

...at Hansa Biopharma we envision a world where all patients with rare immunologic diseases can lead long and healthy lives...

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# Continued progress on strategic agenda; Imlifidase highlighted at ATC

### Highlights for the second quarter 2019

- Good progress on strategic agenda
  - Guillain Barré Syndrome (GBS) study started expansion outside transplantation and into auto-immune diseases continues
  - Divestment of equity holding in Genovis
  - Advancement across pipeline
  - Expanding our presence in Europe and the U.S.
- High level of excitement at the 2019 American Transplant Congress, with imlifidase highlighted in three presentations.
   Plenary abstract by Dr. Huang won the "People's Choice Award"
- Advancing imlifidase toward commercialization for kidney transplantation in highly sensitized patients. MAA under review by EMA; complementary analysis being conducted in the U.S.
- All resolutions were passed at the AGM 2019
- Cash position stood at SEK 763m (~USD 80m) end of June 2019



# Continued advancement toward commercialization

### Imlifidase in kidney transplantation

### Europe (EMA)

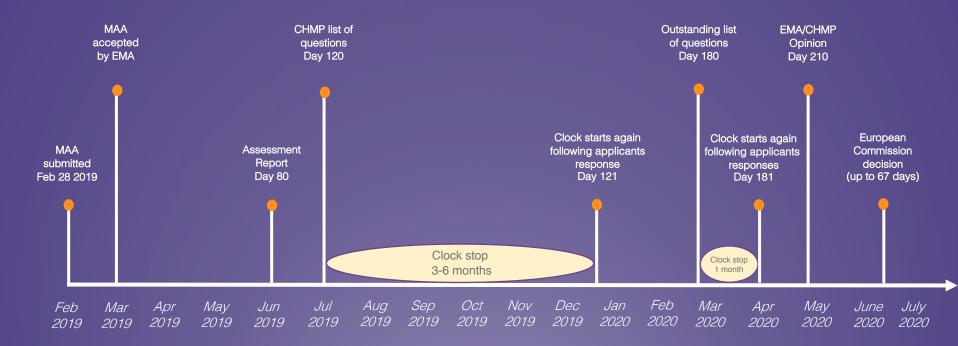
- MAA for imlifidase accepted end of Feb'19; regulatory review progressing
- Opinion from EMA expected within 210 working days, plus clock stops

### U.S. (FDA)

- Conducting complementary transplantability analyses comparing imlifidase-treated patients and matched controls from U.S. transplant registry
- Upon completion of analyses, Hansa to request FDA meeting to determine U.S. regulatory path forward. Meeting expected in H2'19
- U.S. administration announced initiatives to increase transplant rate and quality of life for dialysis patients and also reduce expenditure to treat chronic and end-stage renal disease



### EMA – The process towards approval



### **EMA/CHMP Assessment**

- Evaluation of benefit and risks
- Assessment of Risk Management Plan
- Assessment of product information

- Assessment on need for post safety/efficacy studies
- Preparation of Risk Management Plan Summary



# Anti-GBM enrolling; AMR & GBS receives CTA approval. NiceR lead candidate selected

### Advancement across our pipeline in 1H 2019

#### Anti-Glomerular Basement Membrane Disease (Anti-GBM)

 9 patients enrolled out of targeted 15. Adding more sites and expect the study to be fully enrolled by year-end

### Antibody Mediated Rejection (AMR) in kidney transplant

- Phase 2 study with imlifidase in AMR received CTA approval in March'19. Recruitment of up to 30 patients initiated from eight sites in the U.S., Europe and Australia.
- Study is a randomized, open-label multi-center, active control study, designed to evaluate the safety and efficacy of imlifidase in eliminating DSA in acute AMR

### Guillain-Barré Syndrome (GBS)

Phase 2 study with imlifidase in GBS received CTA in April'19

#### NiceR

- Lead candidate selected in next-generation program for repeat dosing
- Development of a GMP process initiated; preparations for toxicology studies are ongoing



# New GBS study marks continued expansion outside transplantation

### Initiation of GBS Phase 2 study in Europe

- Guillain Barré Syndrome (GBS) is a rare, acute, paralyzing, inflammatory disease of the peripheral nervous system affecting 1-2 in 100,000 people annually
- CTA approval obtained for Phase 2 study in GBS in April
- Recruitment of up to 30 patients initiated at ten clinics in France, U.K. and the Netherlands.
- Study is an open-label, single arm, multi-center trial evaluating safety, tolerability and efficacy of imlifidase, in combination with standard of care, IVIg, to treat GBS
- In 2018, the FDA granted Orphan Drug Designation to imlifidase for the treatment of GBS



### Broad pipeline in transplantation and auto-immune diseases



<sup>&</sup>lt;sup>1</sup> Results from the Phase 1 study have been published, Winstedt el al. (2015) PLOS ONE 10(7).

<sup>\*)</sup> EMA: In imlifidase for kidney transplantation we have filed for conditional approval after completion of phase 2. A confirmatory study would need to be executed in case of approval.

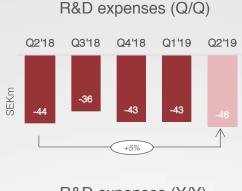




<sup>&</sup>lt;sup>2</sup> Lorant et al American Journal of Transplantation and 03+04 studies (Jordan et al New England Journal of Medicine)

# SG&A and R&D spending increase with commercial preparation and pipeline advancement













# Cash flow follows increased activity level; positively impacted by the divesture of equity stake in Genovis.

### Operating cash flow (Q/Q)



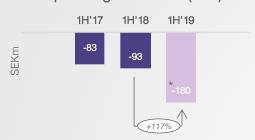
### Cash & short term investments (Q/Q)



### Number of employees (Q/Q)



### Operating cash flow (Y/Y)



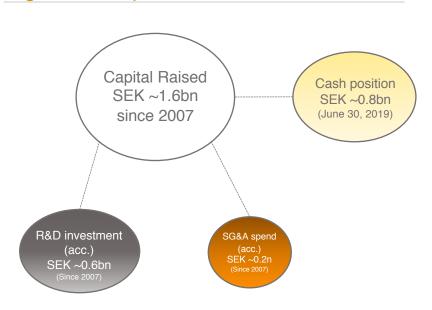
### Shareholders equity (Q/Q)



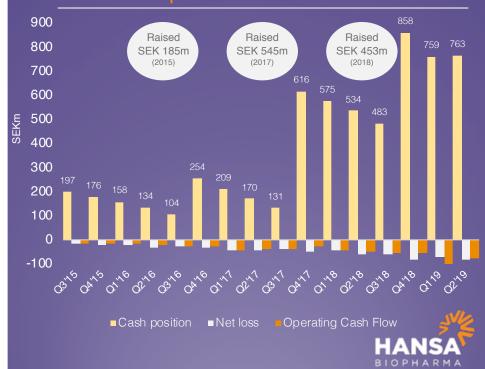


# Hansa Biopharma is financed through 2020

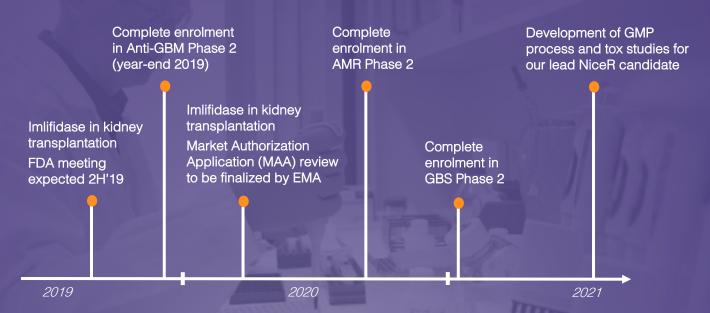
### Significant capital raised since 2007



### Solid cash position end of first half 2019



### Milestones and near-term news flow







Appendix

### Hansa Biopharma at a glance



#### Company background

- Founded 2007 with HQ in Lund, Sweden
- Sören Tulstrup, CEO Ulf Wiinberg, Chairman
- 60 employees (~3/4 in R&D) at June 30, 2019
- Operations in Sweden, US & UK
- Market cap: SEK 7.4bn (USD 791m)
- Listed on Nasdag OMX Stockholm (HSNA)



#### Leader in immunomodulatory enzymes for rare IgG-mediated diseases

- Imilifidase can help meet a large unmet need by transforming the lives of people with rare disease
- A novel approach to specifically and effectively eliminate pathogenic IgG
- Opportunity in transplantation to increase survival rate and quality of life for dialysis patients
- Strong data from five clinical studies (one phase 1 and four phase 2 studies)
- PoC demonstrated in five clinical studies and published in peer-reviewed journals (e.g. NEJM & AJT)



#### Broad pipeline in transplantation and autoimmune diseases

- Lead indication in kidney transplantation in highly sensitized patients (MAA under review)
- Anti-GBM antibody disease (Phase 2)
- Antibody mediated kidney transplant rejection (AMR) (Phase 2)
- Guillain-Barré syndrome (Phase 2)
- NiceR Recurring treatment in autoimmune disease, transplantation and oncology (Preclinical
- EnzE Cancer immunotherapy (Preclinical



#### **Key Financials**

 Cash position
 1H'19 SEK 763m
 (FY'18 SEK 858m)

 Operating Cash Flow
 1H'19 SEK -78m
 (FY'18 SEK -205m)

 R&D cost
 1H'19 SEK -46m
 (FY'18 SEK -155m)

 Net Profit
 1H'19 SEK -82m
 (FY'18 SEK -248m)

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### Hansa Biopharma

- a unique immunomodulatory enzyme technology with near-term commercial opportunity



## Imlifidase works!

- Proven mechanism of action with a consistently demonstrated ability to rapidly and effectively deplete IgG across five clinical studies
- Clearly demonstrated ability to remove the immunological barrier to kidney transplantation



## Addresses a clear unmet need

- Enables kidney
  transplantation for a new
  segment of patients
  advancing them to standard
  of care
- Additional indications in rare, autoimmune diseases with no approved treatment options
- US administration is working on a new kidney care reform to increase survival rate and quality of life for dialysis patients



## Well positioned for commercial success

- Highly concentrated transplant center market, reachable by a small commercial organization of rare disease experts
- Expanding commercial infrastructure
- MAA under review by EMA potential launch in 2020
- Strong protection
  - 11 patent families
  - Orphan drug status
  - Significant knowhow



### Rich pipeline with significant potential

- Leveraging a strong technology platform
- Three phase 2 projects in other IgG-mediated indications incl. Anti-GBM, AMR and GBS – all with Orphan Drug status
- Path to develop less immunogenic enzymes to enable repeat dosing and further commercial opportunities



### Technology snapshot



- imlifidase, a novel approach to specifically and effectively eliminate pathogenic IgG



## Origins from Streptococcus pyogenes

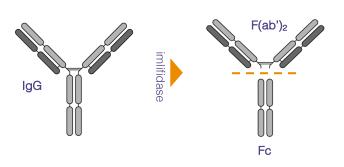
- Species of Gram-positive, spherical bacteria in the genus Streptococcus
- Usually known from causing a strep throat infection





## Imlifidase, a unique IgG antibody-degrading enzyme with proven mechanism of action

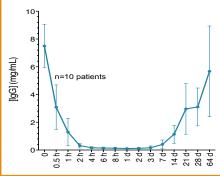
- Interacts with Fc-part of IgG with extremely high specificity
- Cleaves IgG at the hinge region, generating one F(ab')<sub>2</sub> fragment and one homo-dimeric Fc-fragment





## Imlifidase has proven to be highly efficacious

- Rapid onset of action that inactivates IgG below detectable level in 2 hours
- IgG antibody-free window for approximately one week



### Completed and ongoing studies with imlifidase in kidney transplantation

STUDY	SUBJECTS/ COUNTRY	CLINICAL TRIALS.GOV ID	STUDY DESIGN	PRIMARY ENDPOINT	SECONDARY ENDPOINTS	STATUS	PUBLICATION
Study 01 Phase 1	29 subjects	NCT01802697 (2013/2014)	Randomized placebo controlled dose- escalation study with 29 (20 active plus 9 placebo) healthy subjects	Safety and tolerability	Efficacy in IgG cleavage, the pharmacokinetics (PK) and immunogenicity of imlifidase	Complete	PLOS ONE (2015) <sup>1</sup>
Study 02 Phase 2	8 subjects	NCT02224820 •	Single-center, single-arm, open-label	Dosing resulting in HLA-antibody reduction (MFI<1100)	Efficacy: HLA antibody reduction acceptable for transplantation (MFI <1100 as measured in SAB assay)	Complete	Lorant et al (2018) American Journal of Transplantation <sup>2</sup>
Study 03 Phase 2	10 subjects	NCT02475551	Single-center, single-arm, open-label No prior desensitization	Safety: AEs, clinical laboratory tests, vital signs, ECGs	Efficacy: HLA antibody reduction acceptable for transplantation (MFI <1100 as measured in SAB assay)	Complete	The New England Journal of Medicine (2017) <sup>3</sup>
Study 04 Phase 2	17 subjects	NCT024226684	Investigator initiated study, Single-center, single-arm, open-label All patients had prior desensitization with IVIG and/or plasmapheresis	Assessment of efficacy in eliminating DSAs in DSA and flow cytometry positive, highly sensitized patients Assessment of safety Assessment of efficacy and kidney function	Serum creatinine (0-6 months) Proteinuria (0-6 months) DSA at multiple timepoints posttransplant (day 0, D30, D90, D180)	Complete	The New England Journal of Medicine (2017) <sup>3</sup>
Study 06 "Highdes" Phase 2	18 subjects	NCT02790437	Multicenter, multinational, single-arm, open-label Included pts who may have had prior unsuccessful desensitization or pts in whom it was unlikely to be effective	Crossmatch conversion in DSA+ patients who have a positive XM test to their available LD or DD	DSA reduction at multiple timepoints (2, 6, 24, 48 h after imlifidase) Time to create negative CDC XM test and/or flow cytometry (FACS) XM test Safety		Annals of Surgery (Lonze et al, only New York patients) Montgomery et al ATC abstract (2019) <sup>4</sup>
Long-term follow-up	Up to 46 subjects						



Winstedt el al., "Complete Removal of Extracellular IgG Antibodies in a Randomized Dose Escalation Phase I Study with the Bacterial Enzyme IdeS – A Novel Therapeutic Opportunity", PLOS ONE 2015, 10(7)

<sup>&</sup>lt;sup>2</sup> Lorant et al., "Safety, immunogenicity, pharmacokinetics and efficacy of degradation of anti-HLA antibodies by IdeS (imlifidase) in chronic kidney disease patients" Am J Transplant. 2018 Nov;18(11):2752-276

<sup>&</sup>lt;sup>3</sup> Jordan et al., "IgG Endopeptidase in Highly Sensitized Patients Undergoing Transplantation", N Engl J Med 2017;377:442-53.

Montgomery et al., "Safety And Efficacy of Imitifidase In Highly-sensitized Kidney Transplant Patients: Results From A Phase 2 Study" ATC Abstract, 2019

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### Calendar

Sep 6, 2019	Goldman Sachs Biotech Symposium, London
Sep 10, 2019	Morgan Stanley Global Healthcare Conference, NYC
Sep 12, 2019	KOL event, San Francisco
Sep 15-18, 2019	ESOT, Copenhagen
Sep 20, 2019	BofAML Global Healthcare Conference, London
Oct 31, 2019	Interim report Jan – Sep 2019
Nov 20-21, 2019	Jefferies Global Healthcare Conference, London
Dec 4, 2019	Evercore Annual HealthCONx Conf, Boston
Dec 5, 2019	DNB Nordic-American Life Science Conf, NYC
Dec 11-12, 2019	CITI Global Healthcare Conference, NYC



