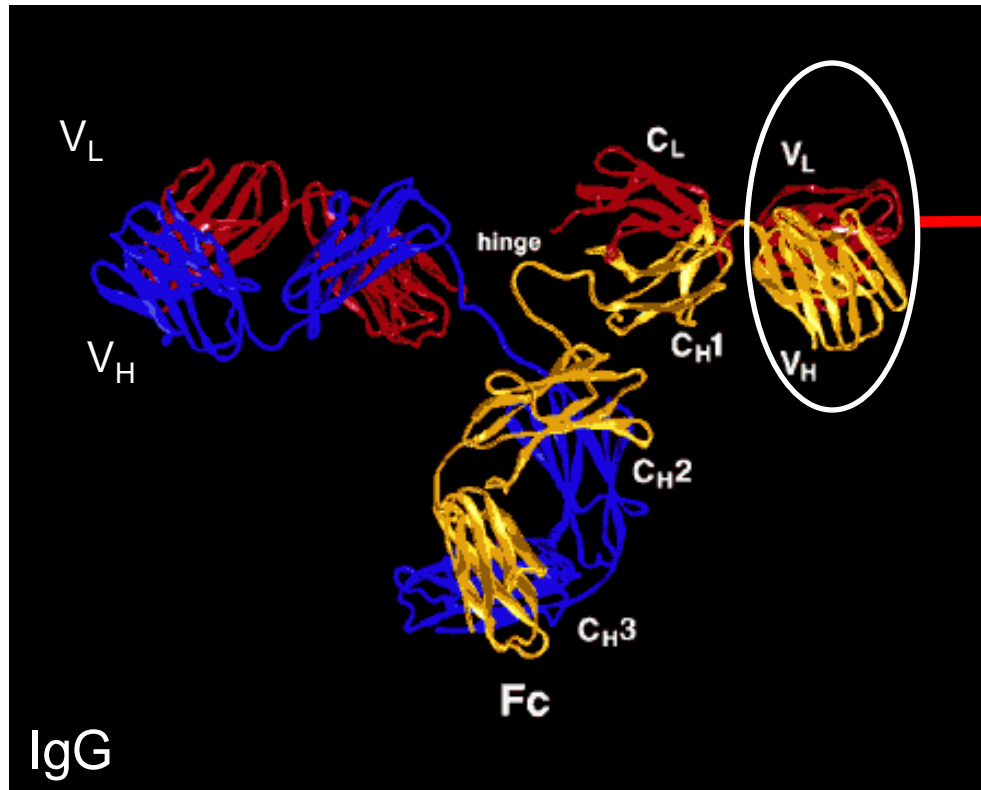
## The Future of Antibody Fragments

## Technology Platform Already Clinically Validated

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- Platform designed to deliver drug-like antibody fragments such as single chain Fv (scFv) or Fab
- Anti-TNF $\alpha$  scFv (ESBA105/DLX105) in clinical development (Phase II)
- Preclinical and clinical safety established – following topical administration in the eye by ESBATech
- Anti-inflammatory efficacy recorded in eye disease by ESBATech
- Osteoarthritis phase II study using intra-articular injections ongoing
- All supporting the compartment-based approach for local/topical administration of single chain antibody fragments
- Important differential advantages over full chain IgG antibodies

# Antibody Fragments



scFv    (=1/6 of an IgG)  
 Fab     (=1/3 of an IgG)

## What Makes Delenex's Technology Attractive?

### Advantages of small antibody fragments vs IgG:

- Excellent tissue penetration → expands application range
- Absence of Fc-effector functions → no detrimental CDC/ADCC
- Ease of engineering → other formats easily accessible
- Lowered production costs → clearly a must for biologics
- Reduced systemic load → fewer systemic side effects

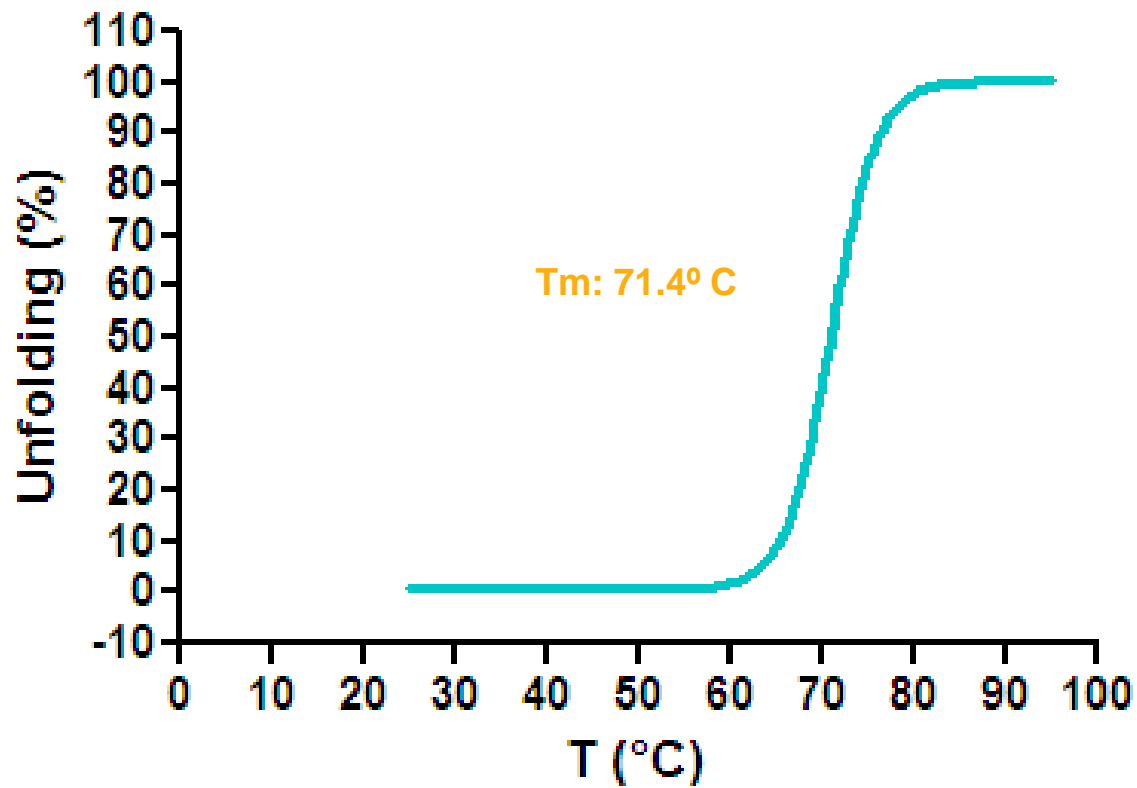
### Perceived "limitations" of antibody fragments:

- Poor stability
- Erratic production yields
- Tendency to aggregate → immunogenicity

Successfully addressed  
by Delenex's technology

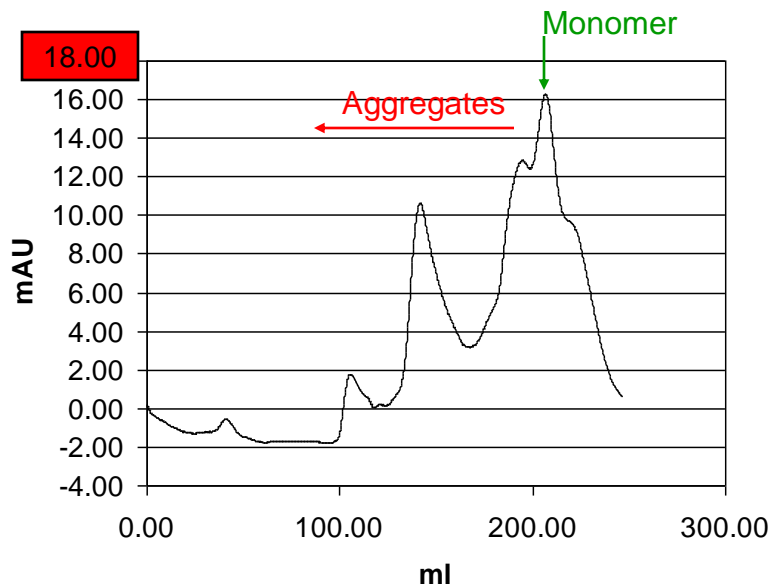
## Excellent Stability

### Thermal unfolding of DLX 105



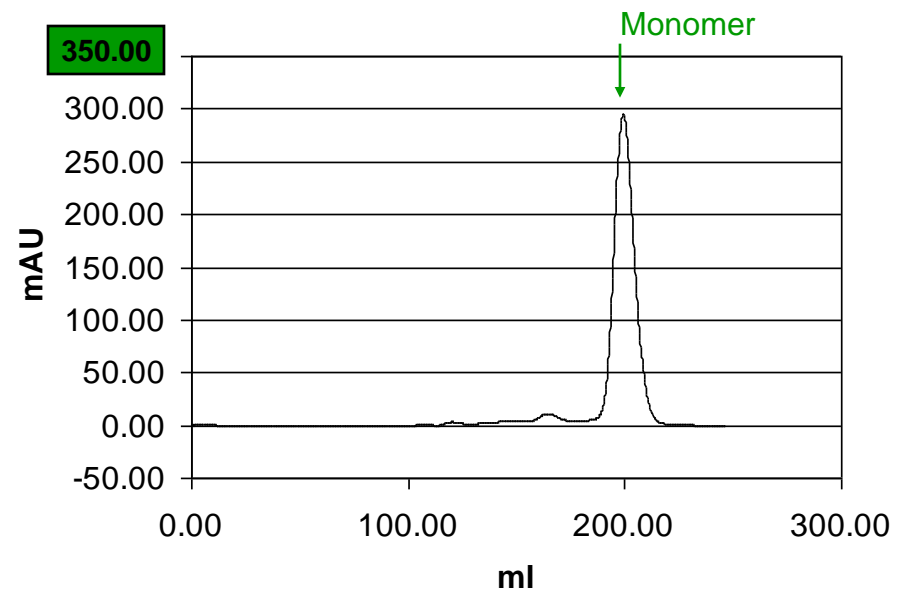
## Excellent Purity and Yield

“Standard” scFv



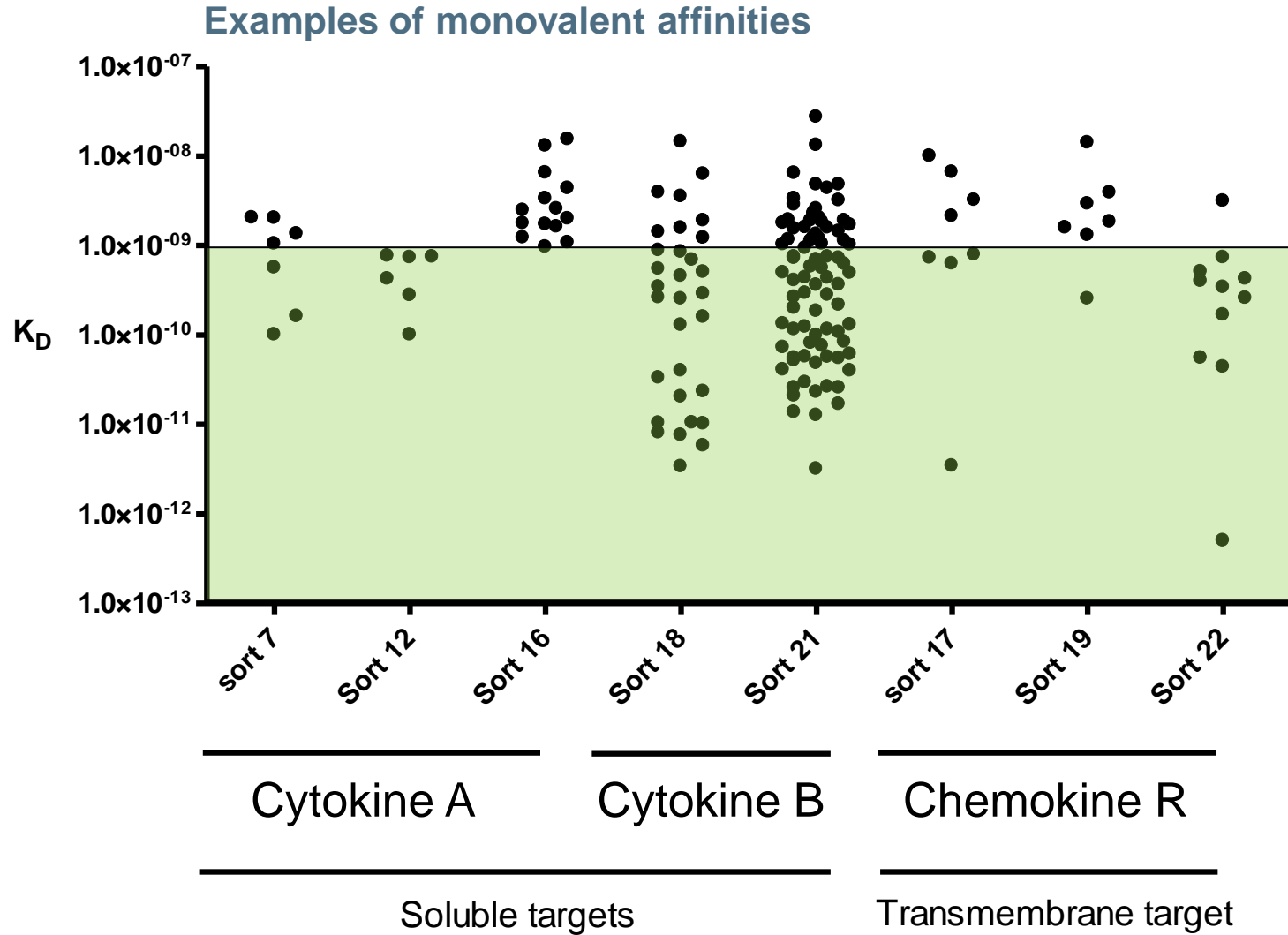
- Low yield
- High aggregation

Delenex scFv

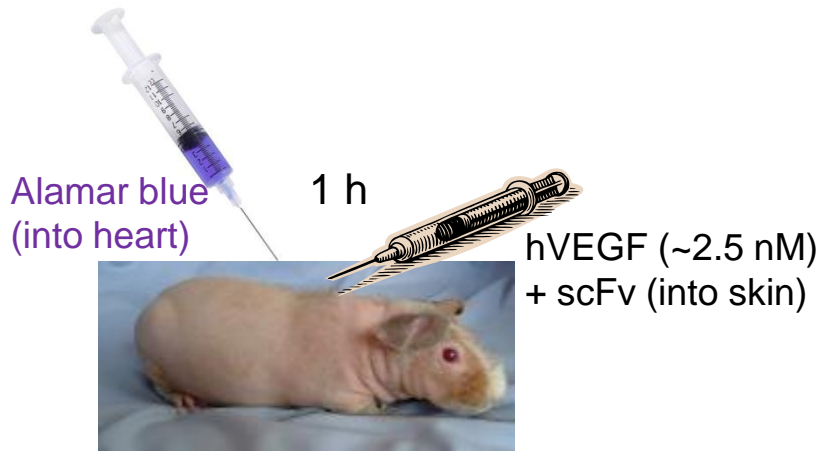


- High yield
- Low aggregation

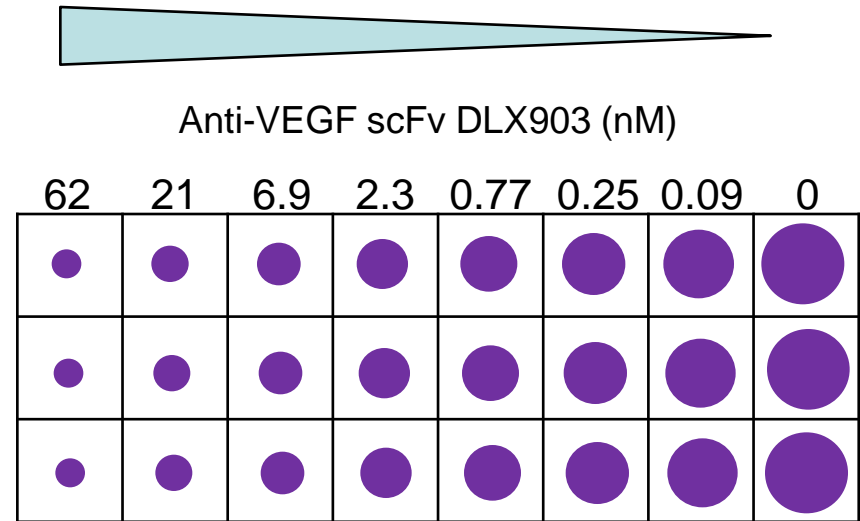
# Excellent Affinity



# Excellent Potency: e.g. Vascular Leakage Model



Nude guinea pig



Preparation of skin 1 h after treatment  
 Photography with incident and transmitted light  
 Calculation of area of dye leakage and calculation of the dose-area relation

→ IC<sub>50</sub> of 3-4 nM

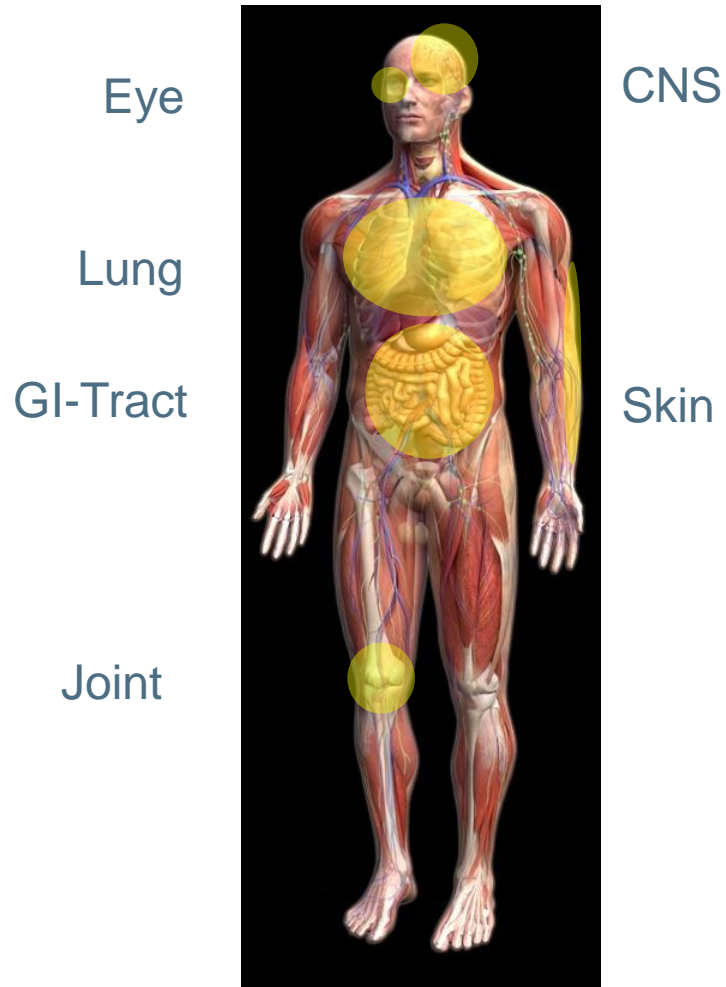
# Legacy Asset Technology & Pipeline

- Exclusive non-royalty licence to ESBATech’s technology platform
- Pipeline

Programme	Discovery Leads	Development Lead	Clinics
DLX105 (anti-TNF $\alpha$ ) in OA	Phase I/IIa		
DLX903 (anti-VEGF)			
DLX521 (anti-ALK)			
DLX212der. (anti- $\beta$ amyloid)			
2 <sup>nd</sup> generation anti-TNF $\alpha$			
2 <sup>nd</sup> generation anti-VEGF			

- Plus novel target/ indication developments

## Examples of Compartment-based Therapeutics



# Examples of Compartment-based Therapeutics



Eye

Lung

GI-Tract

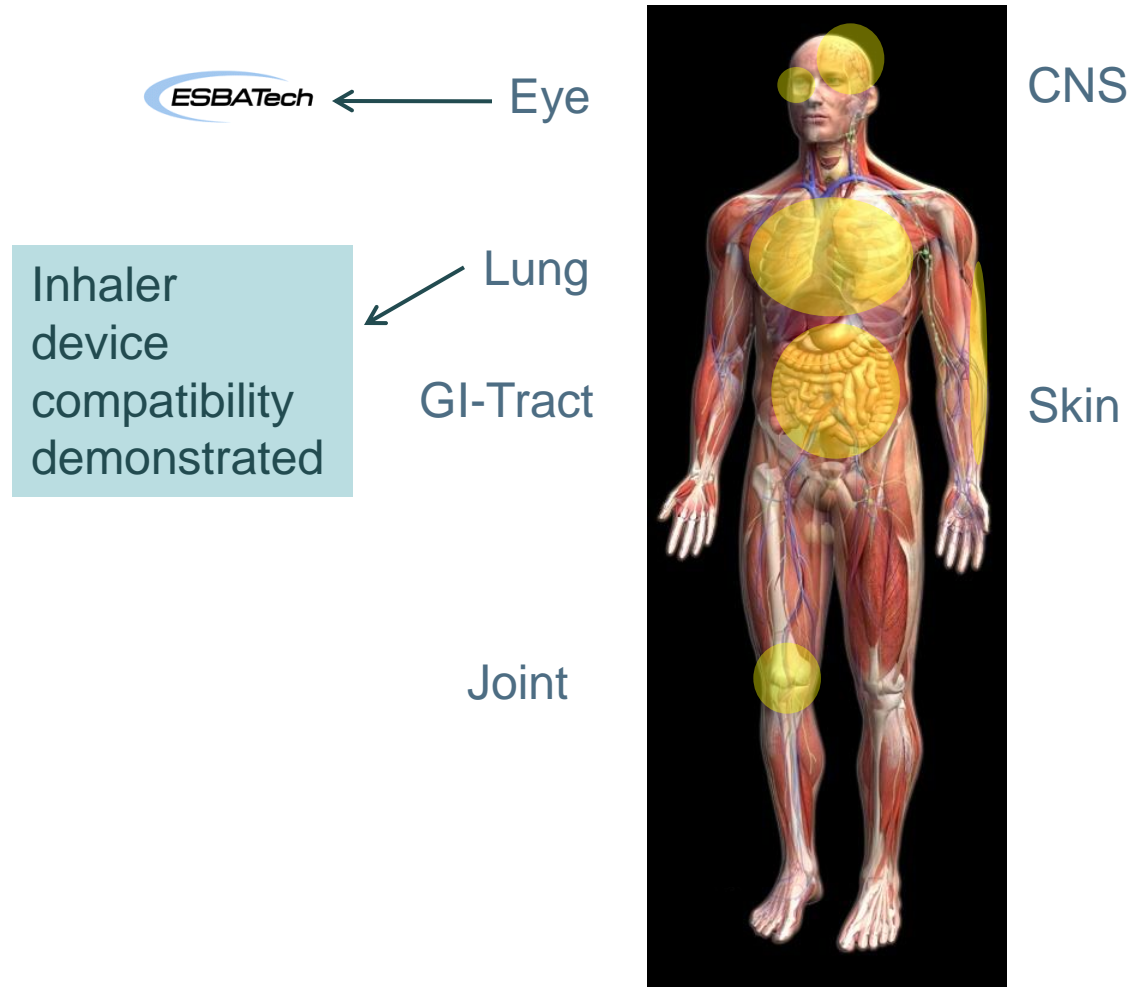
Joint



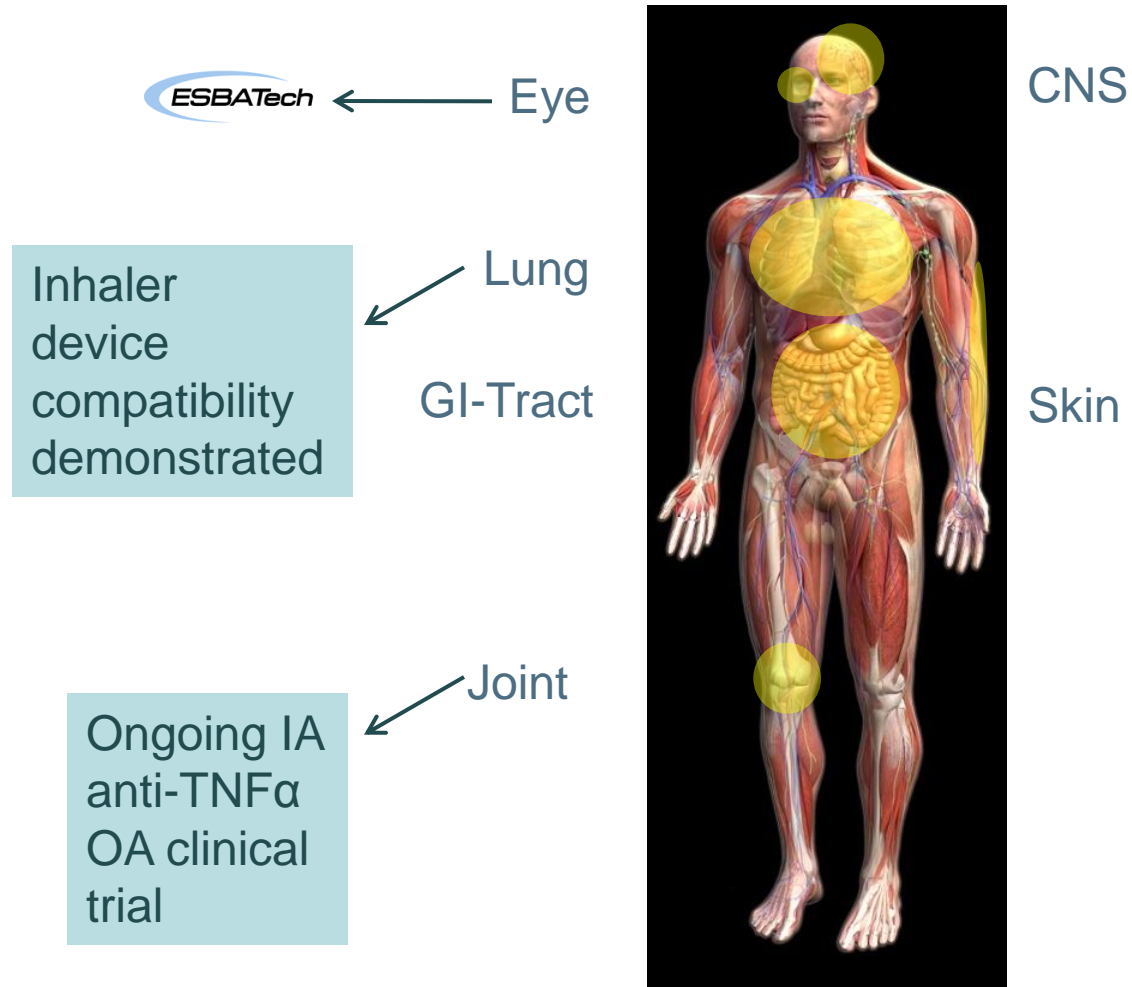
CNS

Skin

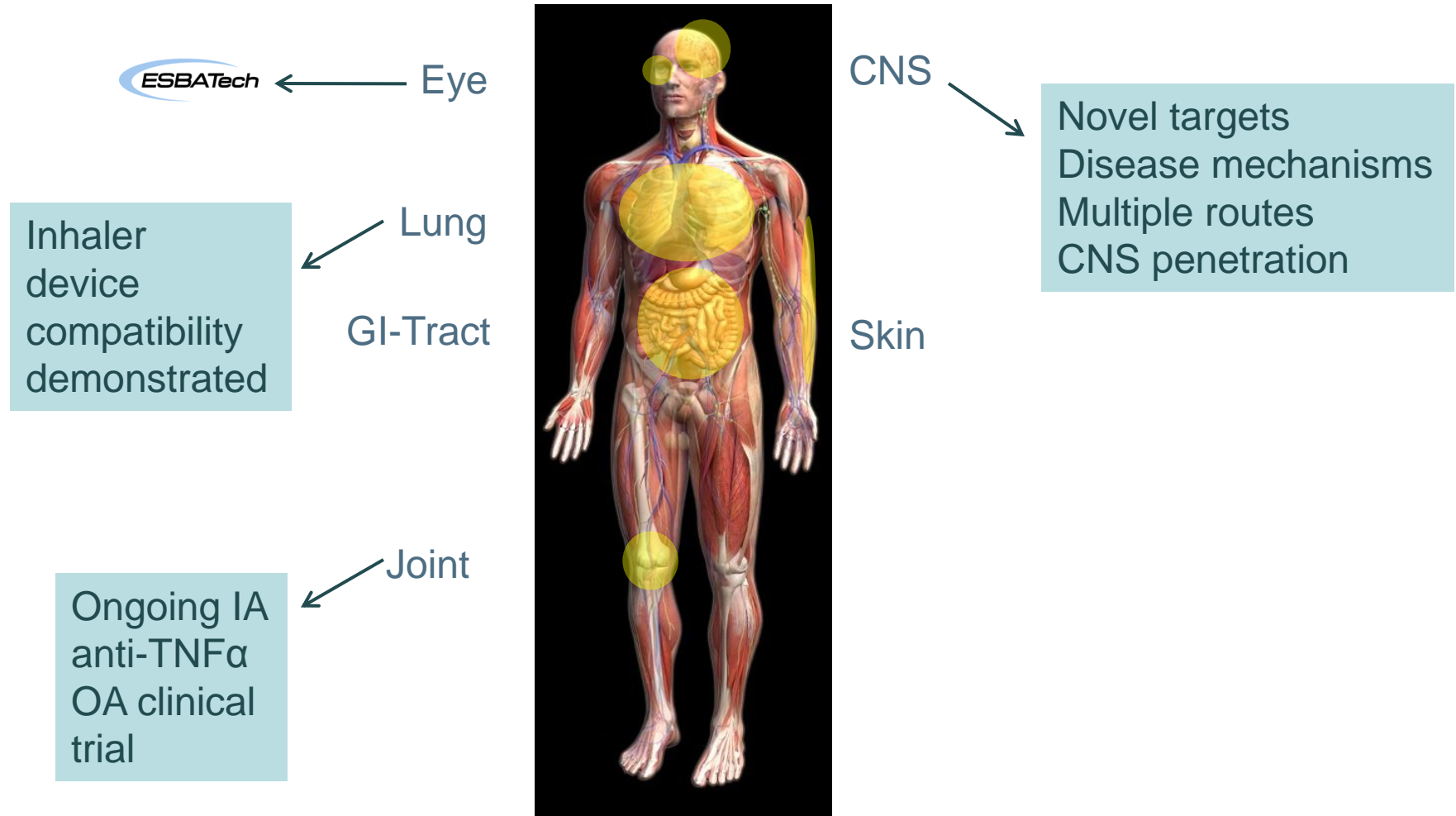
# Examples of Compartment-based Therapeutics



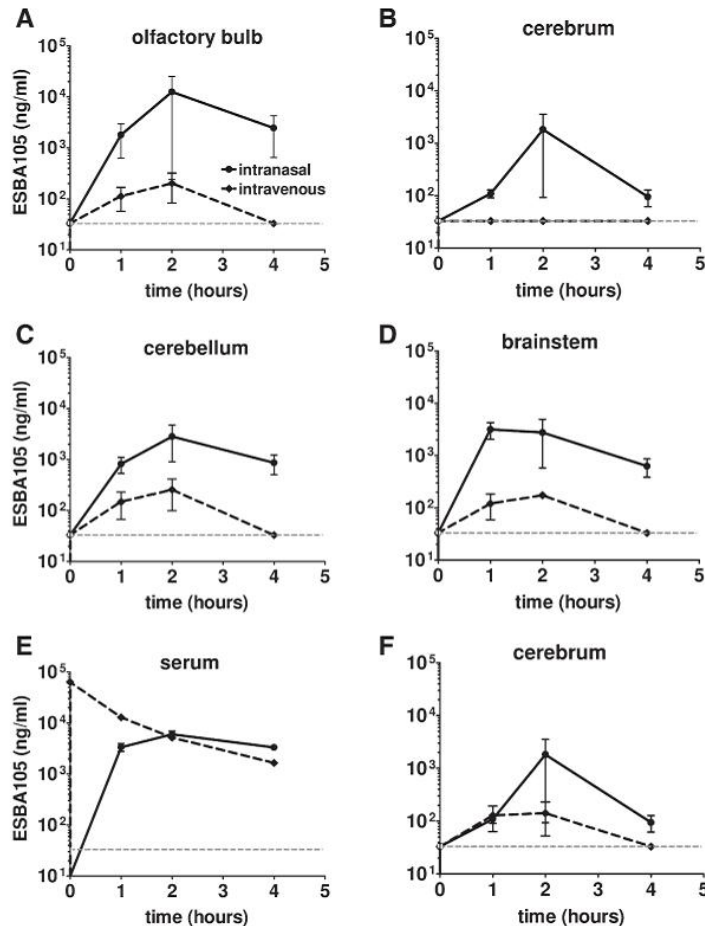
# Examples of Compartment-based Therapeutics



# Examples of Compartment-based Therapeutics



# Experimental Evidence for scFv CNS Penetration



Studied in mice

A-E: 400 µg i.n. vs 40 µg i.v.

F: 400 µg i.n. vs 400 µg i.v.

Higher CNS levels with i.n.

Fig. 2. Comparison of ESBA105 concentrations in different brain regions and serum after intranasal or intravenous administration. A–E: administration of 400 µg (intranasal) or 40 µg (intravenous) of ESBA105. Clearly higher ESBA105 concentrations were measured after intranasal delivery in all analyzed tissues. Following intravenous injection ESBA105 levels were very similar in all tissues except the cerebrum while after intranasal delivery a clear preference for the olfactory bulb was observed. In serum (E)  $C_{max}$  was significantly lower after intranasal administration. F: Comparison of ESBA105 levels in the cerebrum following intranasal or intravenous administrations of an equal dose of 400 µg ESBA105. The administration of the same dose resulted in higher  $C_{max}$  and exposure (AUC) levels in the cerebrum following intranasal administration. Mean values  $\pm$  SEM are given ( $n=4$  for intranasal;  $n=2$  for intravenous). Dashed line: LOQ.

Intranasal delivery of ESBA105, a TNF- $\alpha$ -inhibitory scFv antibody fragment to the brain. *J Neuroimmunol* 215(1-2) (2009) 65-72

## Business Development/Partnering

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- Business plan combines new target/ indication developments
- Initially focus on CNS disorders
- Legacy assets available for partnering
- Collaboration opportunities around technology platform
- A Round financing complete 2Q10

## Investors

Clarus Ventures



SV Life Sciences



HBM Partners



BioMedinvest



VI Partners





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