BioArctic AB

Company Presentation

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Redeye Growth Day, 4th of June 2018

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Snapshot of BioArctic

Company overview

- **Research oriented biopharma company** focusing on development of drugs in areas with a large unmet medical need, such as Alzheimer's and Parkinson's Disease, and Complete Spinal Cord Injury
- **Founded in 2003** by Prof. Lars Lannfelt and Dr. Pär Gellerfors
- **Flexible organization** with approx. 30 FTEs complemented with consultants and close collaborations with external partners
- **Headquartered** in Stockholm, Sweden
- **Listed on Nasdaq Stockholm Mid Cap** since October 2017

Investment highlights

- **Highly educated organization** with proven track record of bringing drugs from idea to market
- **Innovative portfolio** of differentiated first-generation disease modifying agents in Alzheimer's and Parkinson's Disease, diagnostics and pioneering Complete Spinal Cord Injury treatment
- **Strategic collaborations** with Eisai and AbbVie validating highly innovative research organization and unique product candidates
- **Attractive combination** of fully financed partner projects and cutting-edge, well funded, proprietary R&D pipeline with substantial market and out-licensing potential

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Long-standing and Extensive Partnerships

Eisai collaboration and license agreements

Description of agreements

- Two previous research collaborations regarding disease modifying therapies for Alzheimer's Disease that resulted in two licenses of the Aβ oligomer/protofibril antibodies BAN2401 and BAN2401 Back-up
- Third research collaboration ongoing regarding a new target as a disease modifying therapy for Alzheimer's Disease

Milestone / royalty potential

- The total aggregated value of the research collaborations and license agreements is approx. EUR 218m in signing fee and milestones plus high single digit royalties
- BioArctic has received approx. EUR 47m for the research collaborations, signing fees and milestones

AbbVie collaboration agreement

Description of agreements

- Research collaboration (entered Sep 2016) regarding alpha-synuclein antibodies as disease modifying therapies for Parkinson's Disease incl. BAN0805 to IND, follow-up compounds and diagnostic
- BioArctic primarily responsible for performing all preclinical activities
- Option for AbbVie for a license to develop and commercialize the antibodies

Milestone / royalty potential

- Total potential value of the agreement is up to USD 755m incl. an up-front fee, option exercise fee, and success-based milestones plus tiered royalties
- BioArctic has received an USD 80m up-front payment for the research collaboration

Strategic collaborations with pharmaceutical industry validating potential value and commercialization potential for BioArctic with proven track record of delivering on research collaborations

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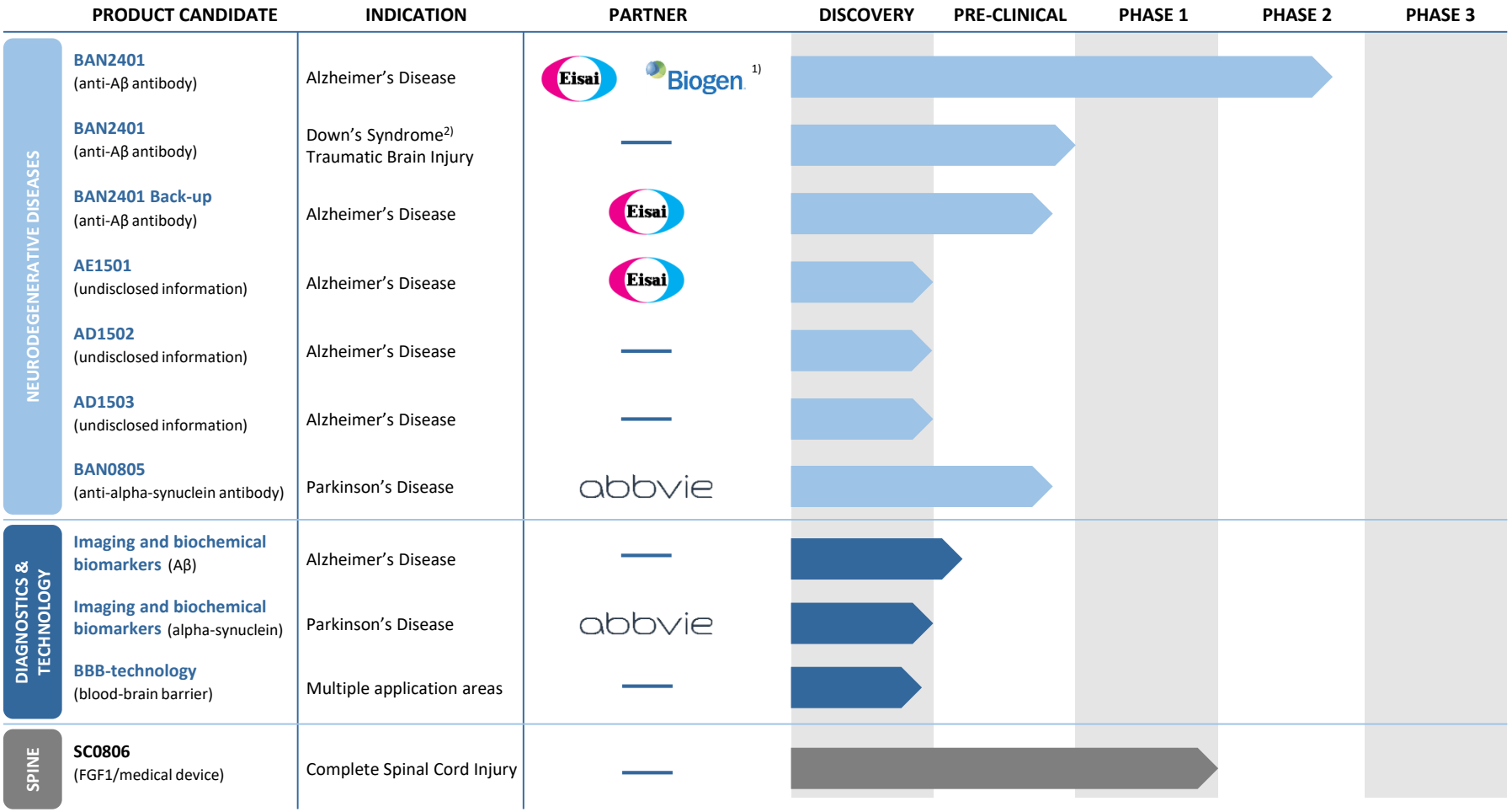
Strategic Partnerships and Cutting-Edge Proprietary R&D



[1] Partner with Eisai on BAN2401 for treatment of AD. Since 2014, Eisai partnered with Biogen in AD
[2] Dementia and cognitive impairment associated with Down's syndrome and Traumatic Brain Injury

Source: Company data

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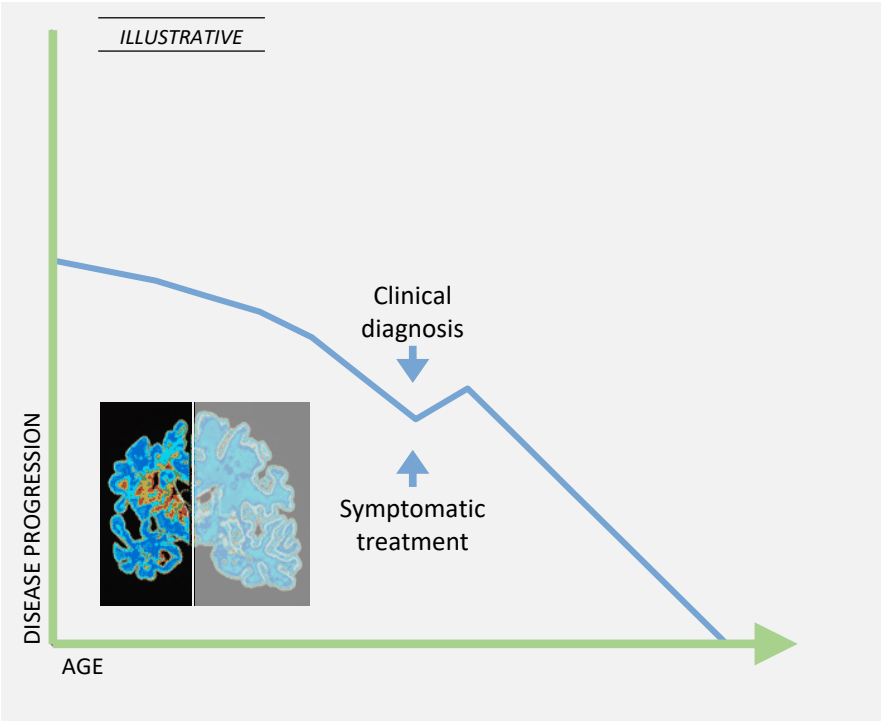
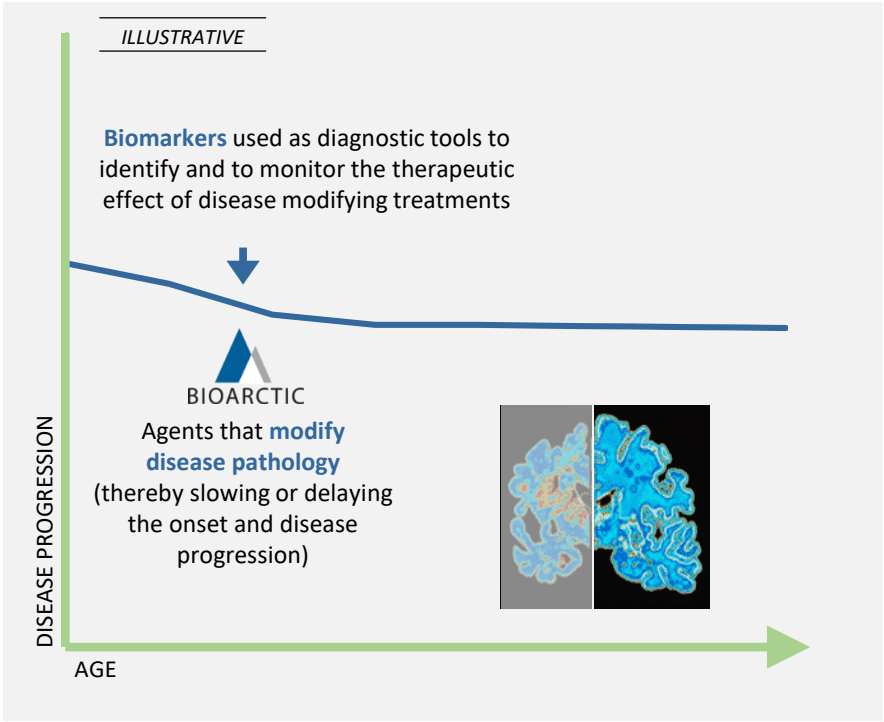
Disease Modifying Agents and Reliable Diagnostics/Biomarkers for Neurodegenerative Diseases

New therapy focus on disease pathogenesis – efforts to delay the neurodegenerative process

Neurodegenerative disease therapy **TODAY**



Neurodegenerative disease therapy **TOMORROW**



Significant unmet medical need to be addressed by disease modifying agents and reliable diagnostics/biomarkers

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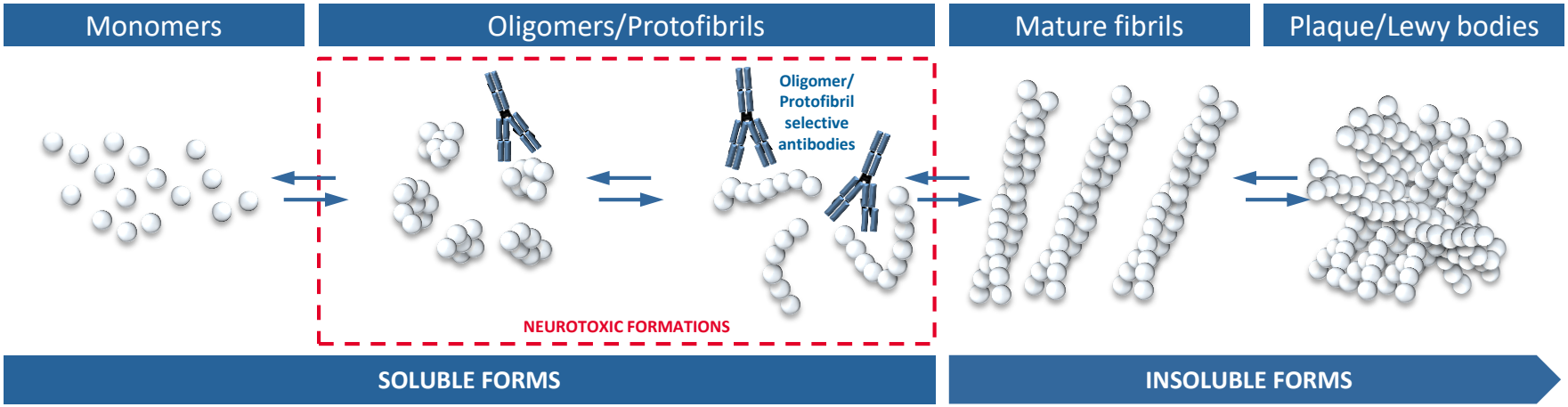
Protein Misfolding is Disease Causing in a Number of Neurodegenerative Diseases Including AD and PD



Aβ Plaque in AD

Alpha-synuclein Lewy bodies in PD

Source: Company information

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BAN2401 – Learnings from Previous Clinical Trials in AD Incorporated in Phase 2b Study Design
Final Results in H2 2018

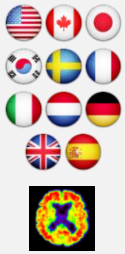
Important parameters

Right target	Right patient population	Right dose & exposure	Right measurements	Right safety
• Address the soluble protofibrils – a toxic form of amyloid	• Early AD – MCI due to AD & Mild AD • Identify right patients – biomarkers	• Selecting doses with exposures above preclinical IC50 • Adaptive design testing several doses and dose regimens	• More sensitive cognition scales • Biomarkers for disease progression and disease modification	• Well tolerated with a benign safety profile • Low cardiovascular risks and amyloid related imaging abnormalities (ARIA) etc.

Phase 2b study design

Patient inclusion

Multinational recruitment:
- 100 clinical centers included
- **Inclusion criteria:** MMSE >22-30
- Stable concomitant medication
- Positive amyloid PET/CSF



Inclusion completed with 856 patients

Treatment 12 months

Double-blind, placebo controlled, parallel-group study with Bayesian adaptive design

- Placebo
- 2.5 mg/kg bi-weekly
- 5 mg/kg bi-weekly
- 10 mg/kg bi-weekly
- 5 mg/kg once every four weeks
- 10 mg/kg once every four weeks

Primary analyses:
- Δ from baseline in ADCOMS at 12 months
- Safety and tolerability

Treatment 18 months

Key analyses:
- Δ from baseline in ADCOMS, CDR-SB, ADAS-cog at 18 months
- Δ from baseline in brain amyloid as measured by amyloid PET
- Δ from baseline in CSF biomarker and MRI (total hippocampal volume
- Safety and tolerability

Top line results after 18 months treatment incl. biomarker and cognition - Q3 2018
Full read-out of study after 18 months treatment and 3 months follow-up - Q4 2018
A positive scenario includes an effect on both a biomarker and cognition

Source: Company information
Note: ADCOMS = Alzheimer's Disease Composite Score, an evaluation tool developed by Eisai

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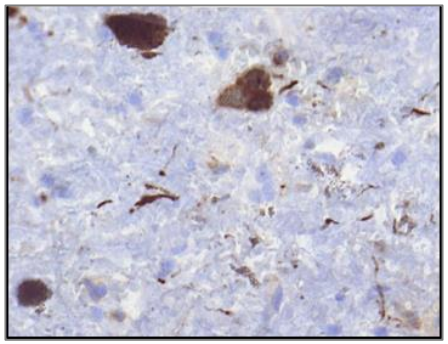
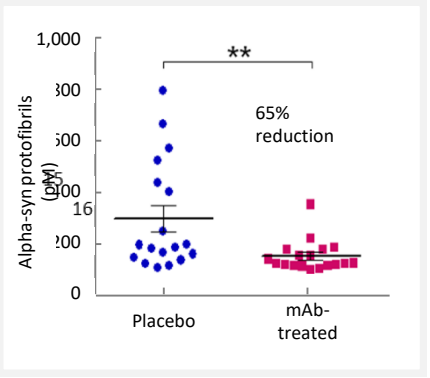
BAN0805 – Groundbreaking Disease Modifying Drug in PD with Rationale for Selective Targeting of Alpha-synuclein Oligomers/Protofibrils

Rationale for targeting alpha-synuclein

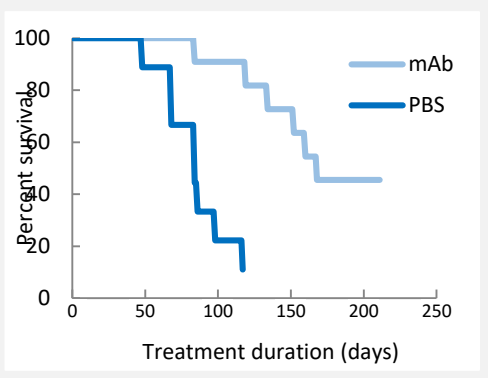
Human genetics → **Pathology** → **Pre-clinical proof of concept**



Reduction of neurotoxic alpha-synuclein oligomers/protofibrils



Increases lifespan



Alpha-synuclein mutations
lead to PD or Dementia with Lewy Bodies and are associated with increased oligomer/protofibril formation

Alpha-synuclein deposition
is a hallmark of PD pathophysiology and alpha-synuclein oligomers/protofibrils are elevated in PD

Oligomer/ protofibril selective antibody
reduces neurotoxic alpha-synuclein oligomer/protofibril levels, delays disease progression and increases life-span in a PD mice model

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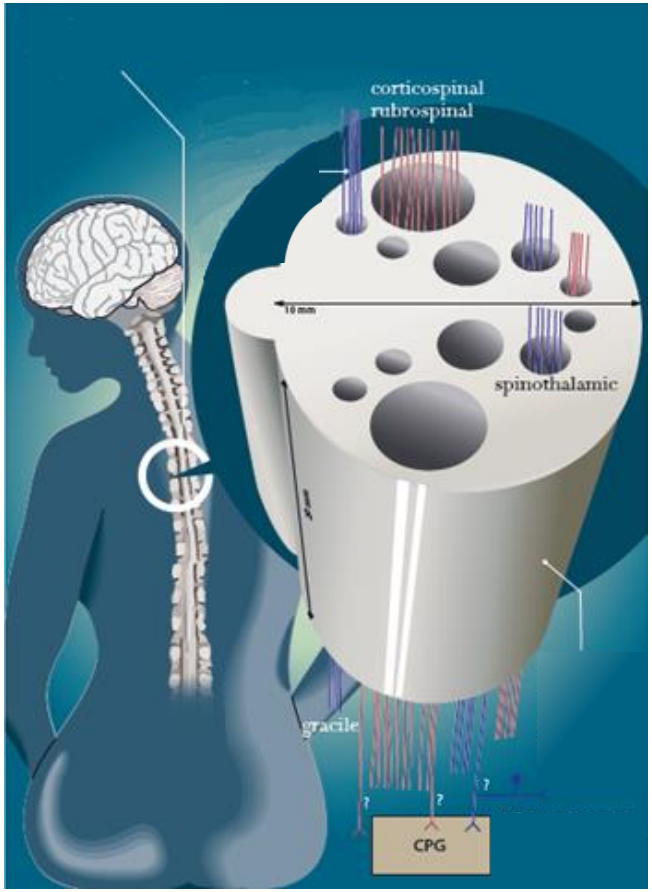
SC0806 – Unique Regenerative Treatment of Complete SCI

SC0806 – Regenerative Treatment of Complete SCI



Treatment rationale and project status

SC0806 makes nerve regeneration possible	
FGF1 activated by heparin	• Stimulation of central axon outgrowth • Decreases gliosis
Peripheral nerve autografts	• Optimal regeneration environment
Biodegradable device	• Provides sustained release of FGF1 • Positioning of nerve grafts from white to gray matter

- Surgical implantation of biodegradable SCI device with recombinant Fibroblast Growth Factor 1 (FGF1) and nerve grafts
  - Combination of medical device and new drug from a regulatory perspective
  - Orphan Drug designation in US and EU – granting 7 and 10 years exclusivity, respectively
- Preclinical Proof of concept shown in rats
  - Rat experiments demonstrate nerve regeneration, restored electrophysiology and motor function
  - The motor evoked potential (MEP) has been restored in rats with resected spinal cords
- Clinical Phase 1/2 trial ongoing with SC0806 in patients with complete spinal cord injury
  - Surgery at Karolinska University Hospital in Sweden
  - Rehabilitation for 18 months with Lokomat in Sweden and preparations to include patients in Norway, Estonia and Finland
  - Patients receiving SC0806 treatment are given the option of 12 months additional rehabilitation in an extension study
  - 9 patients included (6 treated with SC0806 and 3 control patients)

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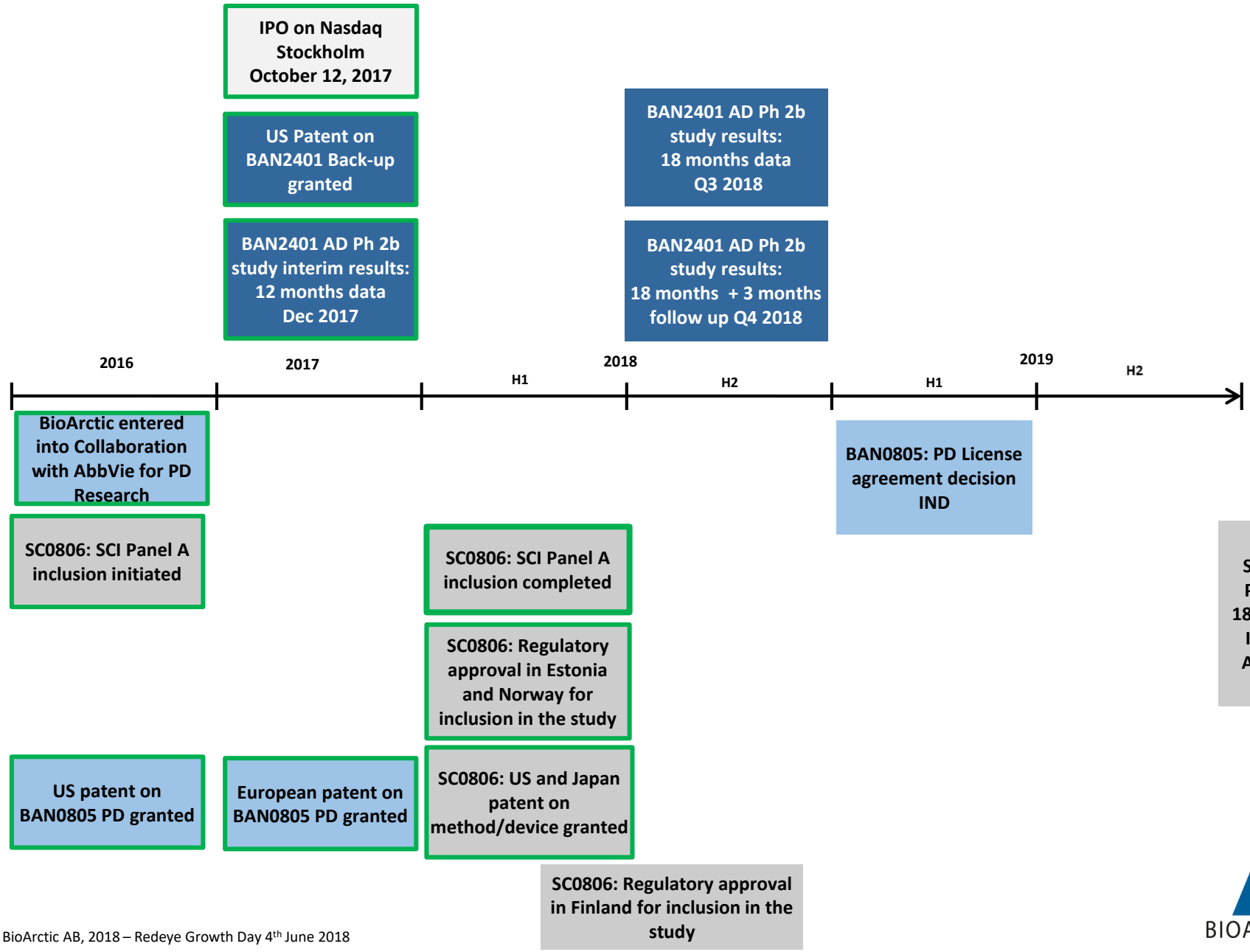
Recent & Anticipated News Flow



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Q&A

Gunilla Osswald, CEO

Thank you for your attention!

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