Corporate Presentation

As of December 31, 2017

NASDAQ: AXGN

It's time to rethink nerve repair.™

Safe Harbor Statement

This Presentation contains "forward-looking" statements as defined in the Private Securities Litigation Reform Act of 1995. These statements are based on management's current expectations or predictions of future conditions, events, or results based on various assumptions and management's estimates of trends and economic factors in the markets in which we are active, as well as our business plans. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates," "projects," "forecasts," "continue," "may," "should," "will," and variations of such words and similar expressions are intended to identify such forward-looking statements. The forward-looking statements may include, without limitation, statements regarding our assessment on our internal control over financial reporting, our growth, our 2018 guidance, product development, product potential, financial performance, sales growth, product adoption, market awareness of our products, data validation, our visibility at and sponsorship of conferences and educational events.

The forward-looking statements are subject to risks and uncertainties, which may cause results to differ materially from those set forth in the statements. Forward-looking statements in this release should be evaluated together with the many uncertainties that affect AxoGen's business and its market, particularly those discussed in the risk factors and cautionary statements in AxoGen's filings with the Securities and Exchange Commission. Forward-looking statements are not guarantees of future performance, and actual results may differ materially from those projected. The forward-looking statements are representative only as of the date they are made and, except as required by law, AxoGen assumes no responsibility to update any forward-looking statements, whether as a result of new information, future events, or otherwise.

The AxoGen Platform for Nerve Repair

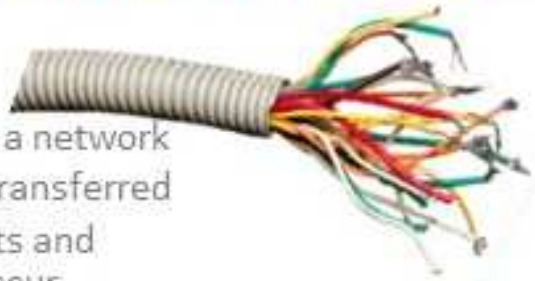
It's time to rethink nerve repair.™

AxoGen

The Function of Nerves

Nerves are like wires

- Transfer signals across a network
- If cut, data cannot be transferred
- If crushed, short circuits and data corruption may occur



The peripheral nervous system is a vast network from every organ to and from the brain

- Sensory
- Motor
- Autonomic

How are Nerves Injured?

AxoGen is the Pre-eminent Nerve Repair Company

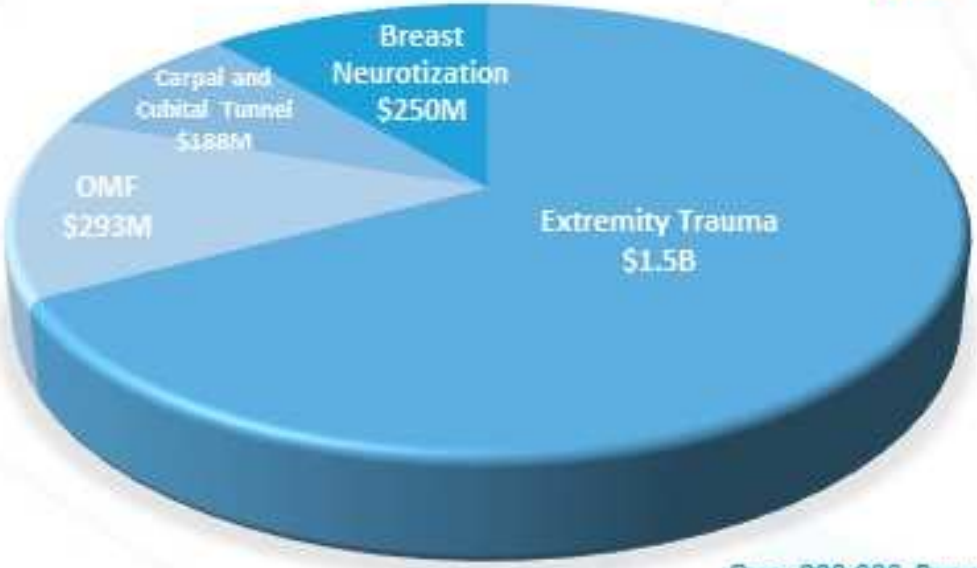
- ✓ Exclusive focus on peripheral nerve repair and protection solutions
- ✓ Comprehensive product portfolio addresses 900,000+ procedures
- ✓ $2.2B+ market opportunity
- ✓ "Five Pillar" Market Development Strategy delivered 28 consecutive quarters of YOY double-digit growth

Q4 2017 Revenue	**$17.0M, 49% growth vs Q4 2016**
2017 Revenue	**$60.4M, 47% growth vs 2016**
High Gross Margins	**84.6% as of December 31, 2017**
Cash as of December 31, 2017	**$36.5 M**
Debt as of December 31, 2017	**$25.0 M**

- ✓ Solid balance sheet provides resources to execute business plan
- ✓ Significant barriers to competitive entry including a growing body of clinical data
- ✓ Strong management team with track record of commercial success
- ✓ Expansion opportunities beyond current markets

Current Targeted Nerve Markets (U.S.)

AxoGen Current Target Markets
$2.2 Billion



Over 900,000 Procedures Annually in U.S.:

Extremity Trauma	719,000[1]
Carpal/Cubital Tunnel	118,000[2]
OMF	80,350[3]
Breast Neurotization	14,500[4]

It's time to rethink nerve repair.™

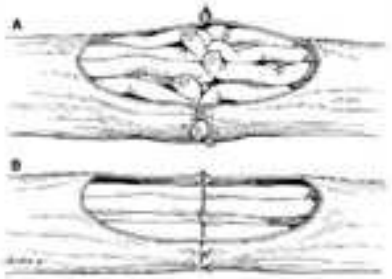
AxoGen

Traditional **TRANSECTION** Repair Options are Not Optimal

SUTURE

Direct suture repair of no-gap injuries

- Common repair method
- May result in tension to the repair leading to ischemia
- Concentrates sutures at the coaptation site



AUTOGRAFT

Traditional "Gold Standard" despite several disadvantages

- Secondary surgery
- Loss of function and sensation at harvest site
- 27% complication rate including infection, wound healing and chronic pain[5]
- Limited availability of graft length and diameter

HOLLOW-TUBES

Convenient off the shelf option; limited efficacy and use

- Provides only gross direction for regrowth
- Limited to small gaps
- 34%-57% failure rate >5mm gaps[6]
- Semi-rigid and opaque material limits use and visualization
- Repair reliant on fibrin clot formation

AxoGen Solutions for **TRANSECTION** Repair

Avance® Nerve Graft

Processed human nerve allograft for bridging nerve gaps

Clinically studied off-the-shelf alternative
- 87% meaningful recovery in sensory, mixed and motor nerve gaps in multi-center study[7]
- Eliminates need for an additional surgical site and risks of donor nerve harvest[8]
- May reduce OR time

Structural support for regenerating axons
- Cleansed and decellularized extracellular matrix (ECM)
- Offers the benefits of human peripheral nerve micro-architecture and handling

Revascularizes and remodels into patient's own tissue similar to autologous nerve[8]

16 Size options in a variety of lengths (up to 70mm) and diameters (up to 5mm)

AxoGuard® NerveConnector®

Only minimally processed porcine ECM for connector-assisted coaptation

Alternative to direct suture repair
- May reduce surgery time by as much as 40%[9]
- Reduces the risk of forced fascicular mismatch[10]

Alleviates tension at critical zone of regeneration
- Disperses tension across repair site[11]
- Moves suture inflammation away from coaptation face[9]

Revascularizes and remodels into patient's own tissue[12, 13, 14, 15]

It's time to rethink nerve repair.™

AxoGen

Traditional **COMPRESSION** Repair Options are Not Optimal

VEIN WRAPPING

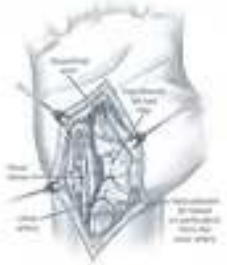
Autologous vein

- Barrier to attachment to surrounding tissue
- Requires extra time and skill to perform spiral wrapping technique
- Second surgery site

HYPOTHENAR FAT PAD

Autologous vascularized flap

- Barrier to attachment to surrounding tissue
- Only wraps part of the nerve circumference
- Increases procedure time



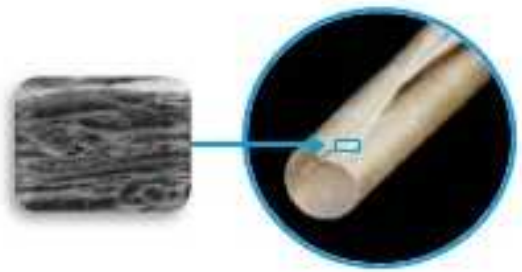
COLLAGEN WRAPS

Off-the-shelf

- Semi-rigid material limits use
- Degrades over time and does not provide a lasting barrier to soft tissue attachment

AxoGen Solutions for **COMPRESSION** Repair Offer Advantages

AxoGuard® NerveProtector

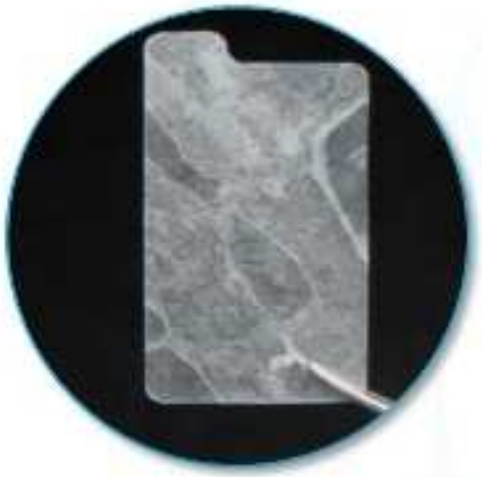


Minimally processed porcine extracellular matrix for wrapping and protecting injured peripheral nerve

- Protects repair site from surrounding tissue
  - Minimizes soft tissue attachments[24]
  - Allows for diffusion of nutrients through the material[12]
- Allows nerve gliding
  - Minimizes risk of entrapment[24]
  - Creates a barrier between repair and surrounding tissue bed[24]
- ECM Revascularizes and remodels into patient's own tissue[11, 12, 25]
- Easy to use
  - Semi-translucent to allow visualization of underlying nerve
  - Conforms to nerve

AxoGen Proactive Solution for **INFLAMMATION**

AVIVE®
SOFT TISSUE MEMBRANE



Avive® Soft Tissue Membrane is minimally processed human umbilical cord membrane that may be used as a resorbable soft tissue covering to separate tissues and modulate inflammation in the surgical bed.

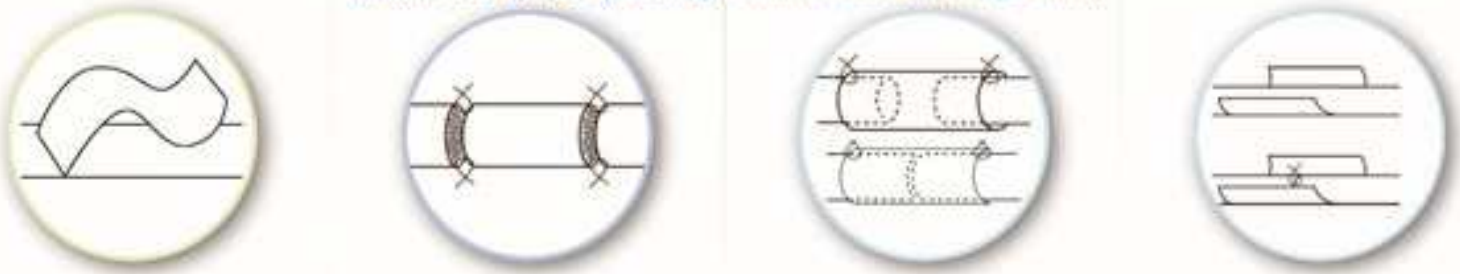
Smart processing to preserve the natural properties of the umbilical cord amniotic membrane

Designed with the Nerve Surgeon in Mind:

- Easy to handle, suture, or secure during a surgical procedure
- Up to 8x thicker than placental amniotic membrane alone[26]
- Specifically designed as a soft tissue covering to modulate inflammation, and provide a longer resorption profile to separate the tissue layers for at least 16 weeks[27]

AxoGen Surgical Solution Portfolio

Proaction	Connection		Protection
AVIVE® SOFT TISSUE MEMBRANE	Avance® Nerve Graft	AxoGuard® NerveConnector	AxoGuard® NerveProtector
	Transected Nerve (≥5mm)	Transected Nerve (≤5mm)	



IP and Regulatory Protection

Avance Nerve Graft 2007

IP Protection to 2022 and beyond

Competitive product BLA estimated 8 years

Expected Biosimilar Protection – additional 12 years exclusivity

Avance® Nerve Graft is processed and distributed in accordance with US FDA requirements for Human Cellular and Tissue-based Products (HCT/P)

11 Issued U.S. Patents

6972168	8986733
7402319	7851447
7732200	9629997
7772185	9690975
8758794	D777917
6696575	

15 Issued Intl Patents

AxoGen has Enforcement Discretion from FDA allowing continued sales under controls applicable to HCT/P with agreed transition plan to Biologic Product under a Biologic License Application (BLA)

A competitive processed nerve allograft would need to complete a BLA Phase I, II and III clinical study prior to clinical release.

Avance® expected to be the reference product for the category of processed nerve allograft

Avance® Nerve Graft

Market Development Strategy

Focus on Building Awareness Among Surgeons, Patients, and Investors

Participate in Clinical Conferences
- Exhibits, Podium presentations, KOL panels

Promote Awareness Among Patients
- AxoGen Patient Ambassador Program

Garner Positive Media Attention
- National, Regional, and Local Broadcast, Print, and Online

It's time to rethink nerve repair.™

AxoGen

Emphasis on Education

2016: 13 National Programs
2017: 15 National Programs
2018: 18 National Programs Expected

- ❑Educate on "best practices" of nerve repair
- ❑Local Grand Rounds and handling labs
- ❑Fellows education – training the next generation of surgeons, expect to train two-thirds of hand surgeon Fellows in 2018
- ❑Nerve Matters® – Online surgeon forum for sharing cases and techniques

Strong Commitment to Developing Clinical Evidence

*Total number for the portfolio of surgical implant products. Certain publications contain data on multiple products. As of December 31, 2017

It's time to rethink nerve repair.™

AxoGen.

Strong Commitment to Developing Clinical Evidence

RANGER® Study: Avance® Nerve Graft On-going registry study

- The largest multi-center clinical study in peripheral nerve repair, over 1,300 Avance® nerve repairs enrolled to date
- Overall meaningful recovery rates of 84-87%; comparable to autograft outcomes without associated donor site comorbidities
- Five peer reviewed publications, referenced over 220 times, and more than 50 clinical conference presentations

Significant Improvement over Manufactured Conduit

- Sensory[28, 29, 30] Motor[28,30]
- Complication Rate[29,30]

Comparable to Autograft[28,30]

- Sensory[28,29,30]
- Motor[28,30]

Predictable Performance[28,29,30]

Reproducible Outcomes[28,29,30]

It's time to rethink nerve repair.™

AxoGen

Focused Sales Execution, Increasing Market Penetration

Sales Execution Focused on Driving Results

- Continue expansion thru driving penetration in active accounts and adding new active accounts
- 5,100 potential U.S. accounts performing nerve repair
- 591 Active accounts as of December 31, 2017

Expanded Sales Reach

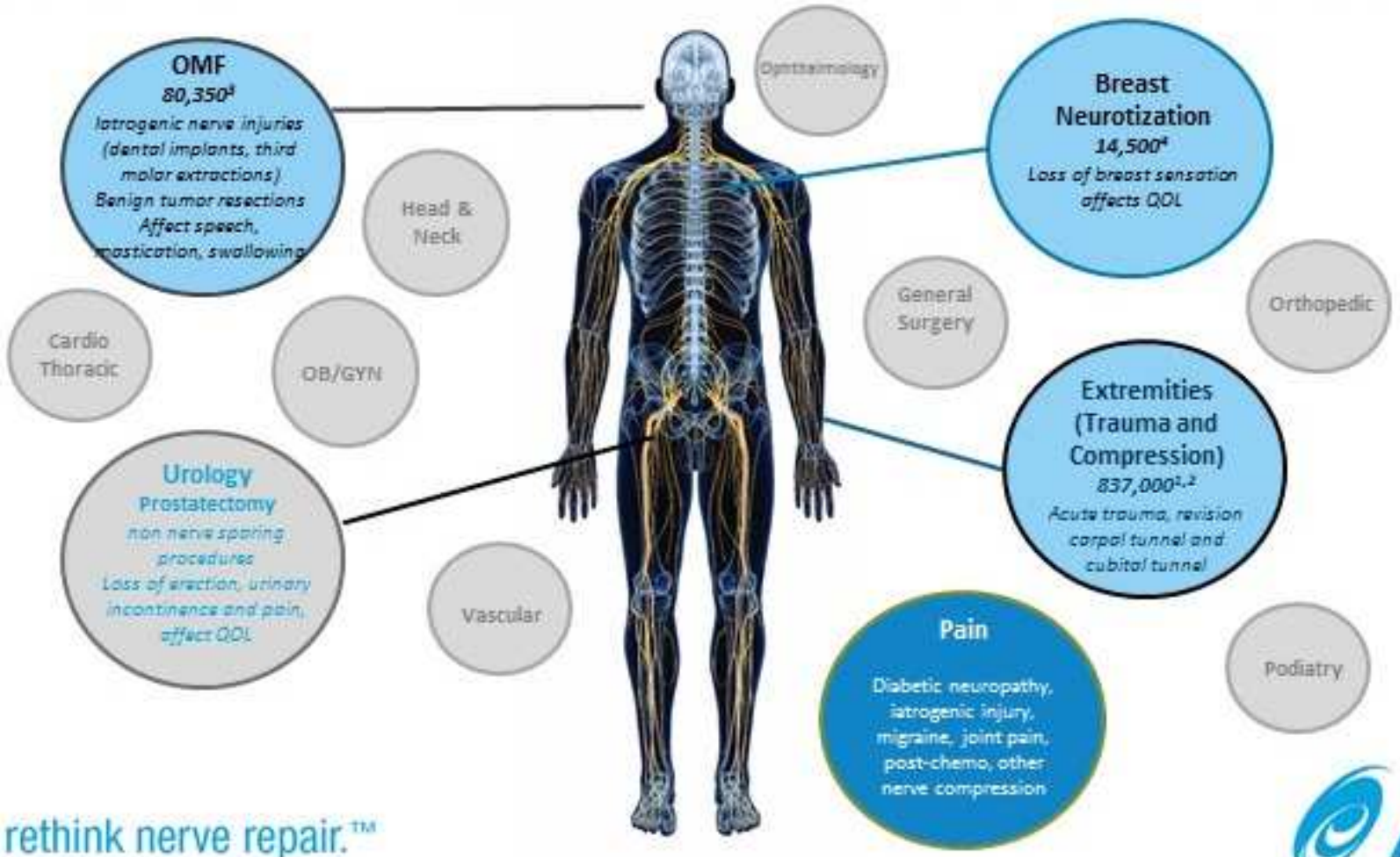
- U.S. sales team
  - 60 direct sales professionals at end 2017
  - 20 independent distributors at end of 2017
  - 75+ direct sales professionals by end of 2018

Expand the Opportunity in Nerve Repair

It's time to rethink nerve repair.™

AxoGen

Platform for Nerve Repair Across Multiple Applications

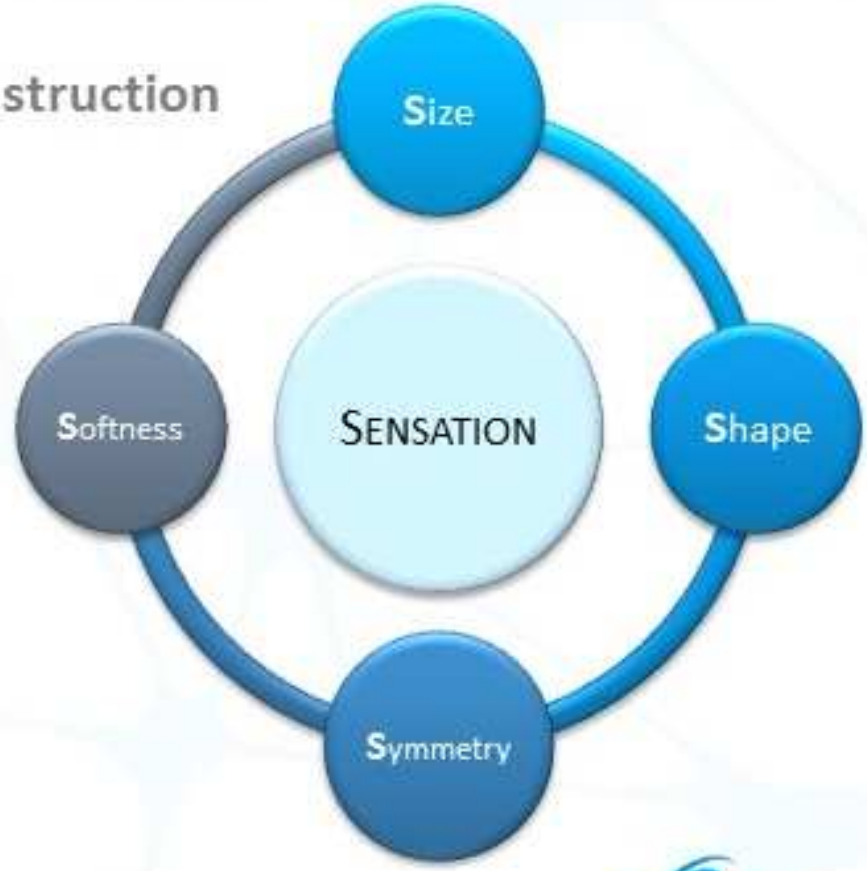


It's time to rethink nerve repair.™

AxoGen

Breast Reconstruction – Every Woman's Right

Raise the bar in outcomes for breast reconstruction



It's time to rethink nerve repair.™

AxoGen

Breast Reconstruction Neurotization
$250 Million Market Opportunity

307,660 BREAST CANCER PATIENTS[34]

113,834 MASTECTOMIES[35]

vs Breast Conserving options (Lumpectomy)

20,650 AUTOLOGOUS RECONSTRUCTIONS[36]

vs implant based reconstructions

14,500 APPLICABLE PATIENTS[4]

65% Bilateral

24,000 BREAST RECONSTRUCTIONS[37]

65% Dual Neurotization

$250 Million

Commercial Strategy
20 to 25 Breast Neurotization Centers

Build Market Awareness

- Digital marketing for patients
- Increased awareness of the issues and solution through media and PR efforts
- Focused co-marketing agreements with Reference Centers

Emphasis on Education

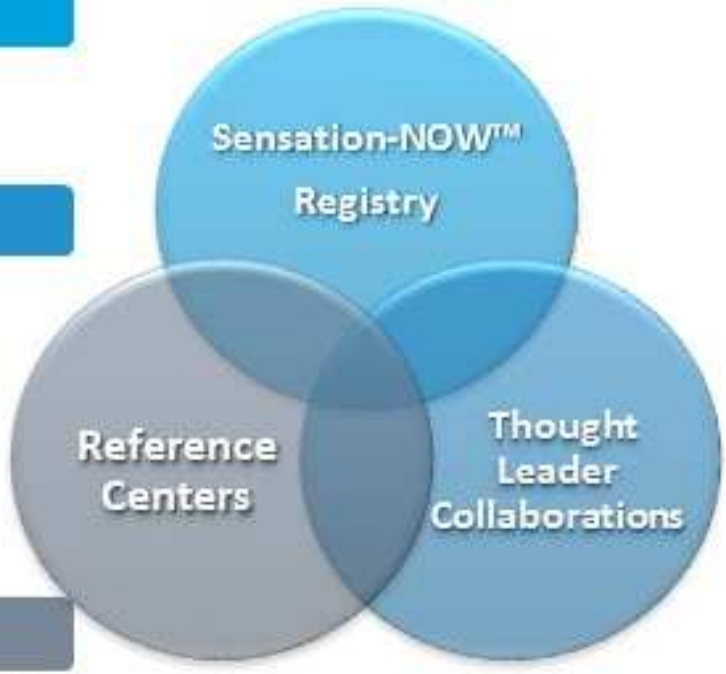
- Train residents and fellows
- Create a library of resources focused on techniques
- Nerve Matters®

Develop Clinical Evidence

- Sensation-NOW™ (Sensation Neurotization Outcomes for Women) Registry
- Single vs Dual Neurotization – randomized prospective study
- Additional investigator initiated clinical studies and sponsored studies

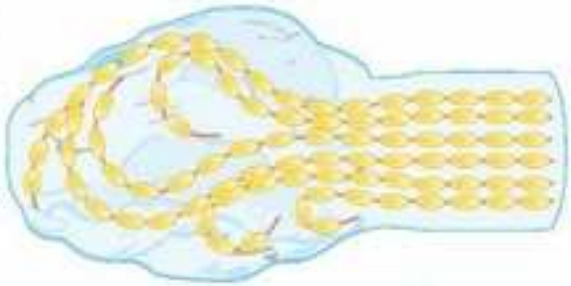
Focused Sales Executions

- Accelerate adoption of our ReSensation™ technique at Reference Centers and Sensation-NOW™ locations



Future Expansion Application – Neuroma Management

- A neuroma is a tangled mass of disorganized nerve and fibrous tissue



- If not properly diagnosed and addressed, the management of these injuries require long term pharmacologic treatment and pain management

Neuromas Form Following Surgery or Trauma

Neuroma-in-Continuity

Stump Neuroma

Etiology	Examples
General Surgery	Hernia repair Mastectomy Lap. Cholecystectomy
Gynecology surgery	C-section Hysterectomy
Orthopedics	Arthroscopy Amputation Knee replacement
Other Causes	Post traumatic injury Occipital neuralgia

AxoGuard® NerveCap

- Patented method for protecting against neuromas #9,629,997
- U.S. FDA Clearance – K163446
  - Indicated to protect a peripheral nerve end and separate the nerve from the surrounding environment to reduce the development of symptomatic or painful neuroma
- Plan to conduct clinical evaluation and user preference studies in 2018

Delivering Strong Consistent Revenue Growth & Gross Margin

U.S. $ in millions

84.6% Gross Margin for the quarter ended December 31, 2017

Balance Sheet and Capital Structure

Balance Sheet Highlights	December 31, 2017
Cash	$36.5 Million
Total Bank Debt*	$25.0 Million

Capital Structure (shares)	December 31, 2017
Common Stock	34,350,329
Common Stock Options, RSUs, PSUs	4,976,432
Common Stock Warrants	44,843
Common Stock and Common Stock Equivalents	39,371,604

*The company has a $31 million of debt facility comprised of a $21 million term loan and a revolving line of credit of up to $10 million. The revolver may be increased at a later date to $15 million dollars at our request, and with the approval of MidCap. Total Bank Debt at December 31, 2016 is comprised of the $21 million term loan plus $4 million borrowed on the revolving line of credit. The facility carries a 54 month term, with interest only payments on the term loan for the first 24 months. The interest rate on the term loan is 8.0% plus the greater of LIBOR or 0.5%, which resulted in a rate of 9.36 percent as of December 31, 2017. Borrowings under the revolving line of credit bear interest of 4.5% plus the greater of LIBOR 0.5%, which resulted in a rate of 5.86 percent as of December 31, 2017.

AxoGen is the Pre-eminent Nerve Repair Company

- ✓ Exclusive focus on peripheral nerve repair and protection solutions
- ✓ Comprehensive product portfolio addresses 900,000+ procedures
- ✓ $2.2B+ market opportunity
- ✓ "Five Pillar" Market Development Strategy delivered 28 consecutive quarters of YOY double-digit growth

Q4 2017 Revenue	**$17.0M, 49% growth vs Q4 2016**
2017 Revenue	**$60.4M, 47% growth vs 2016**
High Gross Margins	**84.6% as of December 31, 2017**
Cash as of December 31, 2017	**$36.5 M**
Debt as of December 31, 2017	**$25.0 M**

- ✓ Solid balance sheet provides resources to execute business plan
- ✓ Significant barriers to competitive entry including a growing body of clinical data
- ✓ Strong management team with track record of commercial success
- ✓ Expansion opportunities beyond current markets

NASDAQ: AXGN

Deloitte Technology Fast 500 : 2014, 2015, 2016, 2017
Russell 2000 Index : June 2016
DecisionWise Intl Employee Engagement Best Practices Award Winner: 2018

It's time to rethink nerve repair.™

AxoGen

Footnotes

1. Noble, et al., "Analysis of Upper and Lower Extremity Peripheral Nerve Injuries in a Population of Patients with Multiple Injuries", Journal of Trauma, Vol 45, 2008
2. University of Maryland Medical Center, Carpal Tunnel Syndrome – Surgery
3. Friedman, "The Prophylactic Extraction of Third Molars: A Public Health Hazard," American Journal of Public Health, Vol 97, 2007 – Alhassani, "Inferior Alveolar Nerve Injury in Implant Dentistry: Diagnosis, Causes, Prevention, and Management," Journal of Oral Implantology, Vol. 36, 2010 – Mills, et al., "Nerve injuries after Dental Injection: A Review of the Literature", Clinical practice, Vol 72, 2006 ; McCrary, et al., Amelioblastoma: a clinical review and trends in management, Eur Arch Otorhinolaryngol. 2016 Jul;273(7):1649-61. Ruggiero, et al., American Association of Oral and Maxillofacial Surgeons Position Paper on Medication-Related Osteonecrosis of the Jaw--2014 Update. J Oral Maxillofac Surg 72:1938-1956, 2014. Agbaje, et al., Systematic review of the incidence of inferior alveolar nerve injury in bilateral sagittal split osteotomy and the assessment of neurosensory disturbances. Int J Oral Maxillofac Surg. 2010 Apr;44(4):447-51.
4. 2016 ASPS Plastic Surgery Statistics Reports, Includes Latissimus Dorsi Flap, Distribution Based on ASPS Data
5. Rappaport, et al., "Clinical utilization and complications of axial nerve biopsy", American Journal of Surgery , Vol 164, 1992
6. Weber, et al., "A randomized prospective study of polyglycolic acid conduits for digital nerve reconstruction in humans", Plast Reconstr Surg., Vol 106, 2000 – Wangensteen et al., "Collagen tube conduits in peripheral nerve repair: a retrospective analysis", Hand: Vol 3, 2010
7. Brooks, et al., "Processed nerve allografts for peripheral nerve reconstruction: a multicenter study of utilization and outcomes in sensory, mixed, and motor nerve reconstructions", Microsurg, Vol 32, 2012
8. Whitlock, et al., "Processed allografts and type I collagen conduits for repair of peripheral nerve gaps", Muscle & Nerve, Vol 4, 2009
9. Boeckstyns, et al., "Collagen conduit versus microsurgical neurorrhaphy: 5-year follow-up of a prospective, blinded clinical and electrophysiological multicenter randomized, controlled trial", J Hand Surg Am, Vol 36, 2011
10. Brushart, et al., "Selective reinnervation of distal motor stumps by peripheral motor axons", Exp. Neurol, Vol 97, 1987
11. Schmidhammer, et al., " Alleviated tension at the repair site enhances functional regeneration: the effect of full range of motion mobilization on the regeneration of peripheral nerves--Histologic, electrophysiologic, and functional results in a rat model", J Trauma, Vol 66, 2009
12. Badylak, et al., "Small intestinal submucosa: a substrate for in vitro cell growth", J Biomater Sci Polym Ed, Vol 9, 1998
13. Hodde, et al., "Effects of sterilization on an extracellular matrix scaffold: Part II. Bioactivity and matrix interaction", J Mater Sci Mater Med, Vol 18, 2007
14. Nelson, et al., "Bioactivity of small intestinal submucosa and oxidized regenerated cellulose/collagen", Adv Skin Wound Care, Vol 21, 2008
15. Data on file at AxoGen, Inc.
16. Hospital OPPS CY 2017, Volumes 1, 2 &3. American Medical Association, Chicago, IL for NB-DRG 40, 41, 42
17. In-Service times based on median intraservice times for CPT codes (64835-6, 64830-35, 64835-36, 64910-64911) provided by CMS, Physician Fee Schedule
18. http://my.clevelandclinic.org/cof/media/files/Patients/cleveland-clinic-miami-charges.pdf
19. 2018 MS-DRG relative weight multiplied by 3.38 rate per IPPS Final Rule, as calculated by NICRA, payment rate will vary by facility. Calculation includes labor, related, non related and capital payment rates
20. Loblaw VA, et al. A detailed cost and efficiency analysis of performing carpal tunnel surgery in the main operating room versus the ambulatory setting in Canada. Hand (New York, N.Y.) 2007;2(4):173-178.
21. Du Lissovoy, et al., "Surgical site infect: incidence and impact on hospital utilization and treatment costs", Am J Infect control, Vol 37, 2009
22. Shepard, et al., "Financial impact of Surgical Site Infections on Hospitals: The Hospital management Perspective", JAMA Surg, Vol 148, 2013
23. Days OR time saved based on analysis of data (Magellan Medical Technology and AxoGen® internal Data) and based on average of 8 and 12 hour days
24. Kokkalis, et al., "Assessment of processed porcine extracellular matrix as a protective barrier in a rabbit nerve wrap model", J Recon Microsurg, Vol 27, 2011
25. Data on file at AxoGen, Inc.
26. Data on file at AxoGen, Inc.
27. Data on file at AxoGen, Inc.
28. Kellam, et al., "What's New in Hand Surgery", J Bone Joint Surg Am, Vol 98, 2016
29. Mackay, et al., "A Multicenter, Prospective, Randomized, Pilot Study of Outcomes for Digital Nerve Repair in the Hand Using Hollow Conduit Compared With Processed Allograft Nerve", Hand (N Y), Vol 11, 2016

Footnotes

10. Safa, et al., "Autograft Substitutes: Conduits and Processed Nerve Allografts", Hand Clin, Vol 32, 2016
11. https://d2wirczt3b6wjm.cloudfront.net/News/Statistics/2016/plastic-surgery-statistics-full-report-2016.pdf
12. Haroutiunian, et al., "The neuropathic component in persistent postsurgical pain: a systematic literature review", Pain, Vol 154, 2013
13. Pro forma amounts reflect the impact of the equity raise and the debt refinancing completed in October had the transactions taken place on September 30, 2016. The Company sold a total of 3,663,334 shares at $7.50 and received proceeds, net of underwriter's discounts and offering expenses, of $25.8 million. Additionally, the company refinanced its previous $25.0 million debt facility with Three Peaks Capital into a new facility with MidCap Financial. The new facility provides for up to $31.0 million of debt comprised of a $21.0 million term loan and a $10.0 million revolving line of credit. The revolver may be increased to $15.0 million at a later date at the Company's request and with the approval of MidCap. Borrowings under the revolver are subject to the available borrowing base which, at closing was $8.4 million, and the company drew $4.0 million. At closing, the interest rate was 8.5% on the Term loan and 5.0% on the revolver. The company anticipates that annual interest cost savings of this new facility will be at least $1.5 million compared to the previous facility. Expenses and fees of approximately $400,000 were paid in October to complete the refinancing, and prepayment fees of approximately $1.5 million were owed to Three Peaks Capital and were paid from the company's own funds.
14. Historical incidence based on NIH National Cancer Institute http://www.breastcancer.org/symptoms/understand_bc/statistics; Growth rate based on CAGR 2015 – 2017
15. Siegel, et al., "Cancer treatment and survivorship statistics, 2012", CA Cancer J Clin, Vol 62, 2012 2016 ASPS Plastic Surgery Statistics Reports from 2012 - 2016 ASPS • Includes reconstructive revisions and reconstructions of large, breast-conserving surgeries (lumpectomy)
16. 2016 ASPS Plastic Surgery Statistics Reports, includes TRAM, DIEP, and "Other Flaps", Distribution based on 2016 ASPS Data