

Q2 2018 Presentation

16.08.2018, Oslo

Agenda

- Highlights
- Beta-glucans
 - Animal- and Consumer health
 - Cancer
 - Advanced wound care
- Enzymes
 - Molecular and new markets
- Q2 Financials
- Outlook for 2018



Biotec in brief

A corporation with two independent versatile technology platforms who both benefit from underlying market growth

Beta-glucans

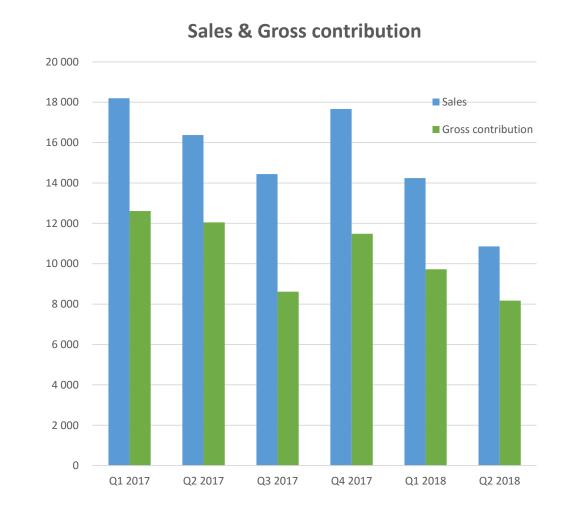
- A common unique technology platform with immune modulating products for improved outcome
- Woulgan proven to reactivate wound healing and with commercial progress in key markets
- An adjuvant in selective cancer treatments

<u>Enzymes</u>

- Fast growing business that is developing and selling unique enzymes for tommorows personalized healthcare:
 - DNA sequencing
 - Gene therapy
 - Diagnostics

Highlights Q2 2018

- Raised NOK 22.1 million in new equity by issuing 4,390,000 new shares
- Q2 sales of MNOK 10.9 (16.4)
- EBITDA of MNOK -4.2 (-4.4)
- Neuroblastoma phase II interim results presented at ANR2018
- Cash flow from operations YTD 2018 is at same level as 2017 despite lower sales



New capital raised in June 2018

The new capital raised is intended to accelerate the company's value building activities, which in a cash constrained environment otherwise would have taken second priority:

- * Biotec Pharmacon's SBG® has in a recent phase II study shown promising effects as an adjuvant to vaccine treatment against relapse of neuroblastoma, and the Company needs to develop this business case further.
- * ArcticZymes has a great potential for further growth and the Company needs to invest more to accelerate product and portfolio development.
- * To identify non-organic and complementary growth opportunities in ArcticZymes, the Company needs dedicated resources.
- * Building an advanced wound care product franchise takes time as a large number of wound care nurses needs to try the product and be convinced of its benefits. The Company does not intend to increase the market pressure for the Woulgan gel, but will accelerate the development of a dry-layer formulation, once the gel shows commercial traction, thus increasing the value proposition for a potential partner.

Beta-glucans BIOTEC PHARMACON

Activities for M-Glucan® and M-Gard®

Over 20 years experience with immune-modulating beta-glucans

Animal health

- Sales experiences annual and seasonal fluctuations driven by demand for health feed within the aquaculture sector.
- Difficult for Biotec to influence consumption in the aqua marine sector as M-Glucan® is sold as integral part of an animal feed product.
- Our brand is strong in terms of quality, documentation and security of supply, but the aqua marine feed market is under pressure.

Consumer Health:

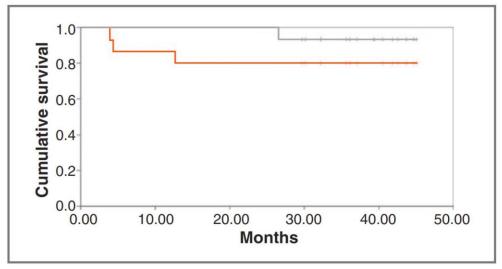
- Have in 1H 2018 passed 2017 annual sales.
- Actively working on expanding the customers base participating in fairs etc.
- Potential new customers perform stringent due-diligence as part of purchasing processes.



SBG® in current neuroblastoma vaccine trial

SBG® and Neuroblastoma

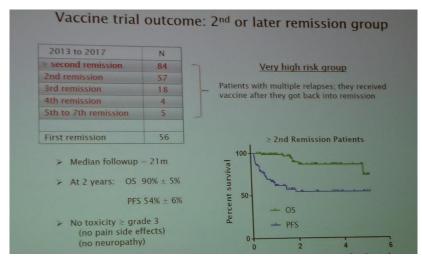
- High impact indication in children with a large unmet medical need (<50% survival in high-risk patients)
- Proof of concept study for use of SBG® as adjuvant in immunotherapy of cancer



Relapse-free survival (red) and overall survival (black) of the 15 study patients from the start of the vaccination (Kushner et al 2014, Clinical Cancer Research 20:1375-1382).

Data from trial presented at Advances in Neuroblastoma Research 2018 at 9-12 May in San Francisco

- 84 patients with relapsed neuroblastoma treated with vaccine + SBG
- Two years overall survival 90% and progression free survival of 54% in this very high-risk patient group
- Improved outcome correlate with immune response to vaccine
- SBG seem to induce improved immune response and higher antibody titer towards the vaccine.



Vaccine trial outcome (Cheung et al presented at ANR 2018).

SBG® in immunotherapy of neuroblastoma

Clinical trial program of the bivalent ganglioside vaccine in combination with SBG® for high-risk neuroblastoma

2009 – 2013 Phase I Safety	2013 – 2016 Phase I/ II Efficacy	2016 – 2019 Phase II Efficacy	2019 – 2021 Phase II/III Efficacy
≥2nd remission patients	≥2nd remission patients	≥1st remission patients	Multi-site Randomised Controlled Trial ≥1st remission patients
15 patients. Results published in Clinical Cancer Res 2014	84 patients. Initial results presented at ANR18 in San Francisco May 2018.	115 additional patients to be included (215 in total). About 85 included by end July 2018.	Under planning
Safety in relapsed patient population	Efficacy in relapsed patient population.	Commence initial approval process	Possible approval of combined treatment for relapsed neuroblastoma

Status Woulgan®





- Number of Woulgan accounts increasing
 - Sellers focus on increasing number of users &
 - Driving adoption of new, additional treatment
- UK and Nordic studies accepted for publication
 - strong healing benefits with excellent safety
 - simple and well-tolerated formulation
- Continue exploring additional partners for faster growth of franchise.

Activities in all markets



	UK	Nordics	Germany
Clinical	300 patient study manuscript accepted for publication in September's Journal of Wound Care In ulcer-type wounds, Woulgan shows 62% 12 week healing rates vs. 30% for standard care	2 articles from Nordic case series published in "Sårmagasinet" (Sweden) and "Sår" (Norway, Denmark)	
Market Access	Sales team are working to add Woulgan onto local formularies so clinicians are allowed to use Woulgan To drive fuller adoption and encourage cost-conscious clinicians to use Woulgan, sellers will work add it onto treatment pathways	Good progress to expand tender listings in several Swedish regions, including evaluations and tender bids	Sick Funds continue to reimburse Woulgan Ministry of Health in legal action with the G-BA having rejected their proposed changes to dressing reimbursement. No resolution is expected in the short-term
Go-to-market	20 customer evaluations currently active with over 60 planned Three evaluations completed in second quarter with the lead clinician recommending Woulgan® as part of their formulary	Together with Navamedic, Biotec actively promoting Woulgan in 5Klovern and Kalmar	Opened a major new Homecare company account, dedicated to providing wound care nationally

ArcticZymes

Molecular and new markets



Commercial Updates

Experienced headwinds during the second quarter and first half. Two factors have contributed to lower sales revenues:

Largest Customer

Sales of main product lower during this period compared to previous years

Directly related to different purchasing habits following the centralization of the customers' manufacturing facilities

Customer is still committed to serving their well-established customer base with products

Business is not going away but we do expect our customer to stock differently in the future

Represents the largest orders AZ receives and is the main attributing factor to the large quarterly fluctuations

Cross sales of other products are steadily ramping and over the next few years will compensate for sales fluctuations

Changes in Salesforce

The salesforce was changed and expanded

Priority was to secure hires and get new business developers on board. Achieved in a short-time frame

Assembled a well-experienced and seasoned sales team of three new business developers:

- 2 in Europe
- 1 in the USA

It took longer time than anticipated to get up to speed and achieve full impact during the quarter

Now fully trained and up to speed. Ready and eager to make up lost ground during first half

Sales Dynamics



Catalogue Business

- Small orders
- 1000's customers
- Serving end users



B2B/OEM Business

- Large bulk orders
- 10's -100's customers
- Serving companies

New Product Launches

ArcticZymes has had a busy second quarter in launching 3 new products

Proteinase

- Novel heat-labile enzyme easily inactivated after use
- Open doors to penetrate the rapidly growing liquid biopsy and sample preparation markets. e.g. non-invasive tests based on cancer biomarkers



Glycerolfree SAP

- Represents the 4th member of ArcticZymes' glycerol-free product family
- New formulation was developed based on requests from existing customers eager to expand their product range and product life cycles

Achieved 5 product launches within last 10 months

Triton-free Cod UNG

- New formulation: marks the 1st step towards maintaining a completely EU REACH compliant product portfolio
- Over next 12 months AZ will gradually offer all of its products as EU REACH compliant versions

Upscaling of Production

Scaling Up Production to Meet Commercial Demand

- Following the launch of several products over the last 2 years new supply deals and opportunities are now materializing
- With this new commercial potential on the table AZ is prioritizing production scale up of three of its newest products

IsoPol[™] BST+ Polymerase



- Polymerases represent largest opportunity in target markets
- Potential for incorporation into a company's entire Molecular Diagnostic (MDx) portfolio
- Individual deals in the million NOK range.
 Several deals advancing

ArcticZymes Proteinase



- Attracted interest from companies developing liquid biopsy and single cell applications
- Necessary for supplying sufficient material for our customers' product developments
- Potential for incorporation into an entire product portfolio by our customers

Salt Active Nuclease High Quality



- Upscaling efforts ongoing since the 4th Quarter last year. Several options available
- Sizable orders will be demanded as customers lock down their cGMP processes
- Expect to convert a number of ongoing prospects with 90 leading viral vector facilities

ArcticZymes Road Map

- Focus on leveraging increased capacity and higherlevel sales expertise within our new business development team
- Sales efforts will very much be prioritized on:
 - ✓ develop new key accounts
 - ✓ leveraging cross sales with existing customers
 - ✓ secure new molecular customers we haven't been able to reach before via new products
- Longer-term success will hinge on:
 - ✓ AZ's ability to commercialize a relevant and broader synergistic OEM product portfolio
 - ✓ Combination of investment in organic and non-organic growth initiatives

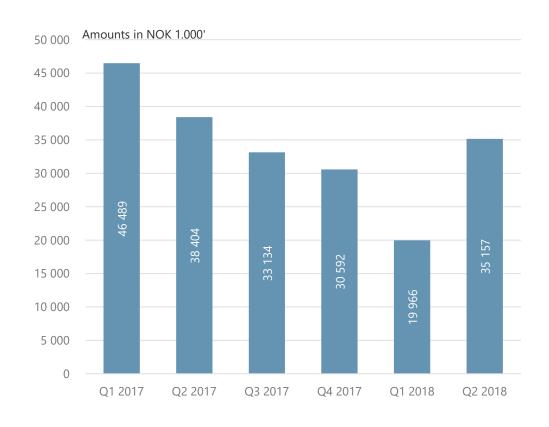


Q2 Financials



Cash flow explained by private placement

Net cash position



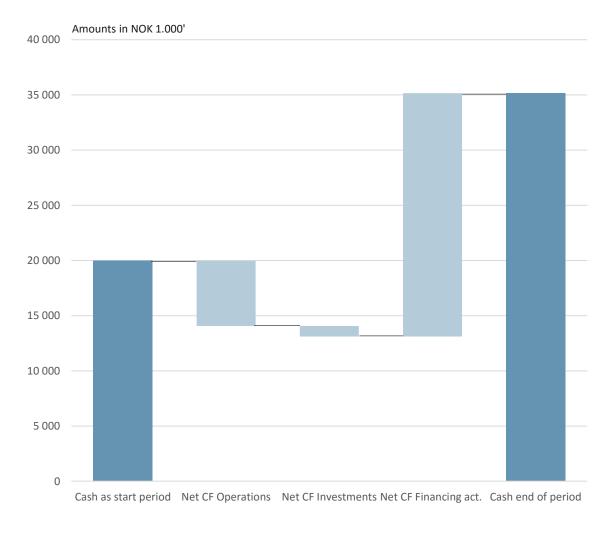
Second quarter changes in cash of +15.2 MNOK

- Private placement of 22.1 MNOK
- 13.5 (20.4) MNOK in short-term receivables
- 10.6 (13.9) MNOK in short-term payables

Cash balance of 35.2 MNOK end of Q2 2018

Q2 2018 Cash flow detailed

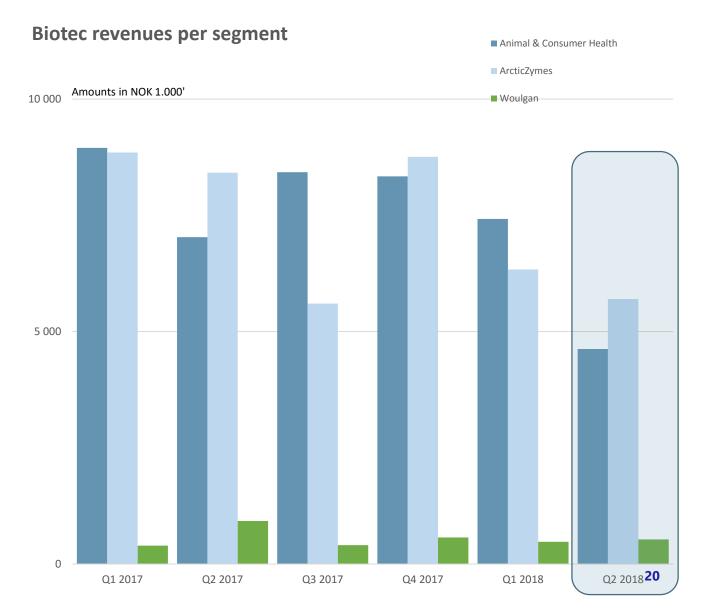
Q2 2018 Cash flow



- Q2 2018 Cash flow from operations -5.9 MNOK
 - Explained by change in working capital of
 - Receivables -0.4 MNOK
 - Payables -1.8 MNOK
 - Inventory 0.2 MNOK
- Q2 2018 Cash flow from investments -1.0 MNOK
 - Investment of MNOK 0.3 in intangible assets
- Q2 2018 Cash flow from financing 22.1 MNOK
 - Private placement of 4.4 million new shares

Q2 sales was low and below expectations

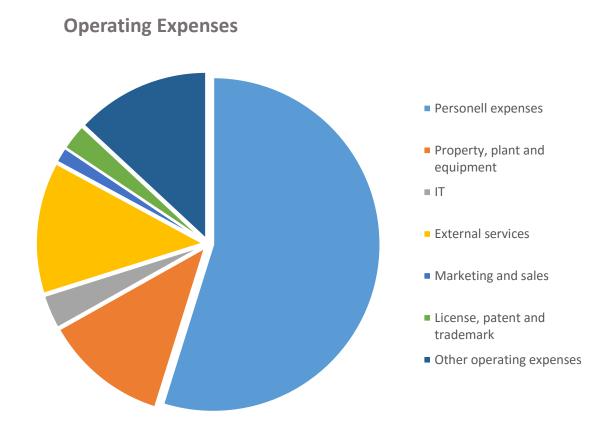
Segment	Q2 Sales
ArcticZymes	MNOK 5.7
Animal & Consumer Health	MNOK 4.7
Woulgan	MNOK 0.5
Group	MNOK 10.9



EBITDA improved due to reduction in operating expenses

EBITDA Amounts in NOK 1.000' Q1 2017 Q2 2017 Q3 2017 Q4 2017 Q1 2018 Q2 2018 0 -1 000 -2 000 -3 000 -4 000 -5 000 -6 000 -7 000

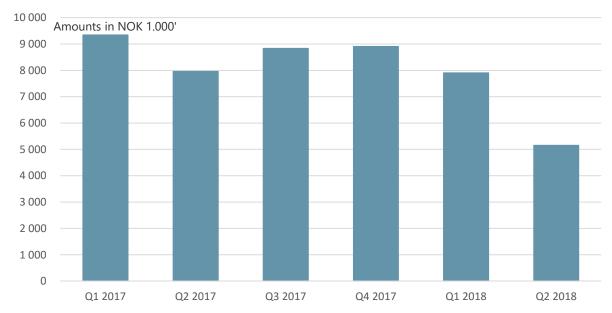
-8 000



Beta-Glucan performance

Beta-Glucans	Q2		,	YTD	
(Amounts in NOK 1.000)	2018	2017	2018	2017	
Sales revenues	5 170	7 957	13 075	17 305	
Gross profit	2 616	3 625	6 249	7 090	
Operating expenses	-6 584	-8 936	-14 878	-17 691	
EBITDA	-3 568	-4 635	-7 630	-9 265	

Sales per quarter

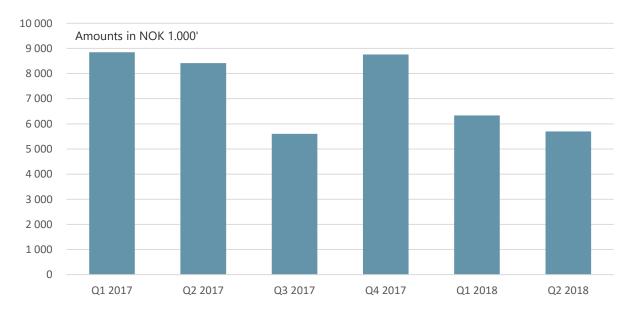


- Sales continues to be driven by Animal Health and Consumer Health
- Reduced expenses on an quarterly basis primarily related to personnel and marketing
- Woulgan sales are at a steady state
- EBITDA improved due to favourable product mix and cost control

ArcticZymes performance

Enzymes	Q2		,	YTD	
(Amounts in NOK 1.000)	2018	2017	2018	2017	
Sales revenues	5 701	8 420	12 038	17 269	
Operating expenses	-5 886	-6 621	-13 800	-14 090	
EBITDA	647	2 566	-20	5 161	

Sales per quarter



- Q2 2018 sales 2.7 MNOK lower than second quarter of 2017
- Operating expenses decreased compared to Q2 2017 due to reduction in personnel and IP expenses
- EBITDA reduced from Q2 2017 primarily due to lower sales

Outlook 2018



Outlook 2018

- Overall sales growth versus 2017 uncertain
- Reduction in cash consumption
- Review of Woulgan go-to-market model to ensure further growth
- AZ expects to grow the business organically while also looking for inorganic growth opportunities

