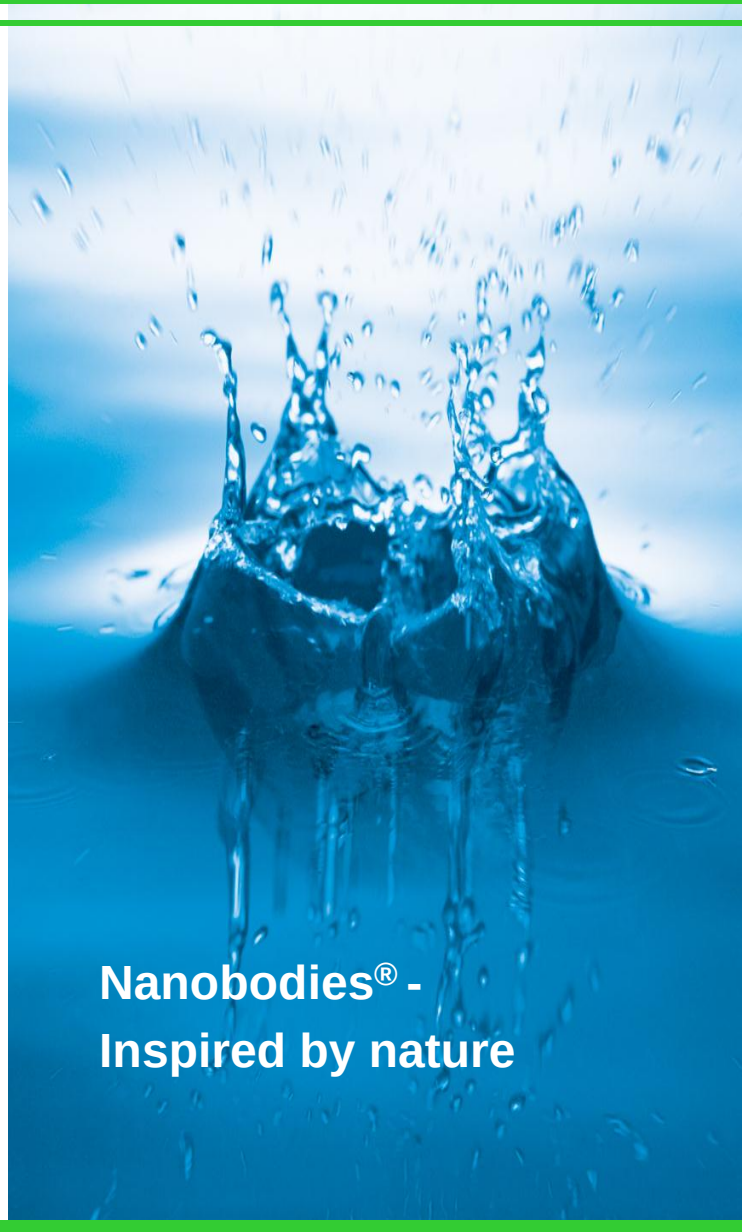
Nanobodies® – creating better medicines

Jefferies 2014 Global Healthcare Conference

London – 19th November 2014

Dr Edwin Moses - CEO



Forward looking statements

Certain statements, beliefs and opinions in this presentation are forward-looking, which reflect the Company or, as appropriate, the Company directors' current expectations and projections about future events. By their nature, forward-looking statements involve a number of risks, uncertainties and assumptions that could cause actual results or events to differ materially from those expressed or implied by the forward-looking statements. These risks, uncertainties and assumptions could adversely affect the outcome and financial effects of the plans and events described herein. A multitude of factors including, but not limited to, changes in demand, competition and technology, can cause actual events, performance or results to differ significantly from any anticipated development. Forward looking statements contained in this presentation regarding past trends or activities should not be taken as a representation that such trends or activities will continue in the future. As a result, the Company expressly disclaims any obligation or undertaking to release any update or revisions to any forward-looking statements in this presentation as a result of any change in expectations or any change in events, conditions, assumptions or circumstances on which these forward-looking statements are based. Neither the Company nor its advisers or representatives nor any of its parent or subsidiary undertakings or any such person's officers or employees guarantees that the assumptions underlying such forward-looking statements are free from errors nor does either accept any responsibility for the future accuracy of the forward-looking statements contained in this presentation or the actual occurrence of the forecasted developments. You should not place undue reliance on forward-looking statements, which speak only as of the date of this presentation.

Corporate snapshot

Corporate	• Drug discovery and development company in Ghent, Belgium • >300 employees
Technology	• Pioneer in next generation biological drugs – Nanobodies® • >500 granted and pending patents
Products	• >30 programmes – six at the clinical development stage • Three clinical proof-of-concepts (POC) • >10 new clinical programmes anticipated over the next 3 years
Partners	• AbbVie, Boehringer Ingelheim, Eddingpharm, Merck & Co, Merck Serono and Novartis
Financials	• >€200M in cash expected end 2014



Three-pronged business strategy

Fully-funded programmes with milestones and royalties

- approx. 20 programmes
- 5 discovery and 5 licensing deals
- >€285M in cash received
- Approximately €3bn in future milestones plus royalties

abbvie
Boehringer Ingelheim
EDDING 亿腾 PHARM
MERCK
MERCK SERONO
NOVARTIS



Co-discovery/co-development deals

- 3 co-co deals
- 3 programmes
- 50:50 ownership and option to convert into licensing deals
- >€50M in cash received

MERCK SERONO
Ablynx

Wholly-owned product pipeline

- approximately 9 programmes
- aim to retain the optionality to partner if and when appropriate

Ablynx

Pipeline of proprietary and partnered programmes

	Therapeutic area	Product name	Target	Discovery	Pre-clinical	Phase I	Phase II	Phase III	Filing
Fully owned	Haematology	caplacizumab	vWF						
	Inflammation/ Immunology/Infection	Various							
	Oncology	Various							
	Respiratory	ALX-0171	RSV						
		Various							
	Ocular	NA							
CoCo	Inflammation/ Immunology	NA							
		NA							
		NA							
Fully partnered	Oncology/Neurology Immunology	Various							
	Immunology/ Inflammation	ALX-0761	IL-17F/IL-17A						
		ALX-0061	IL-6R						
		ozoralizumab	TNFα						
	Bone disorders	ALX-0141	RANKL						
	Neurology	NA							
	Oncology	ALX-0751							
		NA							
	Respiratory	NA							
	Various	NA	CXCR2						
		NA							
	Immuno-oncology	Various							

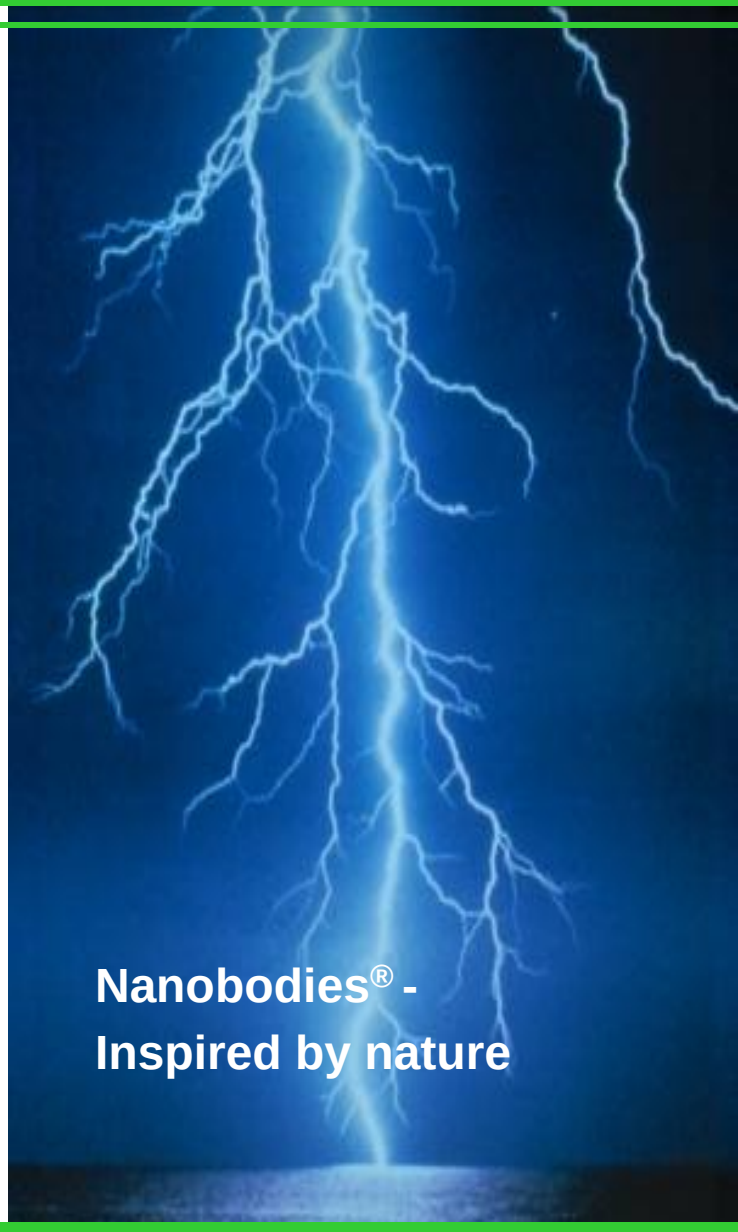
Greater China

Greater China

Validated targets (clinic)
1st in class

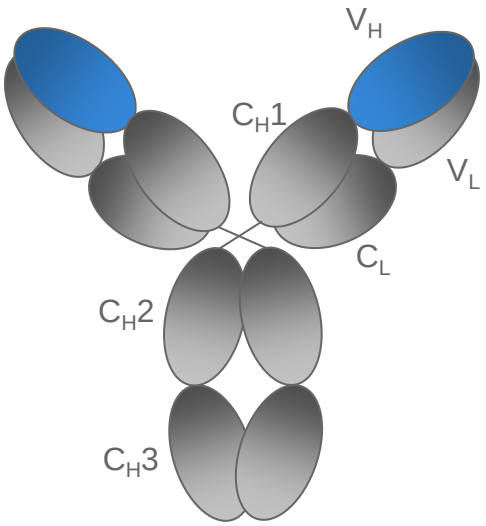
Ablynx

Unique technology

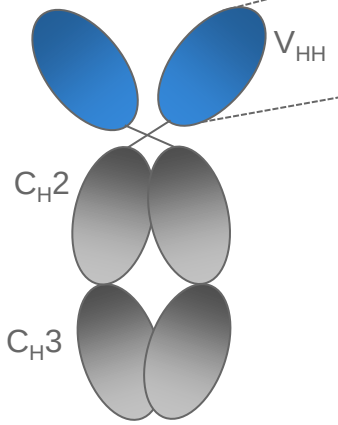


Nanobodies – derived from heavy-chain only antibodies

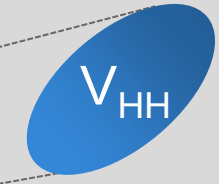
- *Camelid* heavy-chain only antibodies are stable and fully functional
- Nanobodies represent the next generation of antibody-derived biologics



Conventional antibodies



Heavy chain only antibodies



12-15kDa

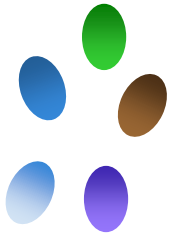
Ablynx's Nanobody

- small
- robust
- sequence homology comparable to humanised/human mAbs
- easily linked together
- nano- to picomolar affinities
- intractable targets
- multiple administration routes
- manufacturing in microbial cells

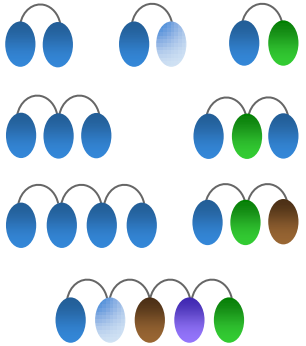
Ablynx' platform – rapid generation of high quality biologics



Immunise llamas with antigen or use synthetic library



Wide range of highly diverse Nanobodies with 0.1-10nM affinities



Formatted* Nanobodies ready for *in vivo* testing

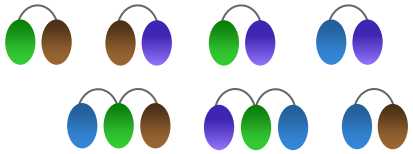
~12-18 months

* glycine-serine linkers from C-terminus to N-terminus

Ablynx's unique biologics platform – competitive advantages

Mix and match

e.g. targeting different checkpoint inhibitors with a single Nanobody construct

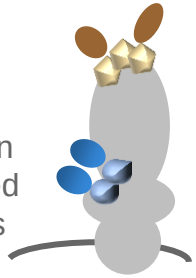


Challenging and intractable targets

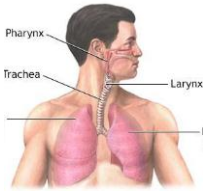


Nanobodies against ion channels and GPCRs

Nanobodies can reach conserved cryptic epitopes



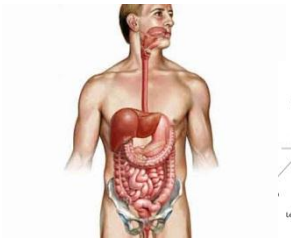
Alternative delivery routes



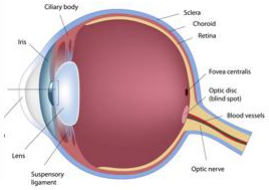
Inhalation



Needle-free



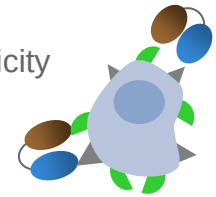
Oral-to-topical



Ocular

Cell / tissue-homing

Cell specificity

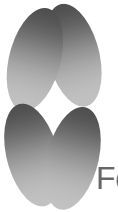


Immune cell retargeting

Tissue-specific targeting

Customised half-life extension

Weeks/days/hours



Fc



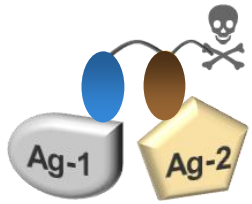
Albumin-binding Nanobody



PEG

Cell killing

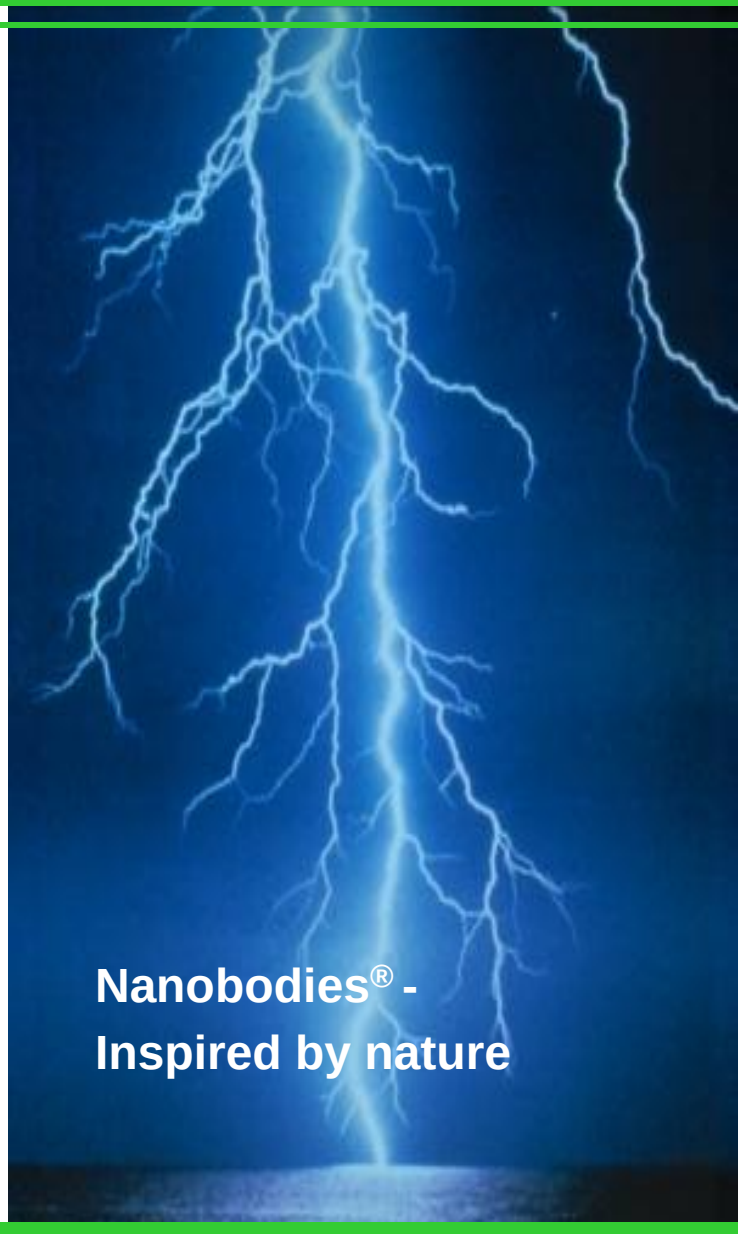




Nanobody drug conjugates

Ablynx

Products in the clinic



Leading programmes in the clinic

Proprietary			
Programme (target)	**Indication**	**Key differentiating features**	**Stage**
Caplacizumab (vWF) 	Thrombotic thrombocytopenic purpura	First-in-class orphan drug Novel mode of action Inhibition of microthrombi formation	Start Phase III mid-2015: results end 2017
ALX-0171 (RSV) 	Respiratory syncytial virus infection	First-in-class addressing high unmet need Inhaled Nb delivered to infection site Highly potent trivalent construct	Start POC infant study Q4 2014: results Q3 2015

Partnered				
Programme (target)	**Indication**	**Partner**	**Key differentiating features**	**Stage**
ALX-0061 (IL-6R) 	RA, SLE	abbvie	Best-in-class opportunity Monovalent interaction; strong affinity and preferential binding to soluble IL-6R	Start Phase IIb/a (RA; SLE) in 2015 RA results 2016
ALX-0761 (IL-17A/F) 	Psoriasis	MERCK SERONO	Potent neutralisation of both IL-17A and IL-17F POC achieved in primate CIA* model	Phase Ib ongoing in psoriasis patients: results 2016

* Collagen induced arthritis model

caplacizumab – anti-vWF

- First-in-class bivalent Nanobody with Orphan Drug Status
- Developed for the treatment of acquired thrombotic thrombocytopenic purpura (TTP)
- Phase III study to start in 2015



Acquired TTP – significant unmet medical need



Healthy person

Severe fatigue, headache, coma, abdominal pain, weakness, nausea, bizarre behaviour, vertigo, seizures

Sudden onset



Emergency

Daily PEX in hospital until recovery of platelet count

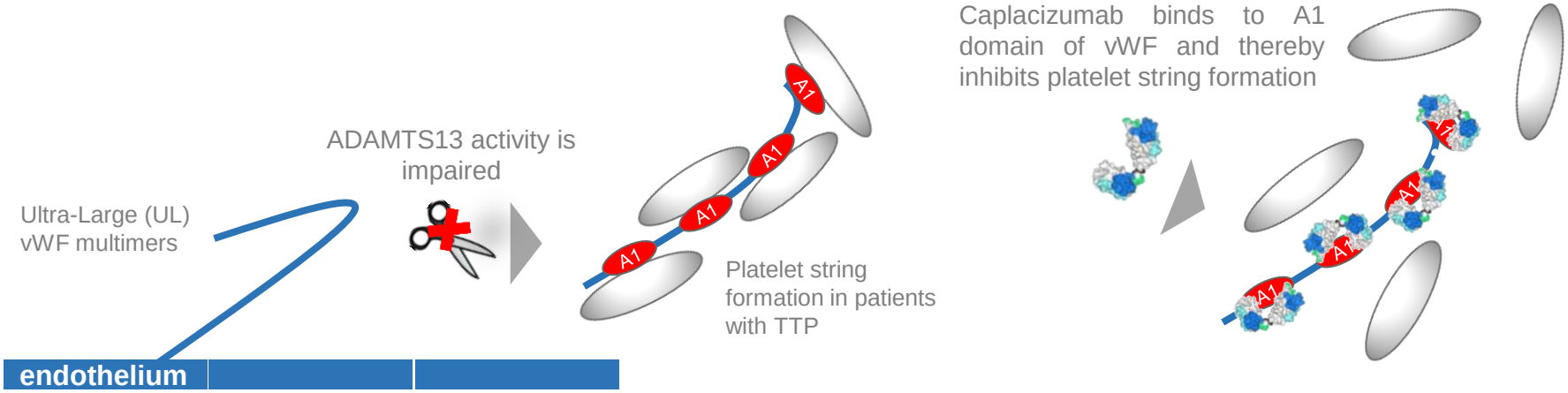
- Potentially life threatening rare disorder of the blood coagulation system
  - incidence of 11.3 per million[2]
  - ~10,000 acute events annually in US and Europe
- Extensive microscopic thrombi formed in small blood vessels throughout the body
- High unmet medical need
  - mortality remains high (10-20%)[1] and ~ 36% of patients have relapses[2]
  - major morbidities after first TTP episode such as neurocognitive impairment
  - no approved medicinal product for treatment available
  - standard of care is plasma exchange (PEX) plus immune suppressants

[1] Scully et al, Br J Haematology, 2012

[2] George et al, 2008

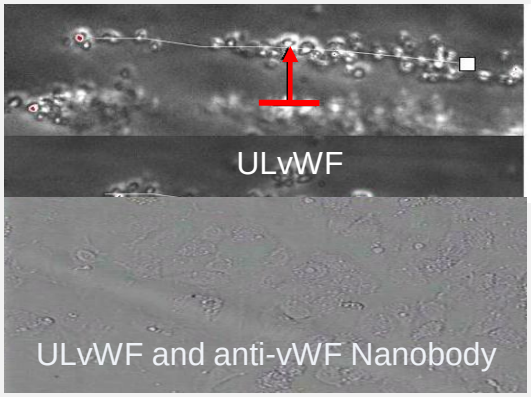
Caplacizumab – prevents formation of microthrombi in TTP

caplacizumab blocks the platelet – ULvWF interaction



***Ex vivo* assay for platelet string formation**

Fluorescence microscopy image of platelets adhering to UL-vWF in plasma of TTP patients



Without treatment, fluorescently labelled platelets adhere to UL-vWF, observed as string-like structures

Caplacizumab inhibits the formation of platelet strings and potentially the associated microvascular thrombi in many organs

Caplacizumab – strong Phase II clinical proof-of-concept

Primary endpoint

- patients treated with caplacizumab achieved confirmed platelet normalisation at more than twice the rate of the group treated with placebo
- this effect was statistically significant (p = 0.013)

Secondary endpoint

- 71% less patients with an exacerbation
- 76% more patients in complete remission

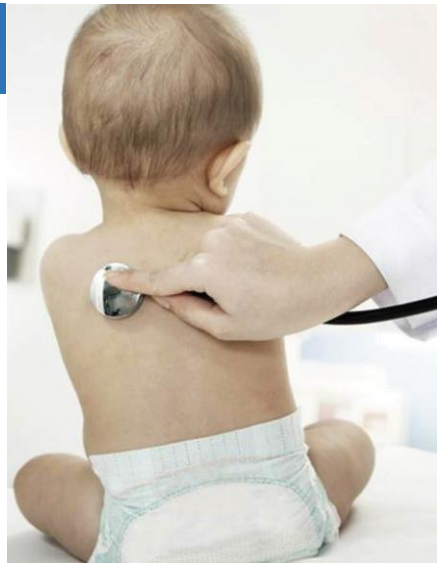
Safety

- no deaths in the caplacizumab arm compared to 2 deaths in the placebo arm
- increased bleeding tendency, which is believed to be manageable
- overall, caplacizumab has an acceptable safety profile

In 2015, caplacizumab will be the first Nanobody to enter Phase III clinical development

ALX-0171 – anti-RSV

- First-in-class trivalent Nanobody for the treatment of respiratory syncytial virus (RSV) infection in infants
- Delivered through inhalation
- First-in-infant Phase IIa to start in Q4 2014



RSV infection in infants – high unmet medical need

- Leading cause of infant hospitalisation and primary viral cause of infant death
  - ~300,000 children* (< 5 years) hospitalised per year in 7 major markets[1,2]
  - increased medical cost in the 1st year following RSV infection[3]
  - prolonged wheezing and risk for asthma development[4]
  - ~3.5% mortality rate in hospitalised high-risk infants (~400 deaths/year in the US)
- No widely accepted drug available to treat RSV infections
  - Synagis® used as prophylactic in high-risk pre-term infants only ($1.1bn sales in 2013)





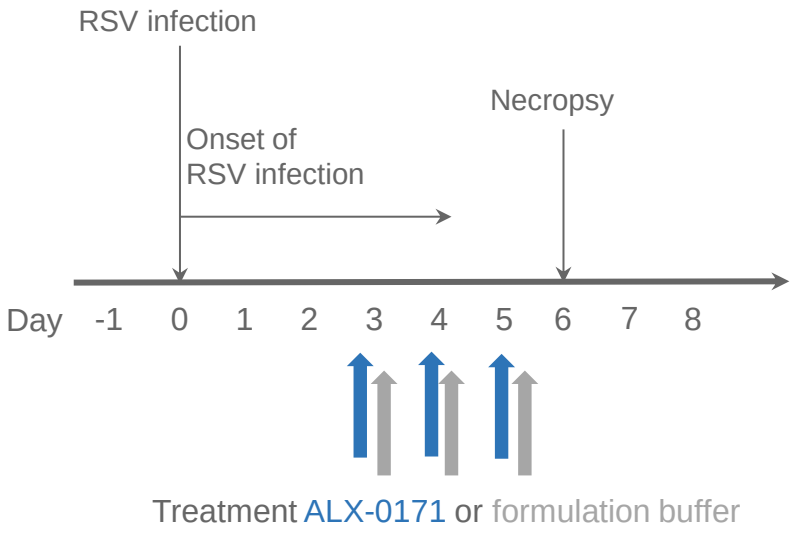

Evolves to distressing symptoms → **Symptomatic treatment including inhaled corticosteroids & bronchodilator** → **8-20% hospitalised**

* Extrapolation based on estimated US prevalence

[1] Hall et al, NEJM ,2009; [2] Lee et al, Human Vaccines 2005; [3]Shi et al, J Med Econ, 2011; [4] Sigurs et al, Thorax, 2010; Krishnamoorthy et al, Nature Medicine 2012; [5]Krilov et al, BMC Pediatrics 2014

ALX-0171 – neonatal RSV lamb model to assess efficacy

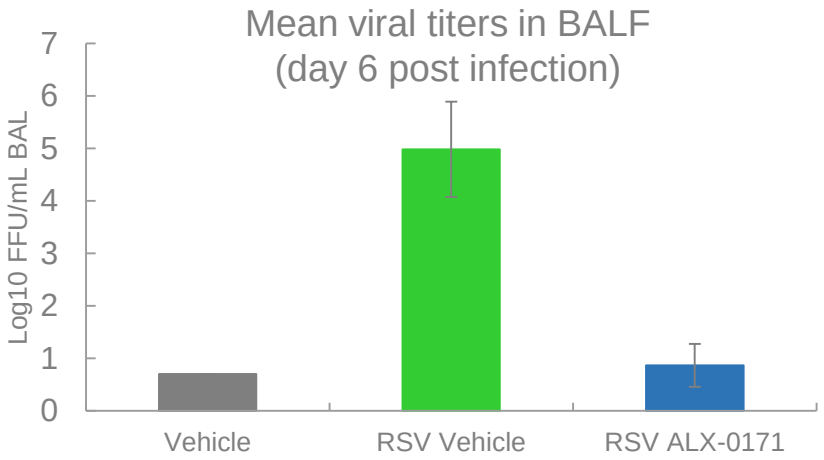
- Study design – 5 animals per group
  - mock-infected / ALX-0171 treated (vehicle)
  - RSV infected / not treated
  - RSV infected / ALX-0171 treated

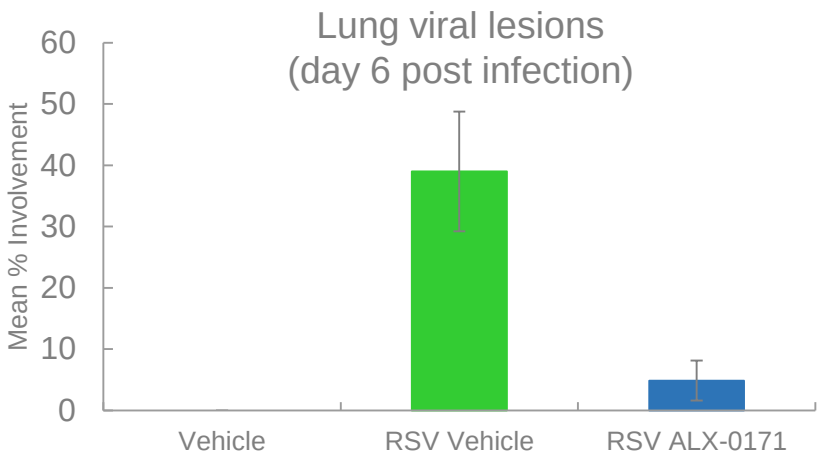


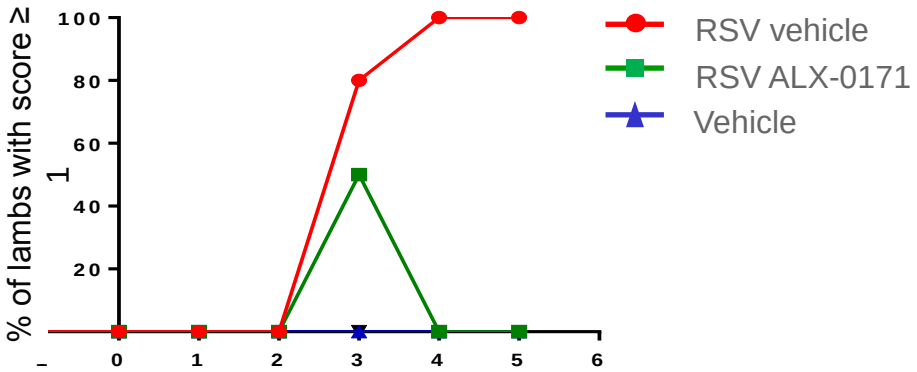
Suitability of neonatal lamb model compared with human challenge model

- Lambs develop lower respiratory tract infection which is associated with general malaise and specific lung pathology (comparable to infants)
- Treatment at peak of viral load on day 3 post infection (symptoms and lung pathology are already clearly present)
- Lambs develop clinical symptoms such as wheezing (comparable to infants)

ALX-0171 – proof-of-concept achieved in RSV lamb model







Daily inhalation of ALX-0171 for 3 consecutive days

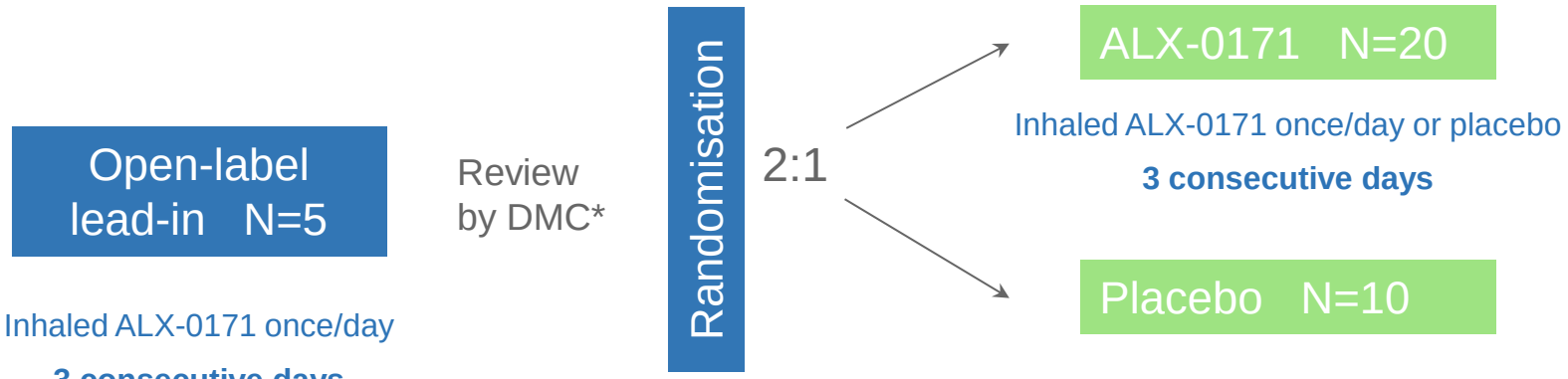
- markedly reduced viral titres and lung lesions
- markedly reduced symptoms of illness

ALX-0171 – successful Phase I inhalation studies in adults

- September 2012 – Phase I first-in-human study
  - 60 healthy volunteers
  - single–ascending dose and multiple dose up to 210 mg inhaled twice daily for 5 days
  - well tolerated, with no clinically relevant adverse events or effects on lung function
- May 2014 – Phase I safety study in adults with hyper-reactive airways
  - 24 subjects
  - single-ascending dose and multiple dose part up to 200 mg inhaled daily for five days
  - some cases of mild bronchoconstriction which could be immediately reversed
- May 2014 – Phase I PK study
  - 41 healthy volunteers
  - single and multiple dose of 200 mg inhaled daily for 5 days and single dose of 0.3 mg/kg iv
  - local half-life of ALX-0171 is approximately 20 hours, confirming potential for once-daily dosing

ALX-0171 – first-in-infant inhalation study

- Infants aged 5 to <24 months who are hospitalised for RSV infection
- 24 EU centres and additional centres Southern Hemisphere (risk mitigation)
- Custom-developed infant inhalation device (vibrating mesh)



Primary endpoint:
Safety and tolerability of ALX-0171

Secondary endpoints:
Clinical effect (feeding, respiratory rate, wheezing, coughing, general appearance)
PD (viral load), PK (ALX-0171 systemic concentration) and immunogenicity

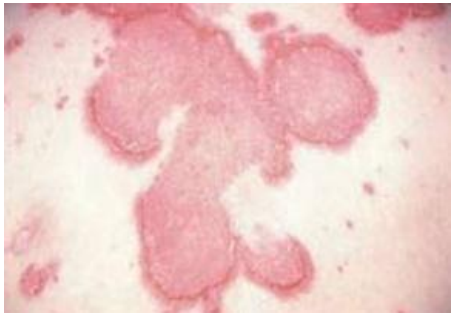
Start Q4 2014
Results expected H2 2015

* Data monitoring committee

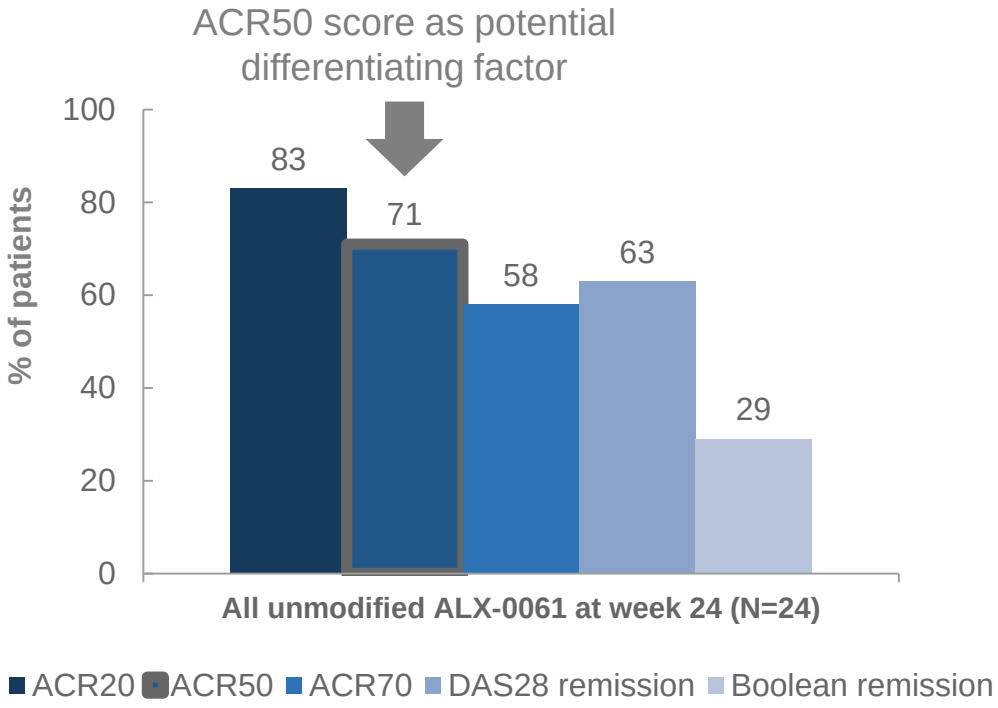
ALX-0061 – anti-IL-6R

- Monovalent half-life extended Nanobody
- Best-in-class potential for the treatment of auto-immune disorders
- Global licensing agreement with AbbVie
- Phase IIb studies in RA and Phase IIa study in SLE to start in 2015





ALX-0061 – compelling Phase IIa results in RA patients



- Treatment was highly efficacious and was well tolerated at all doses
- No increase of adverse events upon extension of treatment
- No anti-drugs antibodies were reported

ALX-0061 – global licensing deal with AbbVie

Economics

- $175M upfront at signing in September 2013
- $665M total potential milestones plus double-digit royalties

Ablynx

- perform and fund Phase I study with subcutaneous formulation (started 2014)
- perform and fund Phase II studies in RA and SLE (start 2015)

AbbVie

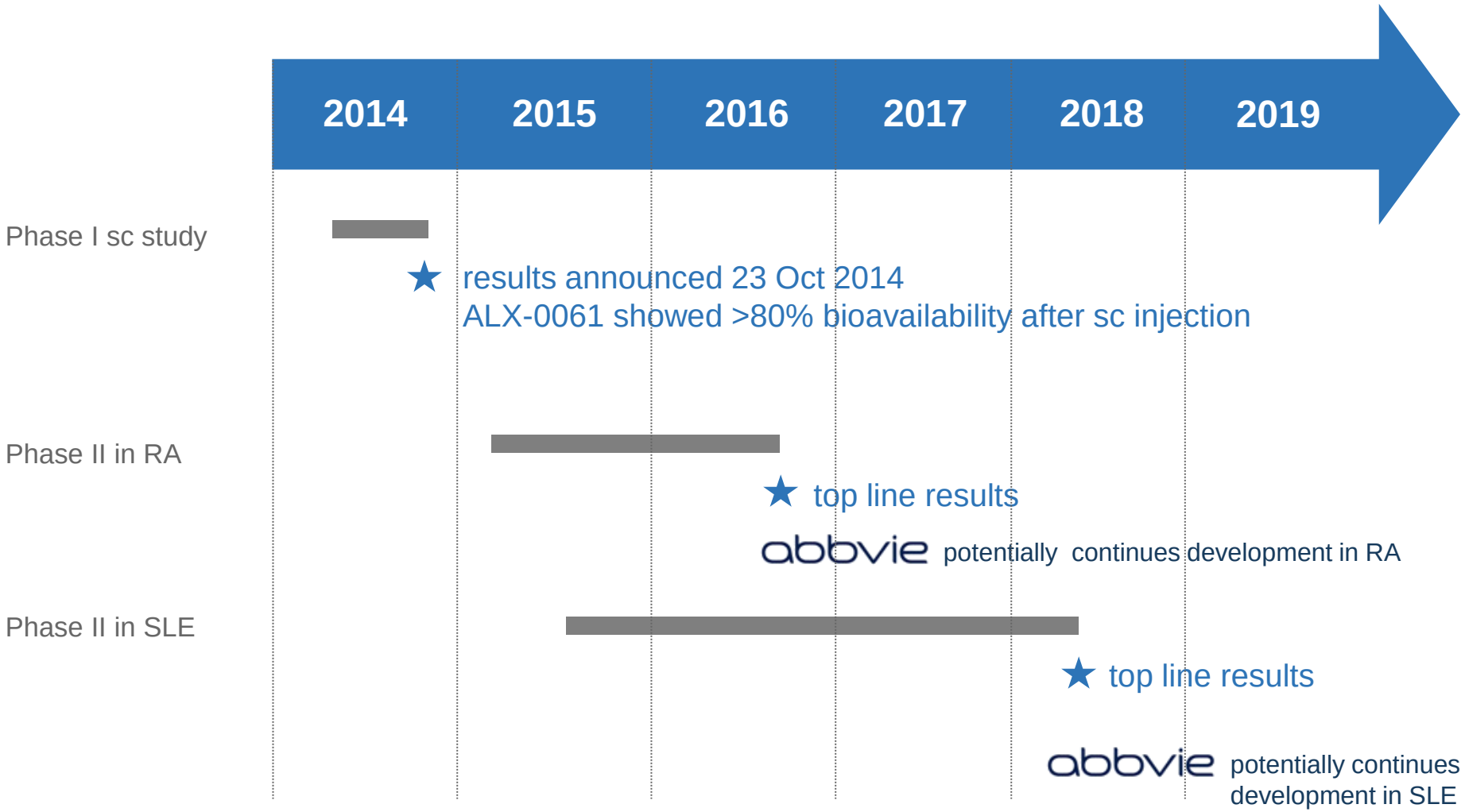
- pay a fee for each indication if they exercise the right to license ALX-0061 after completion of the Phase II studies
- responsible for Phase III development and registration

Commercialisation

- AbbVie is responsible for global commercialisation
- Ablynx retains option to co-promote ALX-0061 in the Benelux

RA: rheumatoid arthritis SLE: systemic lupus erythematosus

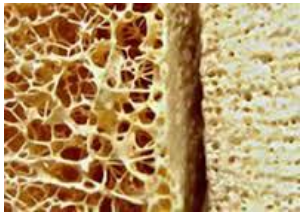
ALX-0061 – key data points in clinical development



Additional clinical assets

- ALX-0761 – anti-IL-17A/F licensed to Merck Serono
- ALX-0141 – anti-RANKL licensed to Eddingpharma (rights in Greater China)
- Ozoralizumab – anti-TNFα licensed to Eddingpharm (rights in Greater China)

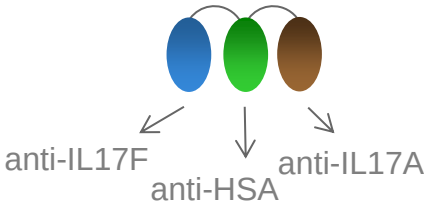




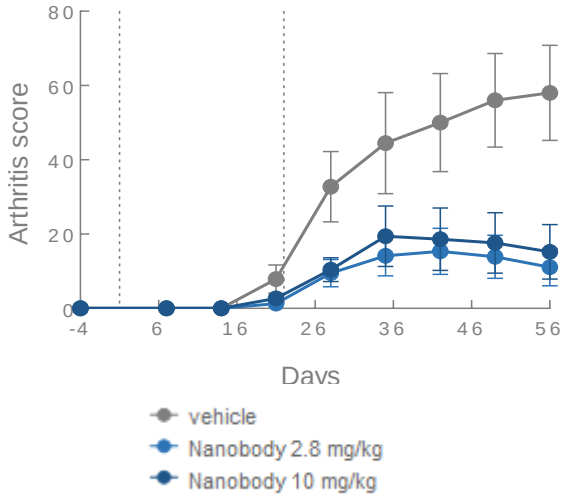


ALX-0761 – bi-specific Nanobody in psoriasis

- ALX-0761 blocks both IL-17A and IL-17F (involved in inflammation); binds human serum albumin for improved PK
- Targeting both IL-17A and IL-17F could be more effective in blocking the inflammatory response
  - IL-17F forms homodimer and heterodimers with IL-17A
  - IL-17F exerts similar *in vitro* biological activity as IL-17A but is secreted by different cell types
- Development by Merck Serono
  - completed Phase I SAD study in healthy volunteers
  - ongoing Phase Ib study in patients with psoriasis (results expected in 2016)
- Secukinumab (Novartis) most advanced anti-IL-17A in development (registration phase) with estimated peak sales of ~$500M*



Proof-of-concept achieved in primate collagen induced arthritis model[1]

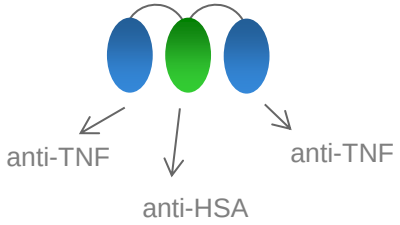


*Analysts estimates 2014
[1]Poster available on Ablynx website: R&D>pipeline

Clinical stage products licensed in China

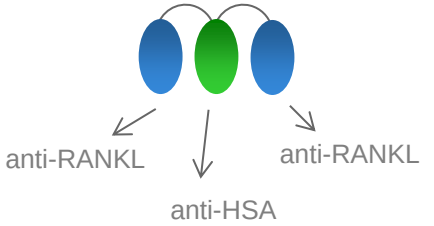
Total pharma market in China expected to grow to $163bn by 2017[1]

Anti-TNFα – ozoralizumab – inflammation



- Phase II proof-of-concept achieved in patients with RA (Pfizer)
- Ablynx regained worldwide rights to anti-TNFα Nanobodies from Pfizer
- exclusively licensed to Eddingpharm in Greater China in Aug 2014
  - €2M upfront; development and commercial milestones; up to 20% royalties
- pre-clinical study in China on-going
- Ablynx will have access to the clinical data generated by Eddingpharm

Anti-RANKL – ALX-0141 – bone disorders

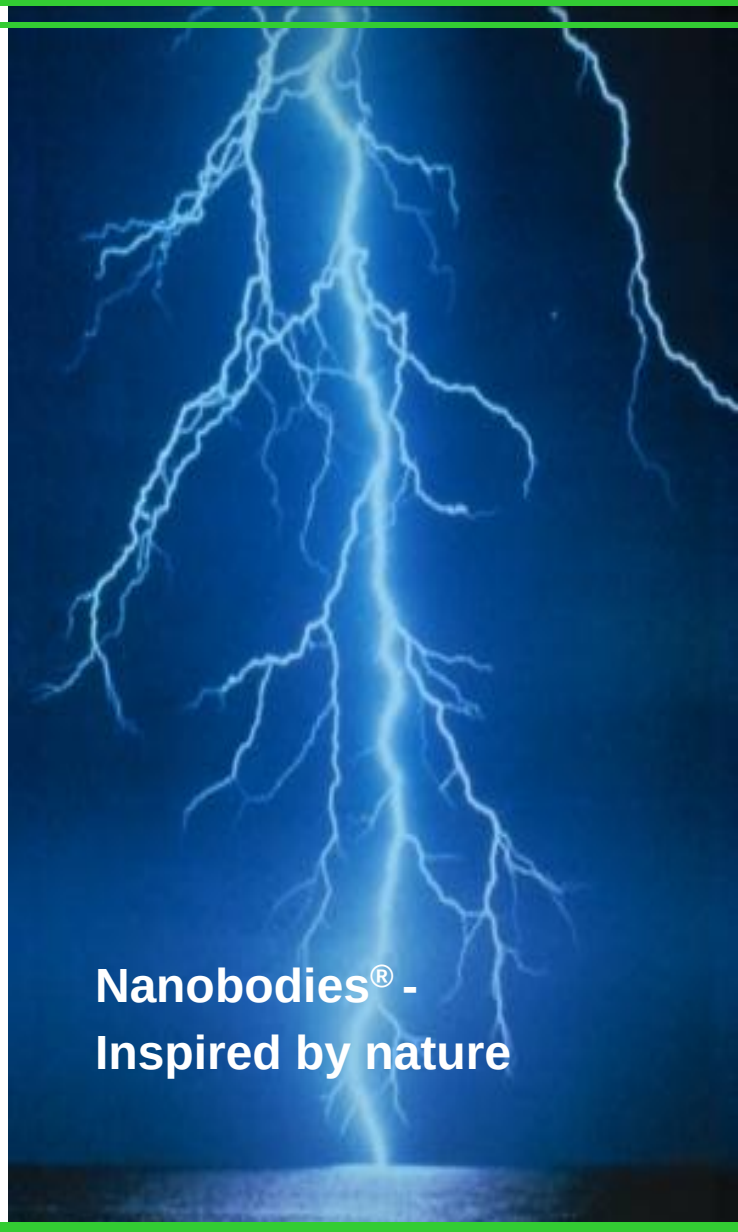


- Phase I study successfully completed (Ablynx)
- exclusively licensed to Eddingpharm in Greater China in Oct 2013
  - €2M upfront; commercial milestones; up to 20% royalties
- pre-clinical study in China currently on-going
- Ablynx will have access to the clinical data generated by Eddingpharm

[1] Espicom

Ablynx

Partnerships



Broad platform exploitation and cash generation

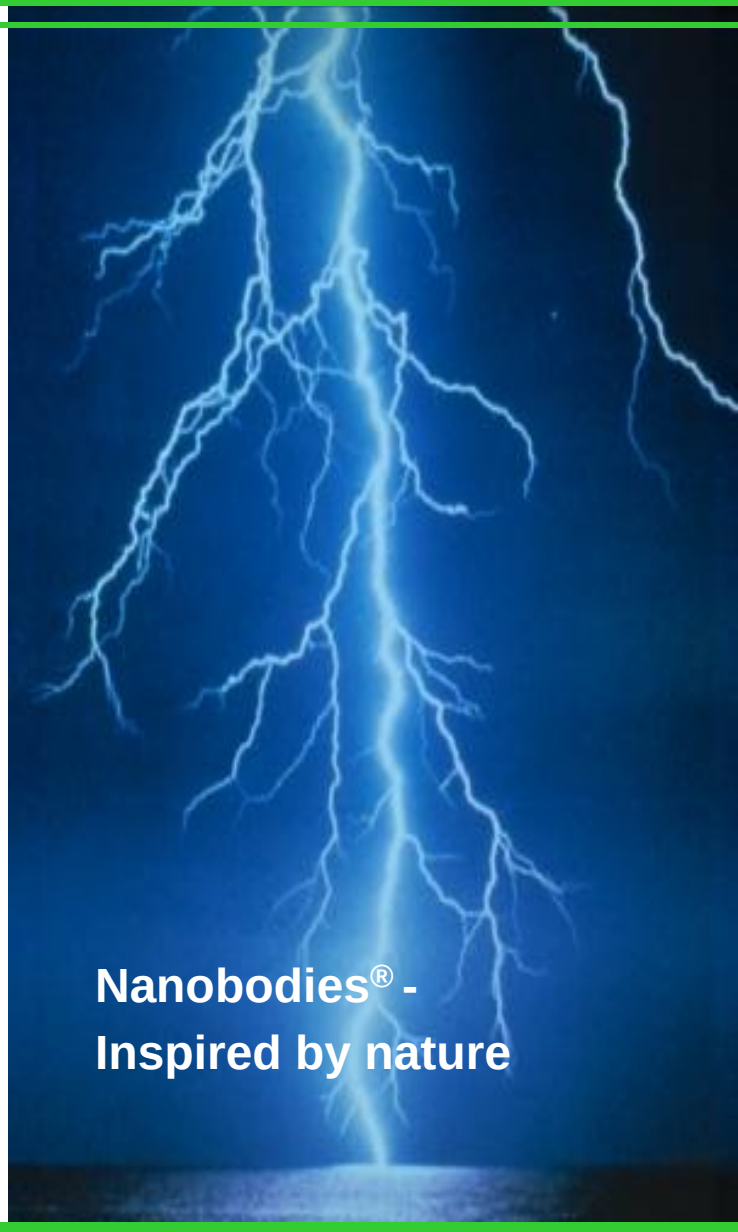
abbvie	Global **licensing deal for ALX-0061** (anti-IL-6R) in RA and SLE: $175M upfront and total potential value of $840M plus royalties
Boehringer Ingelheim	Strategic discovery alliance (**8 pre-clinical programmes** on-going) – focus on **bi-specifics**
MERCK SERONO	**4 deals: 10 programmes** (1 Phase I) on-going in inflammation, immunology, oncology, immune-oncology, neurology and osteoarthritis
MERCK	**2 discovery deals**: **ion channel** deal in neurology; **immune-onco** deal (focus on **multi-specifics**) with €20M upfront, €10.7M research funding and total potential milestones of up to €1.7bn plus royalties
EDDING 亿腾 PHARM	**2 licensing deals** in **Greater China** for ALX-0141 (anti-RANKL) in bone disorders and ozoralizumab (anti-TNFα) in inflammation
NOVARTIS	Target based **discovery deal** (**challenging target: CXCR2**)

>€335M in non-dilutive cash received from collaborators to date

~€3Bn in potential future milestones plus royalties

Ablynx

Outlook



A successful 2014 and a strong 2015 ahead

2014 achievements

- **5 clinical trial read outs** including clinical proof-of-concept (POC) for caplacizumab in TTP - **data being presented at ASH**
- **4 clinical trials initiated**
- Further validation of the platform through **immune-onco deal** with Merck & Co focusing on multi-specifics
- Expansion into **Asia** through 2nd licensing deal with Eddingpharm for the development and commercialisation of ozoralizumab in Greater China

Potential value enhancing events in 2015

- **Start of Phase IIb** with ALX-0061 (IL-6R) in RA
- **Start of Phase III** with caplacizumab (vWF) in TTP
- **Start of Phase IIa** with ALX-0061 (IL-6R) in SLE
- **Start of multiple Phase I** studies for partnered programmes
- Results from various **technology feasibility studies** across multiple applications
- **Results from Phase IIa** with ALX-0171 (RSV) in infants, potentially the 4th clinical POC for Ablynx
- Continued discussions on **partnering** various early stage and later stage assets
- **Milestone payments** from on-going partnerships

Value creation – clinical data expected from patient studies

2014

caplacizumab Phase II (TTP)

Wholly-owned ✓

2015

ALX-0171 Infant Phase IIa (RSV)

Wholly-owned

2016

ALX-0061 Phase IIb (RA)

AbbVie have option to license worldwide

ALX-0761 Phase Ib (severe psoriasis)

Licensed to Merck Serono (worldwide)

2017

caplacizumab Phase III (TTP)

Wholly-owned

ALX-0171 Infant Phase IIb (RSV)

Wholly-owned

ALX-0141 and ozoralizumab Phase I/II in China

Licensed to Eddingpharm (China)

2018

ALX-0061 Phase IIa (SLE)

AbbVie have option to license worldwide

Results from a number of patient studies with **partners**

Nanobodies® – creating better medicines

www.ablynx.com

investors@ablynx.com

