

FREE WRITING PROSPECTUS

Xtant Medical Holdings, Inc. Company Presentation

This presentation highlights basic information about Xtant Medical Holdings, Inc. Because it is a summary, it does not contain all the information you should consider before investing.

We have filed a registration statement (including a prospectus) with the SEC for the offering to which this presentation relates. The registration statement has not yet become effective. Before you invest, you should read the prospectus included in the registration statement (including the risk factors described therein) and other documents we have filed with the SEC for more complete information about us and the offering. You may get these documents for free by visiting EDGAR on the SEC website at <http://www.sec.gov>.

The preliminary prospectus, dated September 28, 2016, can also be accessed through the following link:
https://www.sec.gov/Archives/edgar/data/1453593/000114420416125750/v449443_s1a.htm.

Alternatively, Xtant Medical Holdings, Inc. or the dealer-manager participating in the offering will arrange to send you the prospectus if you contact Maxim Group, LLC, Maxim Group LLC, Prospectus Department, 405 Lexington Ave., New York, NY, 10174; Telephone: (212)-895-3745; Email: syndicate@maximgrp.com.



Encompassing Excellence

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September/October 2016 Investor Presentation



Important Cautions

Regarding Forward Looking Statements

This presentation contains certain disclosures that may be deemed forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to significant risks and uncertainties. Forward-looking statements include statements that are predictive in nature, that depend upon or refer to future events or conditions, or that include words such as "continue," "efforts," "expects," "anticipates," "intends," "plans," "believes," "estimates," "projects," "forecasts," "strategy," "will," "goal," "target," "prospects," "potential," "optimistic," "confident," "likely," "probable" or similar expressions or the negative thereof. Statements of historical fact also may be deemed to be forward-looking statements. You are cautioned not to place undue reliance on forward-looking statements that speak only as of the date on which they are made. Forward-looking statements reflect management's current estimates, projections, expectations and beliefs, and are subject to risks and uncertainties outside of our control that may cause actual results to differ materially from what is indicated in those forward-looking statements.

These statements by their nature involve risks and uncertainties, and actual results may differ materially depending on a variety of important factors, including, among others, the occurrence of the risks described in the "Risk Factors" section of our most recent quarterly report on Form 10-Q filed with the U.S. Securities and Exchange Commission. In addition to those factors, the following factors, among others could cause our actual results to differ materially from forward-looking or actual performance: our ability to integrate X-spine's business and realize the projected benefits of the transaction; our ability to meet our obligations under existing and anticipated contractual obligations, including financial covenants and other obligations in our secured lending facility; our ability to manage cash flow; the ability of our sales force to achieve expected results; and other factors. We assume no duty to update any forward-looking statements.

Annualized, pro forma, projected and estimated numbers used in this presentation are used only for illustrative purposes and are not forecasts and may not reflect actual results.

This presentation contains certain supplemental measures of performance, such as EBITDA, that are not required by, or presented in accordance with, generally accepted accounting principles in the United States ("GAAP"). Such measures should not be considered as replacements of GAAP. Further information with respect to and reconciliations of such measures to the nearest GAAP measure can be found in the Company's historical filings with the Securities and Exchange Commission.

Any market or industry data contained in this presentation is based on a variety of sources, including internal data and estimates, independent industry publications, government publications, reports by market research firms or other published independent sources. Industry publications and other published sources generally state that the information contained therein has been obtained from third-party sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such information. Our internal data and estimates are based upon information obtained from trade and business organizations and other contacts in the markets in which we operate and management's understanding of industry conditions, and such information has not been verified by any independent sources. Accordingly, investors should not place undue reliance on such data and information.



Introduction



Xtant Medical Holdings, Inc. develops, manufactures and markets outstanding regenerative medicine products and medical devices for the global spine market



The Company's comprehensive portfolio serves the specialized needs of orthopedic and neurological surgeons including:

- Orthobiologics for the promotion of bone healing, and
- Implants and instrumentation for the treatment of spinal diseases




Xtant operates its Biologics business out of Belgrade, MT, its Fixation and implant business out of Miamisburg, OH, and additional administrative support functions out of Louisville, CO

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Comprehensive and Diversified Product Portfolio

FIXATION



ANTERIOR CERVICAL FIXATION

ARANAX Spider

ANTERIOR CERVICAL INTERBODY

IRIX-C CALIX-PC

POSTERIOR CERVICAL/THORACIC

CEXTEX

THORACOLUMBAR FIXATION

X300 X-press 2 FORTEX ZYFIX

THORACOLUMBAR INTERBODY

AXLE IRIX-A CALIX-A-T-P Butrex

SACROILIAC FUSION

SILEX

BIOLOGICS

CERVICAL STRUCTURAL ALLOGRAFT

Atrix-C

CERVICAL, THORACOLUMBAR & SACROILIAC FUSION BIOLOGICS

OsteoSelect[®] DBM Putty axograft[®]

OsteoSelect[®] PLUS 3Demin[®]

OsteoSponge[®] OsteoVive[®]

THORACOLUMBAR STRUCTURAL ALLOGRAFT

Heros

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Large US Market Opportunity

¹Source: BioMed GPS 2014

²Source: iData 2014

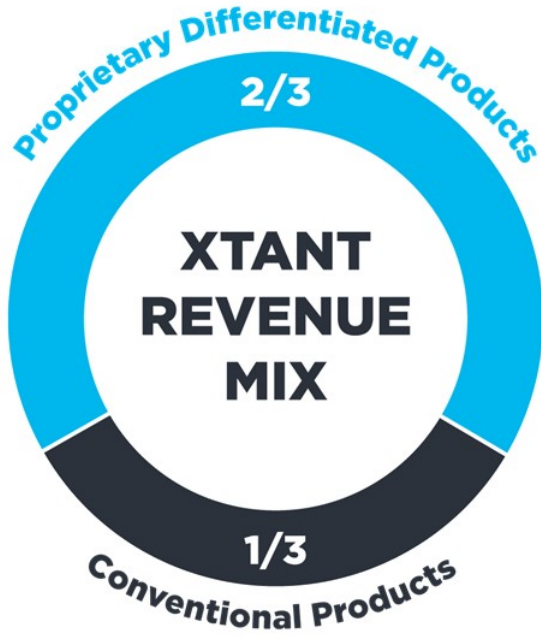
TOTAL MARKET OPPORTUNITY \$8.9B

Category	Value	Percentage
SOFT TISSUE: SPORTS	\$287M	3%
BONE REPLACEMENT	\$1.7B	17%
OTHER	\$1.1B	11%
TRADITIONAL CERVICAL	\$1.0B	10%
TRADITIONAL INTERBODY	\$1.5B	15%
MINIMALLY INVASIVE SURGERY	\$1.5B	15%
TRADITIONAL THORACOLUMBAR	\$1.8B	18%
FIXATION MARKET	\$6.9B	78%
BIOLOGICS MARKET	\$2.0B	-

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Revenue Mix



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Operating Results

Increasing Gross Margins

Quarter	Revenue (\$M)	Gross Margin (%)
3Q15*	\$20.9M	65.5%
4Q15	\$22.3M	67.0%
1Q16	\$21.0M	67.2%
2Q16	\$21.5M	68.5%

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*3Q15 Results are presented as pro forma consolidated, all other data is as reported; all are unaudited

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Full Year 2016 Guidance

(\$000's)	Full Year 2015 Results*	Full Year 2016 Guidance		
		Low	-	High
Total Revenue	\$86,518	\$87,000	-	\$90,000
OEM Revenue	\$5,093	\$1,000	-	\$1,000
Core Revenue	\$81,425	\$86,000	-	\$89,000
EBITDA**	(\$33)	\$2,300	-	\$3,300

*Full Year 2015 Results are presented as pro forma consolidated, all other data is as reported

**The Company defines earnings before interest, taxes, depreciation and amortization ("EBITDA") as net income/loss from operations before depreciation, amortization, impairment charges, non-recurring expenses and non-cash stock-based compensation. See reconciliation of EBITDA at the back of this presentation.

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Growth Drivers



Now that the integration of X-spine is complete, management is focused on driving growth



Portfolio sales (Biologics sold through the legacy X-spine channel and Fixation products sold through the legacy Bacterin channel) could provide substantial growth in the second half of 2016



Selling existing products to existing customers



Investment in consigned inventory and surgical instrumentation in the first half of 2016 will begin to generate revenue in the second half of 2016



New products in development that leverage our call point in spine surgery

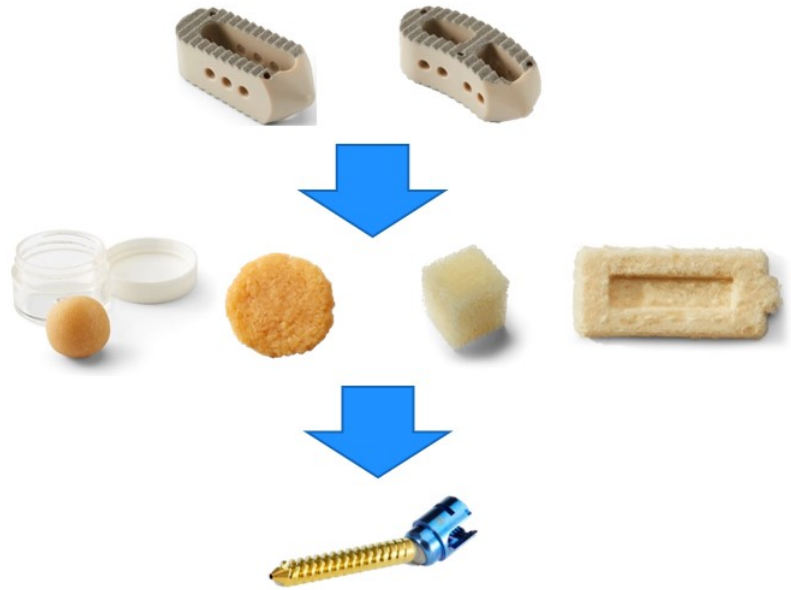
Portfolio Selling Example: Posterior Lumbar Solutions

\$1.5M

2Q16 Revenue from portfolio selling, 6.6% of total revenue, up from \$935K in 1Q16

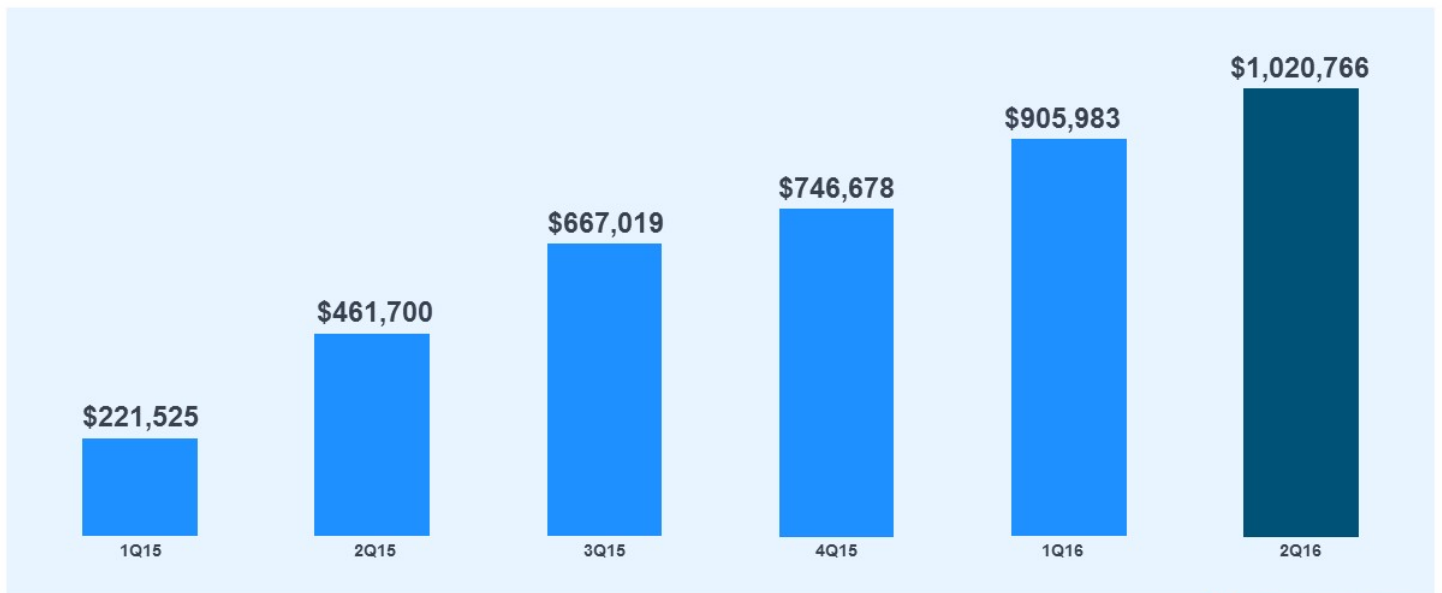
10-12%

Management goal for portfolio selling



Growing Demand for 3Demin since launch

3Demin Revenue



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New Products Announced Since Completion of the X-spine Acquisition

OsteoSelect[®] PLUS DBM PUTTY

- Revenue Contribution Expected in 2H16
- **Total Addressable Market approximately \$400M**

Atrix·C[™]

Cervical Allograft Interbody Spacer

- \$75,000+ revenue in 2Q16 (Pilot Launch)
- **Total Addressable Market approximately \$282M**

ARANAX CERVICAL PLATING SYSTEM

- \$87,000+ revenue in 2Q16 (Pilot Launch)
- **Total Addressable Market approximately \$160M**

Xspan[™] Laminoplasty Fixation System

- 510(k) clearance Announced March 30, 2016
- **Total Addressable Market approximately \$110M**

OsteoVive™

- Announced March 24, 2016
- \$252 million total addressable market*
- Unique, viable cell line (MIAMI)
- Launched end of Q2 2016

*Source: BioMed GPS 2014

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FINANCIAL OVERVIEW

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Financial Overview

Second Quarter 2016 Summary (\$000's)

(000's), unaudited	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
Total Revenue	\$21,462	\$42,439
OEM Revenue	\$436	\$790
Core Revenue	\$21,026	\$41,649
Gross Profit	\$14,703	\$28,804
Gross Margin	68.5%	67.9%
Operating Loss	(\$2,122)	(\$4,485)
EBITDA** Gain (Loss)	\$333	\$188

Six Consecutive Quarters of Y/Y Increase in Core Sales

Six Consecutive Quarters of Expanding Gross Margin, Increase of 3.1% over FY15 GM

Four Consecutive Quarters of Increasing EBITDA - \$1.2M increase from 3Q16

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Capitalization

(000's)	As of June 30, 2016*
Cash & Cash Equivalents	\$2,217
Debt:	
Revolving Line of Credit	\$5,481
Non-Convertible Debt	\$47,072
Convertible Debt (Conv. Prices: ~\$2.2MM at \$2.90 and ~\$68.0MM at \$3.88)	\$70,238
Capital Lease Obligations	\$961
Total Debt	\$123,752
Shares Outstanding:	
Common Stock	12,135
Options (Wtd. Avg. Strike of \$10.83)	562
Warrants (Wtd. Avg Strike of \$7.65)	1,236
Total Common Stock, Options and Warrants	13,933

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*Results listed under "As Of June 30, 2016" are unaudited

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2016 Non-GAAP Profitability & Break Even

- Non-GAAP profitability is defined as EBITDA adjusted for cash based interest expense
- Revised guidance for full year 2016 non-GAAP profitability is (\$3.2M) to (\$2.2M)
- Break even revenues occur at approximately \$24.2M per quarter
- After break even, on an incremental basis the Company anticipates approximately 45% contribution margin

Estimated Incremental Revenue Flow Through

(\$000's)	Break Even	Incremental
Quarterly Revenue	\$24,250	\$1,000
Gross Profit	\$16,611	\$750
Gross Margin	68.5%	75%
Commissions	\$7,275	\$300
All Other Operations & Cash-Based Interest Expense	\$9,336	\$0
Income From Operations	-	\$450
Operating Margin	0%	45%

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SUMMARY

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Financial Guidance

(\$000's)	Full Year 2016 Guidance		
	Low	-	High
Revenue	\$87,000	-	\$90,000
EBITDA**	\$2,300	-	\$3,300
Cash Based Interest Expense	\$5,450	-	\$5,450
Non-GAAP Profitability	(\$3,150)	-	(\$2,150)

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Growth Drivers



Xtant is a substantial revenue stage, spine-product business with expanding margins



Sales growth in 2016 and 2017 driven by Portfolio Sales and additional inventory and surgical instrumentation to service existing accounts and open new ones



Meaningful contribution from new products in second half of 2016 and through 2017

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Reconciliation of EBITDA

(000's)	Three Months Ended June 30, 2016	Three Months Ended June 30, 2015*	Twelve Months Ended December 31, 2015
Net Loss from Operations	(\$2,122)	(\$1,375)	(\$12,475)
Impairment of Assets	\$0	\$0	\$234
Acquisition and Integration related expenses	\$450,756	\$0	\$4,936
Gain from the Extinguishment of Debt	\$0	\$0	(\$2,345)
Non-Cash Compensation	\$135	\$214	\$794
Depreciation & Amortization	\$1,869	\$2,109	\$8,823
EBITDA Gain (Loss)	\$333	\$949	(\$33)

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