



Road Show  
Presentation  
Jan-Sep 2019



# Forward-looking statement

This presentation may contain certain forward-looking statements and forecasts based on our current expectations and beliefs regarding future events and are subject to significant uncertainties and risks since they relate to events and depend on circumstances that will occur in the future. Some of these forward-looking statements, by their nature, could have an impact on Hansa Biopharma's business, financial condition and results of operations [or that of its parent, affiliate, or subsidiary companies]. Terms such as “anticipates”, “assumes”, “believes”, “can”, “could”, “estimates”, “expects”, “forecasts”, “intends”, “may”, “might”, “plans”, “should”, “projects”, “will”, “would” or, in each case, their negative, or other variations or comparable terminology are used to identify forward-looking statements. There are a number of factors that could cause actual results and developments to differ materially from those projected, whether expressly or impliedly, in a forward-looking statement or affect the extent to which a particular projection is realized. Such factors may include, but are not limited to, changes in implementation of Hansa Biopharma's strategy and its ability to further grow; risks and uncertainties associated with the development and/or approval of Hansa Biopharma's product candidates; ongoing clinical trials and expected trial results; the ability to commercialize imlifidase if approved; changes in legal or regulatory frameworks, requirements, or standards; technology changes and new products in Hansa Biopharma's potential market and industry; the ability to develop new products and enhance existing products; the impact of competition, changes in general economy and industry conditions and legislative, regulatory and political factors.

The factors set forth above are not exhaustive and additional factors could adversely affect our business and financial performance. We operate in a very competitive and rapidly changing environment, and it is not possible to predict all factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results.

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# Hansa Biopharma at a glance



## Company background

- Founded 2007 with HQ in Lund, Sweden
- Sören Tulstrup, CEO – Ulf Wiinberg, Chairman
- 64 employees (~3/4 in R&D) at Sep 30, 2019
- Operations in Sweden, US & Europe
- Market cap: SEK ~6bn (USD ~600m) Oct, 2019
- Listed on Nasdaq OMX Stockholm (HSNA)



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

- Imlifidase is a unique IgG antibody-cleaving enzyme
- Imlifidase has been studied in five clinical studies and published in peer-reviewed journals (e.g. New England Journal of Medicine and the American Journal of Transplantation)
- If approved, Imlifidase may have the potential to meet a large unmet need and transforming the lives of people with rare disease



## Broad pipeline in transplantation and autoimmune diseases

- Lead indication in kidney transplantation in highly sensitized patients (MAA under review by EMA)
- 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       | 9m'19 SEK 680m  |
| • Operating Cash Flow | 9m'19 SEK -260m |
| • R&D cost            | 9m'19 SEK -135m |
| • Net Profit          | 9m'19 SEK -249m |

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



# Our Equity Story

## A unique immunomodulatory enzyme technology platform



### Imlifidase cleaves IgG antibodies

- Imlifidase is a unique IgG antibody-cleaving enzyme studied in five clinical studies.
- By removing the immunological barrier, imlifidase has the potential to enable kidney transplantation in highly sensitized patients



### Potentially addressing a clear unmet need

- Patients may become sensitized after losing a first transplant or being exposed to foreign tissues through blood transfusion or pregnancy.
- Such sensitized patients account for roughly 30% of people on the kidney waiting lists.



### A company well positioned for commercial success

- Hansa Biopharma is establishing its own commercial and medical organization in EU and the US. Outside these core markets we will seek commercial partnerships.
- Hansa Biopharma has a broad patent coverage throughout 2035 in key markets and orphan drug designation in EU and US for imlifidase in kidney transplantation.



### Rich pipeline

- We are leveraging our proprietary immuno-modulatory enzyme platform in phase 2 clinical studies in rare autoimmune indications incl:
  - Anti-GBM (Goodpasture's)
  - Guillain-Barré syndrome
  - Acute AMR post transplantation

# Imlifidase, a novel approach with a rapid onset of action to eliminate pathogenic IgG with high specificity



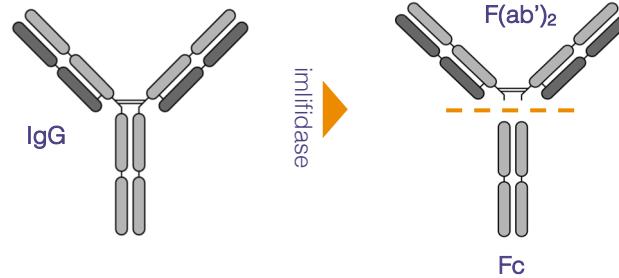
## Origins from *Streptococcus pyogenes*

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



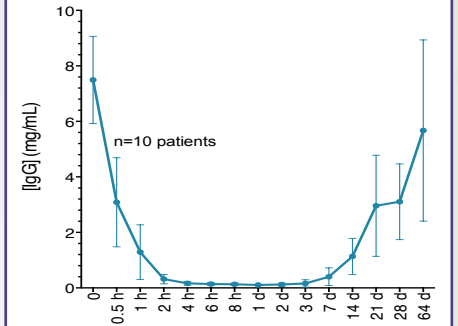
## Imlifidase, a unique IgG antibody-cleaving enzyme

- 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 inactivates IgG in 2 hours

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



# Broad pipeline in transplantation and auto-immune diseases

Candidate / Projecting	Indication	Research/ Preclinical	Phase 1 <sup>1</sup>	Pivotal program/ Phase 2	Marketing Authorization	Marketed	Next Anticipated Milestone
Imlifidase	Kidney transplantation in highly sensitized patients	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	<div><div></div><div>*)</div></div>		MAA review by EMA Follow-up meeting with FDA Nov 20, 2019
	Anti-GBM antibody disease	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>			Complete enrollment
	Antibody mediated kidney transplant rejection (AMR)	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>			Complete enrollment
	Guillain-Barré syndrome	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>			Complete enrollment
NiceR	Recurring treatment in autoimmune disease, transplantation and oncology	<div><div></div></div>					Development of CMC process / Tox studies
EnzE	Cancer immunotherapy	<div><div></div></div>					Research phase

Completed
 Ongoing

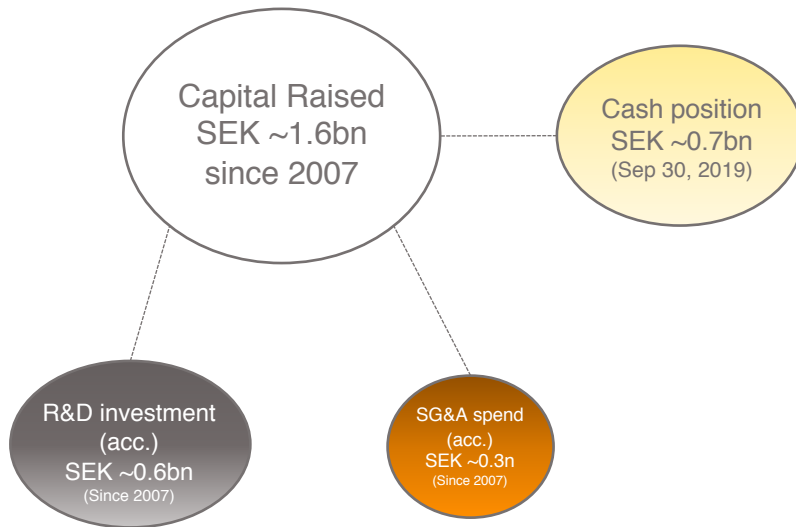
<sup>1</sup> Results from the Phase 1 study have been published, Winstedt et al. (2015) PLOS ONE 10(7).

\*) 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.

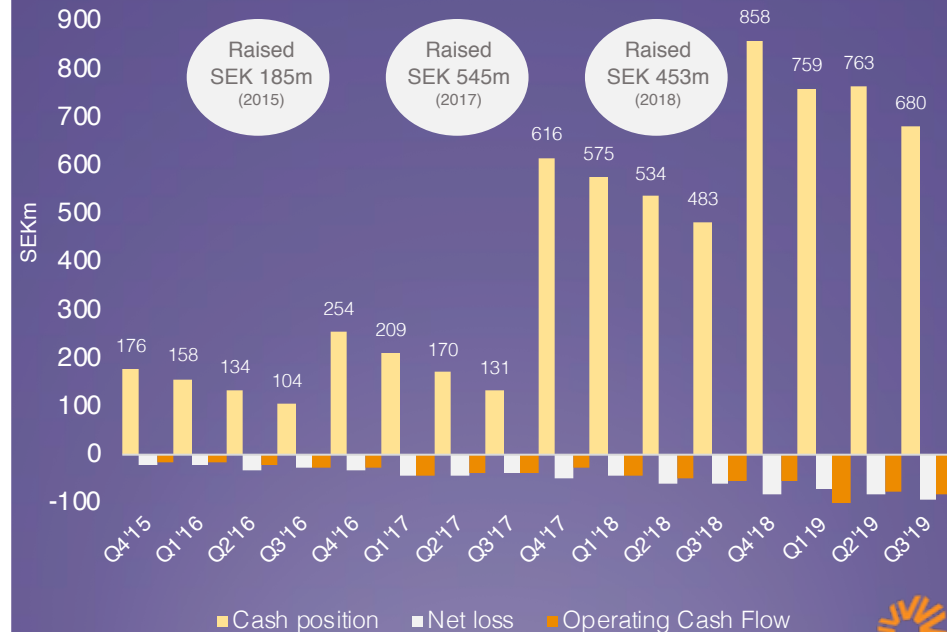
FDA: Discussion on path forward in the US is still ongoing.

# Hansa Biopharma is financed through 2020

## Significant capital raised since 2007

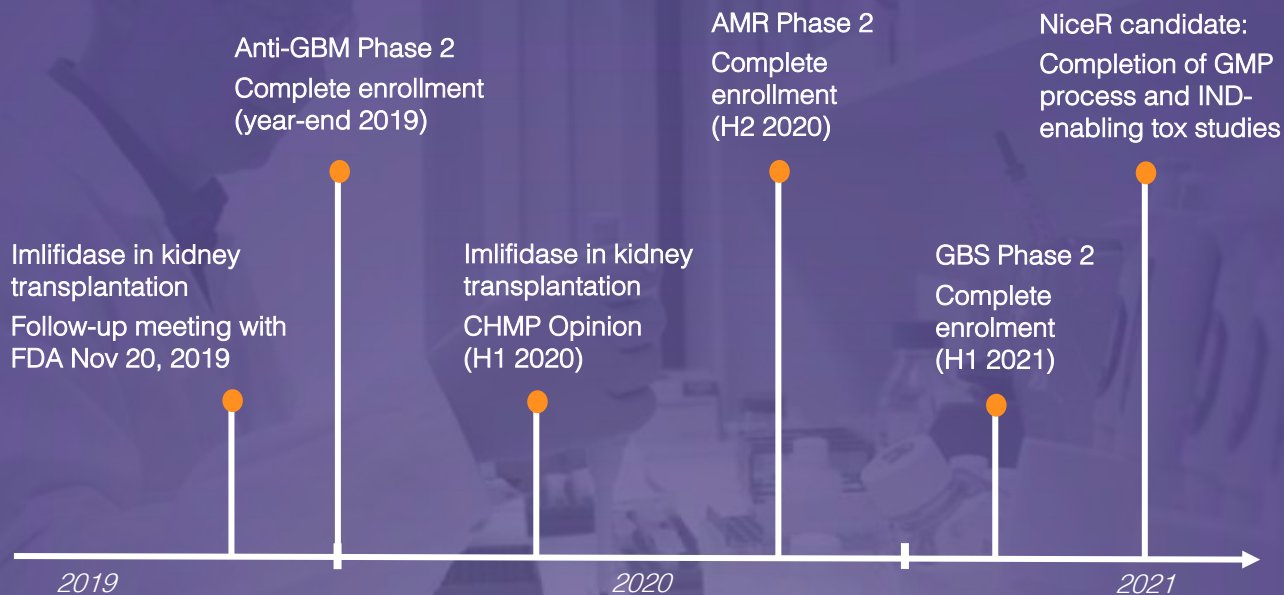


## Solid cash position end of September 2019





# Upcoming milestones





# Q3 Business Update

Road Show Presentation  
Jan-Sep 2019

# Positive results presented at ESOT; FDA meeting confirmed

## Highlights for the third quarter 2019

- Solid progress across the organization
  - Expanding our global footprint
  - Building medical and commercial team to support potential launch of imlifidase in 2020
  - Increasing our engagements with the healthcare community
- Positive imlifidase data presented at the ESOT congress in Copenhagen. Pooled analysis of 46 highly sensitized patients
- EMA regulatory review process progressing as planned; CHMP opinion expected in the first half of 2020.
- Follow-up meeting with the FDA scheduled for Nov 20, 2019
- First patient dosed in AMR; Continued enrollment in Anti-GBM
- Explore potential to enable gene therapy in patients with Neutralizing Antibodies (NABs)
- Cash position stood at SEK 680m (~USD 70m) end of Sep 2019



# Imlifidase enabled transplantation in 46 highly sensitized patients

## Pooled analysis of four Phase 2 trials presented

- Analysis included 46 patients
  - 50% had a cPRA of 100% (Average 99%)
  - 85% were crossmatch positive
  - 70% were retransplanted
- Donor Specific Antibody (DSA) levels rapidly decreased and all crossmatches were converted to negative, thus enabling transplantation in all patients
- No strong correlation between DSA levels and AMR. AMR episodes occurred in 33% of patients - all treated with standard of care
- At study completion, all patients alive and graft survival at 94%



# Continued advancement toward potential commercialization

## Imlifidase in kidney transplantation

### Europe (EMA)

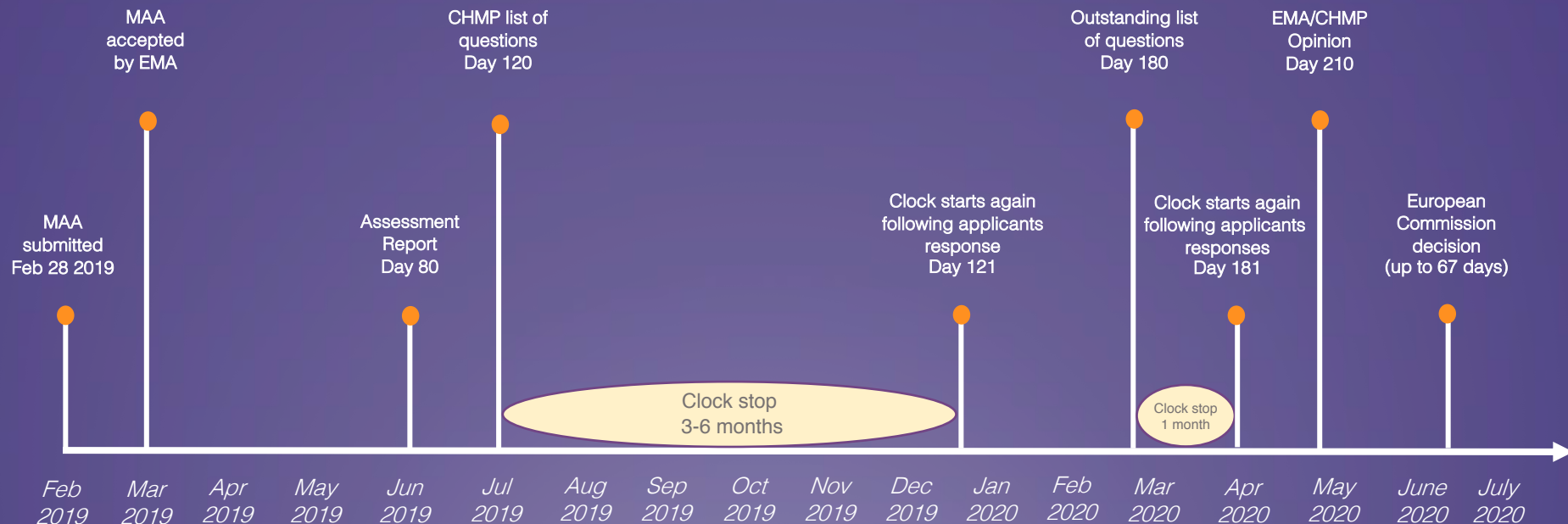
- MAA for imlifidase accepted end of Feb'19; regulatory review progressing as expected
- Opinion from Committee for Medicinal Products for Human Use (CHMP) expected during the first half of 2020

### U.S. (FDA)

- Follow-up meeting with the U.S. Food and Drug Administration scheduled for November 20, 2019
- Discussions from Dec 2018 meeting to be continued to determine U.S. regulatory path forward
- U.S. Department of Health and Human Services set out three specific goals for end-stage renal disease (ESRD):
  - 1) Reduce number of patients who develop ESRD by 25% by 2030
  - 2) 80% of new ESRD patients in 2025 either receive a transplant or homecare dialysis
  - 3) Double the number of kidneys available for transplant by 2030



# EMA – The process towards approval



# Imlifidase may potentially enable life-saving kidney transplantation in highly sensitized patients

## Creating equity for highly sensitized patients

- Transplant rates in highly sensitized patients have improved with the introduction of the allocation systems. However, transplantations rates among highly sensitized patients are still low compared with average or non-sensitized patients
- If approved, imlifidase may potentially:
  - Complement allocation systems (e.g. KAS, Euro-transplant) to reduce time to transplant in highly sensitized patients
  - Reduce the need for antibody matching and gives sensitized patients access to a larger pool of organs
  - Reduce the risk for co-morbidities and mortality associated with dialysis and waiting time
  - Increase transplant rates in highly sensitized patients
  - Help reduce the number of discarded kidneys (1,000 donated kidneys are discarded in the U.S. alone every year<sup>3</sup>)

<sup>1</sup> Jordan et al. British Medical Bulletin, 2015, 114:113–125

<sup>2</sup> Orandi et al. N Engl J Med 2016;374:940-50

<sup>3</sup> Organ Procurement and Transplantation Network (OPTN)

<sup>4</sup> Jordan et al. British Medical Bulletin, 2015, 114:113-125

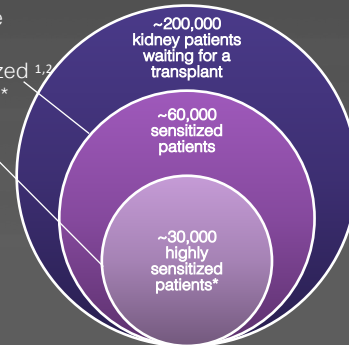


*Delilah Romero, 23 years old from Pasadena, California and a highly sensitized kidney transplant patient*

## U.S. + EU Kidney Transplant Waitlist Breakdown

>30% of waitlist patients are sensitized

- 15% moderately sensitized<sup>1,2</sup>
- 15% highly sensitized<sup>1,2,\*</sup>



~40,000 transplants done annually in the US and EU.  
Hereof ~7,000\* in highly sensitized patients

\*Patients with sensitivity above cPRA 80%

Source: The U.S. Department of Health and Human Services and .irodat.org



# First patient treated in AMR; 11 patients enrolled in Anti-GBM

## Solid progress in our pipeline over 9 months

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

- 11 patients enrolled out of targeted 15. Additional sites have been added to complete the enrollment by year-end

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

- First patient treated with imlifidase in our AMR Phase 2 study
- The study is designed to evaluate the safety and efficacy of imlifidase in eliminating donor specific antibodies (DSAs) in the treatment of episodes of acute AMR

### Guillain-Barré Syndrome (GBS)

- Recruitment process initiated in our GBS Phase 2 study; enrolling up to 30 patients at ten clinics in the EU
- The study is designed to evaluate the safety, tolerability and efficacy of imlifidase in GBS patients in combination with standard-of-care intravenous immunoglobulin (IVIg)

### NiceR

- Lead candidate selected. Development of a GMP process ongoing as well as preparations for toxicology studies













# Appendix

Road Show Presentation  
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# 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)	<ul style="list-style-type: none"> <li>Randomized placebo-controlled dose-escalation study with 29 (20 active plus 9 placebo) healthy subjects</li> </ul>	<ul style="list-style-type: none"> <li>Safety and tolerability</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy in IgG cleavage, the pharmacokinetics (PK) and immunogenicity of imlifidase</li> </ul>	Complete	PLOS ONE (2015) <sup>1</sup>
Study 02 Phase 2	8 subjects 	NCT02224820	<ul style="list-style-type: none"> <li>Single-center, single-arm, open-label</li> </ul>	<ul style="list-style-type: none"> <li>Dosing resulting in HLA-antibody reduction (MFI&lt;1100)</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy: HLA antibody reduction acceptable for transplantation (MFI &lt;1100 as measured in SAB assay)</li> </ul>	Complete	Lorant et al (2018) American Journal of Transplantation <sup>2</sup>
Study 03 Phase 2	10 subjects 	NCT02475551	<ul style="list-style-type: none"> <li>Single-center, single-arm, open-label</li> <li>No prior desensitization</li> </ul>	<ul style="list-style-type: none"> <li>Safety: AEs, clinical laboratory tests, vital signs, ECGs</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy: HLA antibody reduction acceptable for transplantation (MFI &lt;1100 as measured in SAB assay)</li> </ul>	Complete	The New England Journal of Medicine (2017) <sup>3</sup>
Study 04 Phase 2	17 subjects 	NCT024226684	<ul style="list-style-type: none"> <li>Investigator initiated study, Single-center, single-arm, open-label</li> <li>All patients had prior desensitization with IVIG and/or plasmapheresis</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of efficacy in eliminating DSAs in DSA and flow cytometry positive, highly sensitized patients</li> <li>Assessment of safety</li> <li>Assessment of efficacy and kidney function</li> </ul>	<ul style="list-style-type: none"> <li>Serum creatinine (0-6 months)</li> <li>Proteinuria (0-6 months)</li> <li>DSA at multiple timepoints posttransplant (day 0, D30, D90, D180)</li> </ul>	Complete	The New England Journal of Medicine (2017) <sup>3</sup>
Study 06 "Highdoses" Phase 2	18 subjects  	NCT02790437	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Crossmatch conversion in DSA+ patients who have a positive XM test to their available LD or DD</li> </ul>	<ul style="list-style-type: none"> <li>DSA reduction at multiple timepoints (2, 6, 24, 48 h after imlifidase)</li> <li>Time to create negative CDC XM test and/or flow cytometry (FACS) XM test</li> <li>Safety</li> </ul>	Complete	Annals of Surgery (Lonze et al, only New York patients) Montgomery et al ATC abstract (2019) <sup>4</sup>
Long-term follow-up study	Up to 46 subjects  	NCT03611621	<ul style="list-style-type: none"> <li>A prospective, observational long-term follow-up study of patients treated with imlifidase prior to kidney transplantation</li> </ul>	<ul style="list-style-type: none"> <li>Long-term graft survival in patients who have undergone kidney transplantation after imlifidase administration</li> </ul>	<ul style="list-style-type: none"> <li>Patient survival, kidney function, comorbidity, treatments and quality of life</li> <li>Safety</li> <li>DSA</li> <li>Immunogenicity</li> </ul>	Ongoing	

<sup>1</sup> Winstedt et 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)

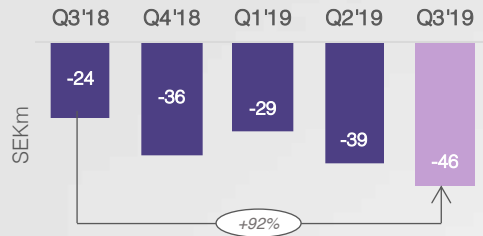
<sup>2</sup> Lorant et al., "Safety, immunogenicity, pharmacokinetics and efficacy of degradation of anti-HLA antibodies by IdeS (imlifidase) in chronic kidney disease patients" Am J Transplant. 2018 Nov;18(11):2752-2762

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

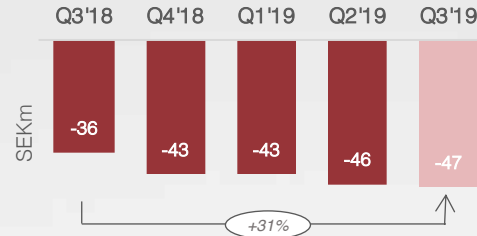
<sup>4</sup> Montgomery et al., "Safety And Efficacy Of Imlifidase In Highly-sensitized Kidney Transplant Patients: Results From A Phase 2 Study" ATC Abstract, 2019

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

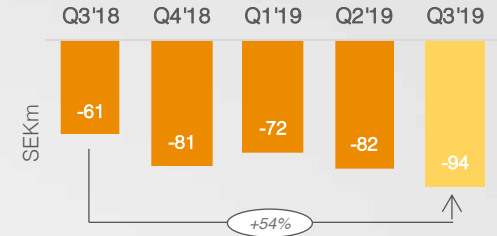
SG&A expenses (Q/Q)



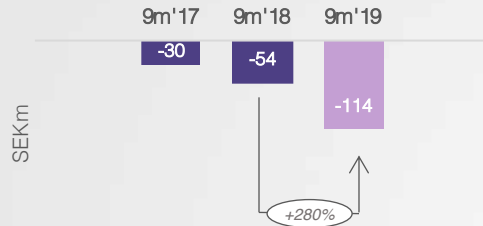
R&D expenses (Q/Q)



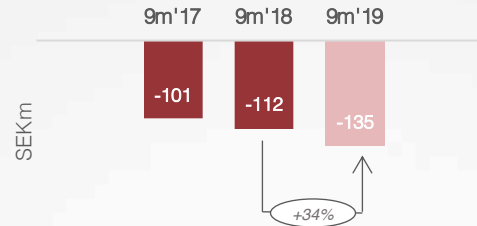
Net loss (Q/Q)



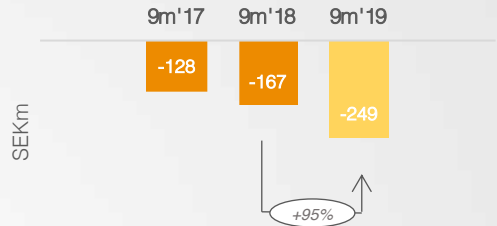
SG&A expenses (Y/Y)



R&D expenses (Y/Y)

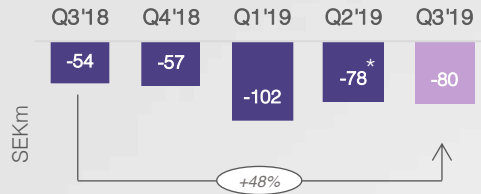


Net loss (Y/Y)

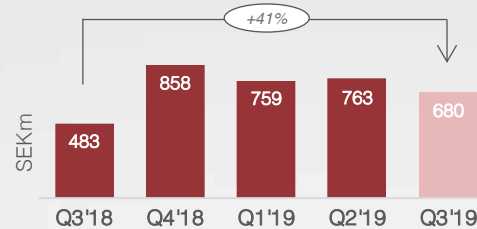


# Cash flow follows increased activity level; Cash position stood at SEK 680m (~USD 70m) end of September 2019

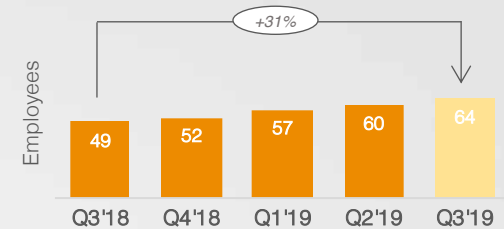
## Operating cash flow (Q/Q)



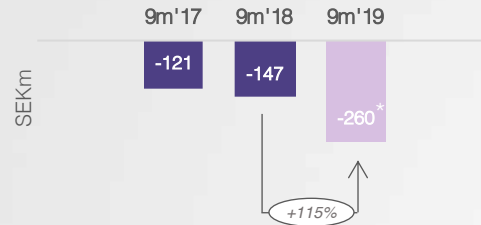
## Cash & short term investments (Q/Q)



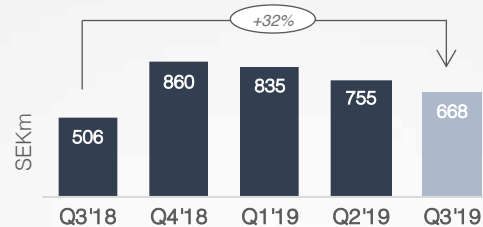
## Number of employees (Q/Q)



## Operating cash flow (Y/Y)



## Shareholders equity (Q/Q)



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[www.hansabiopharma.com](http://www.hansabiopharma.com)



## Calendar

Oct 31, 2019	Interim report Jan – Sep 2019
Nov 4-7, 2019	NDRS MorganStanley, US
Nov 12, 2019	Bryan Garnier Healthcare Conference, Paris
Nov 14-15, 2019	NDRS Kempen, Amsterdam and Zurich
Nov 15, 2019	NDRS Carnegie, Stockholm
Nov 19, 2019	Redeye Lifescience Conference, Stockholm
Nov 20, 2019	Jefferies Global Healthcare Conference, London
Dec 4, 2019	Evercore Annual Health CONx Conf, Boston
Dec 5, 2019	DNB Nordic-American Life Science Conf, NYC
Jan 8, 2020	SEB Nordic Seminar, Copenhagen
Jan 12-15, 2020	JPM Week, San Francisco
Feb 6, 2020	Interim Report Oct-Dec 2019
Mar 4, 2020	Carnegie Nordic Healthcare Seminar, Stockholm
Apr 2, 2020	Annual Report 2019
Apr 28, 2020	Interim Report Jan-Mar 2020

