



**SURGICAL SOLUTIONS FOR
NERVE RECONSTRUCTION**

WEDBUSH
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LIFE SCIENCES:
Management Access Conference

Le Parker Meridien Hotel
119 West 56th Street, New York, NY 10019



August 12, 2014

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”, “may”, “should”, 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 product development, product potential, regulatory environment, sales and marketing strategies, capital resources or operating performance.

The forward-looking statements are subject to risks and uncertainties, which may cause results to differ materially from those set forth herein. Forward-looking statements in this presentation should be evaluated together with the many uncertainties that affect the Company’s business and its market, particularly those discussed in the risk factors and cautionary statements in the Company’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 the Company assumes no responsibility to update any forward-looking statements, whether as a result of new information, future events or otherwise.

AxoGen Overview

Focus on Executing Sales & Marketing Strategy To Drive Shareholder Value

- Only company focused on peripheral nerve repair solutions
- Addressing a \$1.6B+ current market opportunity
- Comprehensive product portfolio addresses all surgical peripheral nerve reconstruction needs
- Pioneering sales and market strategy, solid execution plan
- Poised for strong growth in 2014, YTD Revenue \$7.4 million, 47% growth
- High gross margins: 79% 2nd Quarter 2014
- Barriers to competitive entry & growing body of clinical data
- Long term expansion potential beyond current market

Need for Options in Nerve Repair

Nerve injuries can happen to anyone

- More than 1.4 million Americans will experience a nerve injury in 2014
- More than 900,000 will require a surgical intervention
- Causes of nerve injuries
 - Lacerations, power tool / saw accidents, motor vehicle accidents, gunshot wounds
 - Surgical injuries
 - Nerve compression: Carpal tunnel revision, cubital tunnel

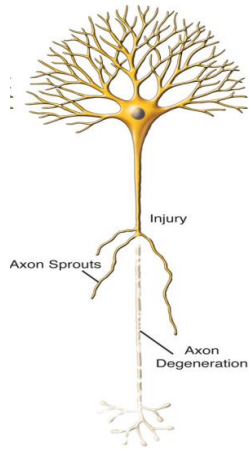


AxoGen Patient Story: Edward

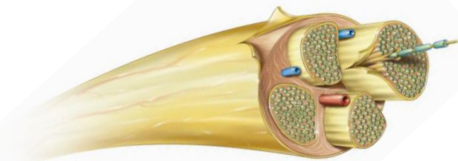
- Navy Corpsman, shot while serving in Afghanistan
- 5 cm gap of sciatic nerve
- Family sought repair options other than amputation
- Repaired with Avance® Nerve Graft at Bethesda Naval (now Walter Reed National Military Hospital)
- Walking again on his own legs, attending Penn State

Peripheral Nerves & Goals of Repair

Peripheral Nerves are Capable of Regeneration with Appropriate Guidance & Protection



Example of axonal regeneration
after injury



Cross section of a peripheral nerve
illustrating the nerve bundles
containing individual axons

Peripheral Nerves provide the pathways for both motor and sensory signals between the central nervous system and target organs, regulating movement and sensation.

Goals of repair

- Restore muscle function and sensation
- Prevent neuroma / chronic pain

Successful nerve regeneration requires

- Scaffold to direct, support growth
- No tension on the repair site
- Protection from soft tissue attachments

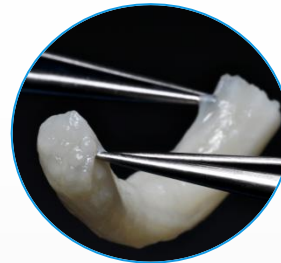
The AxoGen Family of Products

Comprehensive portfolio of nerve repair products.

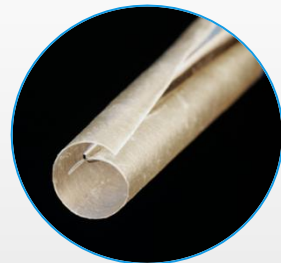
- Thousands of implants to date
- Currently distributed in the US and 7 countries



AXO**GUARD**[®]
Nerve Connector



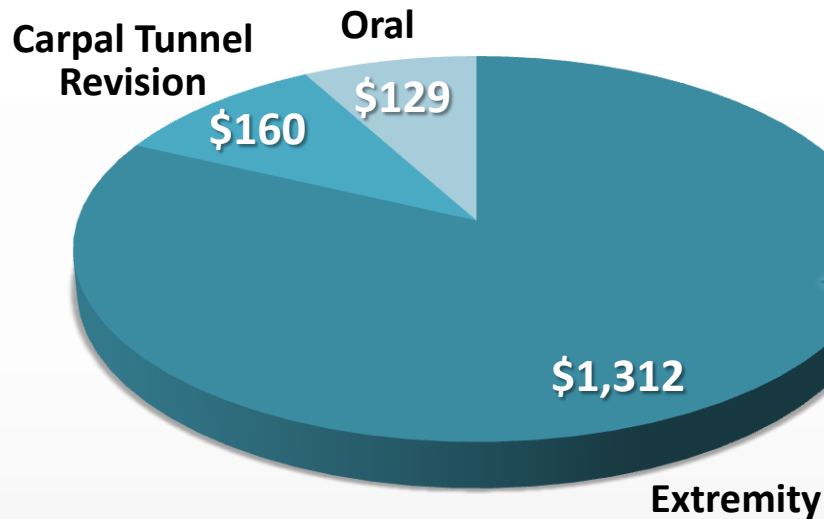
Avance[®]
Nerve Graft



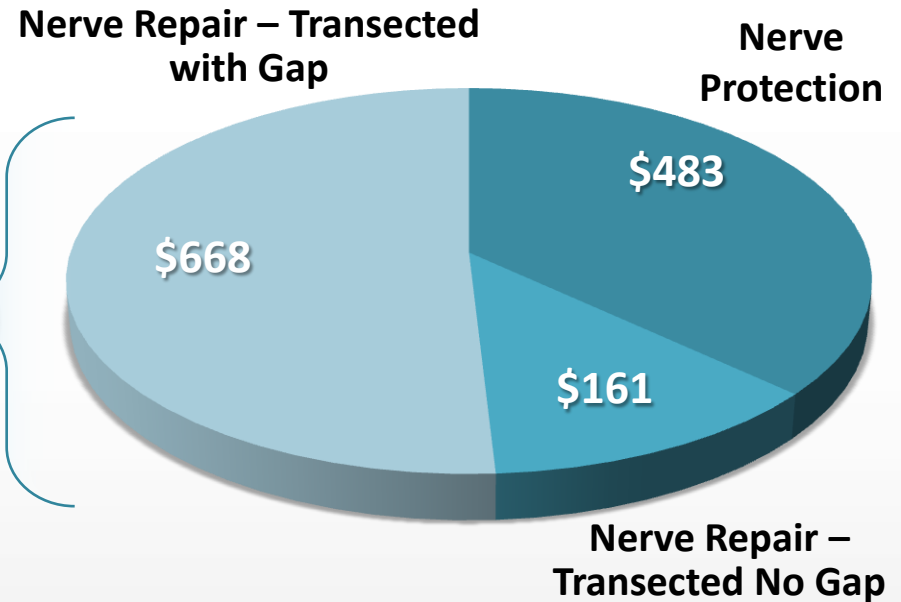
AXO**GUARD**[®]
Nerve Protector

Currently Targeted Nerve Market (US): \$1.6B

AxoGen Current Target Market
\$1.6 billion
In millions



Extremity Market
\$1.3 billion
In millions



Approximately 900K Procedures in US:

Extremity	719,000
Carpal Tunnel	100,000
Oral	68,000

International opportunity approximately equal to US market

The Market for Nerve Repair

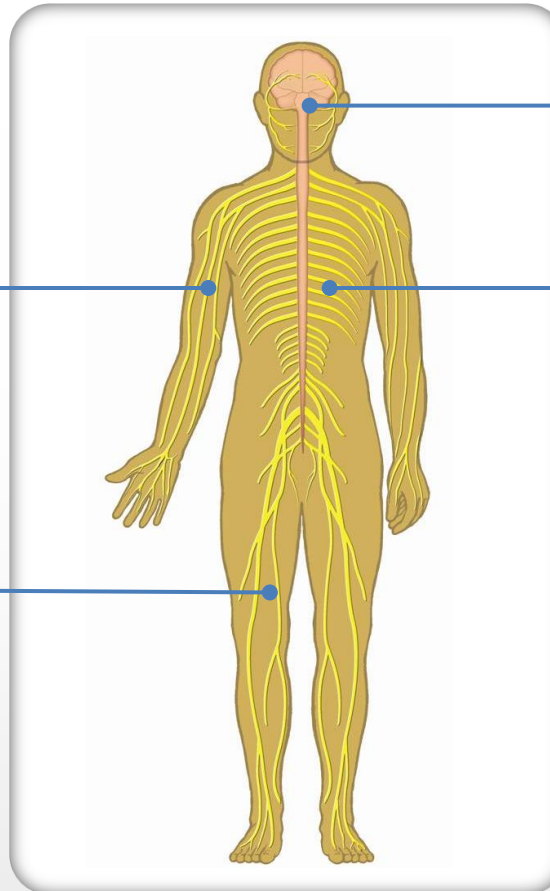
The Nerve Repair Market is Large with Opportunity for Expansion

AxoGen is currently focused on

Extremity (upper & lower)
Carpal Tunnel Revision
Oral Maxillofacial...

Upper Extremity

Lower Extremity



Head and Neck

Torso

...with future expansion opportunities in

Facial Reconstruction
Podiatry
Breast Reconstruction
Prostatectomy
Pain Management
Regeneration Enhancement

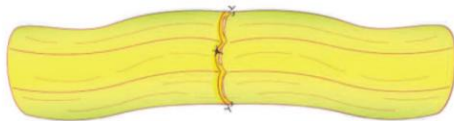
Traditional Peripheral Nerve Repair Options

Transected Nerves

Suture

Direct suture repair of no-gap injuries

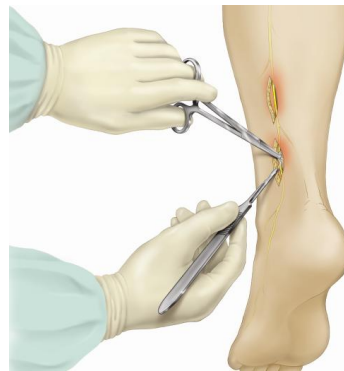
- Common repair method
- May result in tension to the repair leading to ischemia
- Concentrates sutures at the coaptation site



Autograft

Traditional “Gold Standard” despite several disadvantages

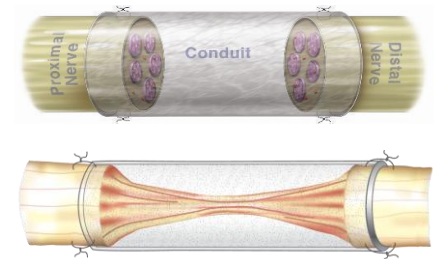
- Secondary surgery
- Loss of function and sensation at harvest site
- 27% complication rate including infection, wound healing and chronic pain¹
- Limited graft length and diameter



Hollow-Tube Conduit

Convenient off the shelf option; limited efficacy and use

- Provides only gross direction for re-growth
- Limited to small gaps
- 34%-57% failure rate >5mm gaps²
- Semi-rigid and opaque material limits use and procedure visualization
- Repair depends on fibrin clot formation



1. Rappaport, et al., Am J Surg 1993

2. Weber, et al., Plas and Recon Surg 2000, Wangenstein et al., Hand 2009

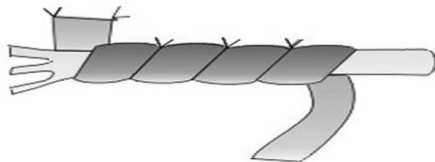
Traditional Peripheral Nerve Protection Options

Compressed and Transected Nerves

Vein Wrapping

Autologous vein used as a barrier to soft tissue attachments

- Barrier to attachment to surrounding tissue
- Revascularizes to become a lasting barrier
- Requires extra time and skill to perform spiral wrapping technique
- Additional surgical morbidity due to second surgical site

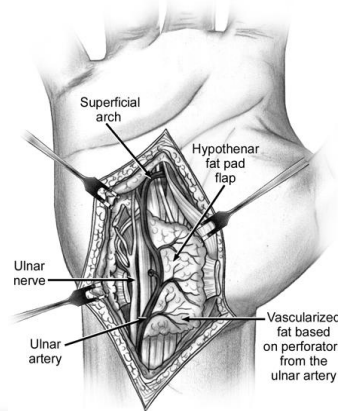


Sotereanos DG, et al., Microsurgery 1995

Hypothenar Fat Pad Flap

Vascularized flap used as a barrier to soft tissue attachments

- Barrier to attachment to surrounding tissue; already vascularized
- Loss of protective hand cushioning
- Only wraps part of the nerve circumference
- Increases procedure time

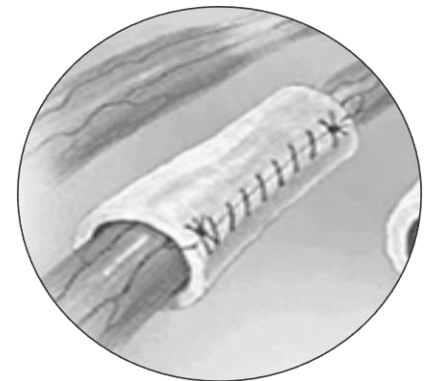


Lippincott and Williams

Collagen Wraps

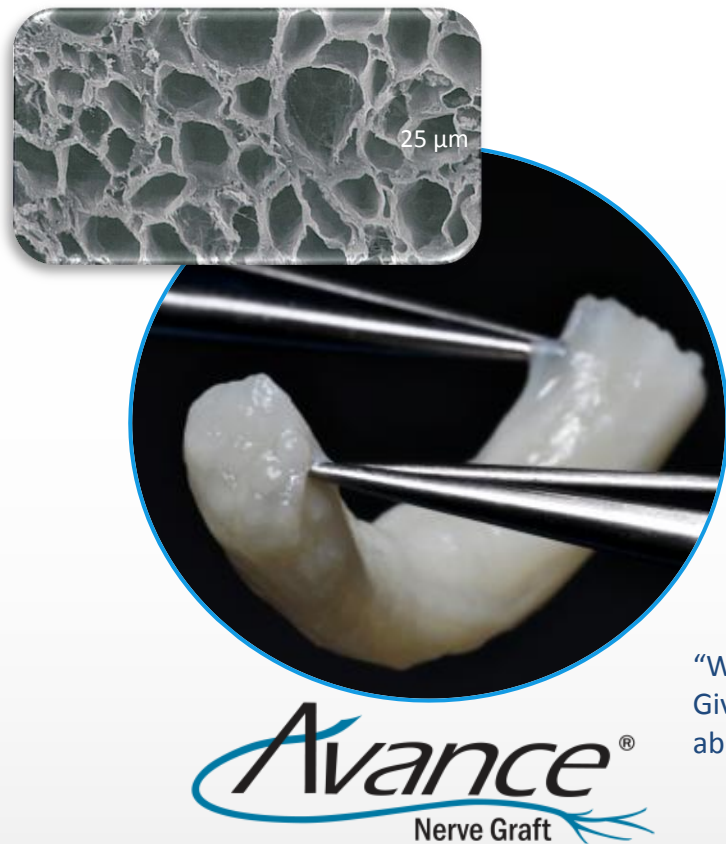
Off the shelf option; not a lasting option for protection

- No additional surgical morbidity
- Semi-rigid material limits use
- Degrades over time and does not provide a lasting barrier to soft tissue attachments



Avance® Nerve Graft

Only commercially available processed nerve allograft



- Bridges long and short nerve gaps
- Human nerve allograft, decellularized, sterile
- Preserves three dimensional architecture
- Flexible and pliable
- Handles similarly to nerve autograft
- Eliminates risk of loss of donor nerve function
- Available in a variety of lengths (up to 70mm) and diameters (up to 5mm)
- Reduces OR time

“We had a patient with multiple nerves cut and we didn’t have enough autograft (tissue). Given the fact that Avance® Nerve Graft is available in different sizes and lengths, we were able to, in one operation, bridge all of the different nerves that had been cut.”

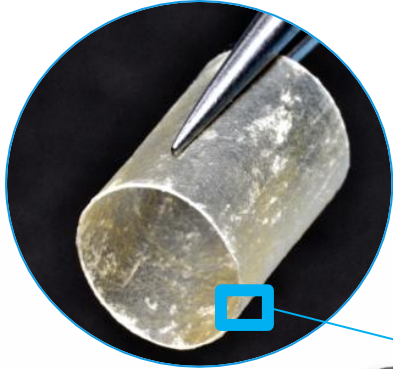
Harry Hoyen, MD
Cleveland, OH

Associate Professor, Cleveland Clinic Department of Orthopaedic Surgery
Co-Director, Cleveland Combined Hand Fellowship, Cleveland Clinic and MetroHealth Medical Center

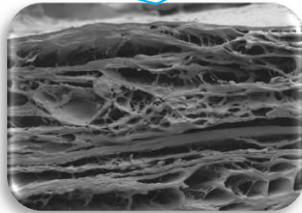
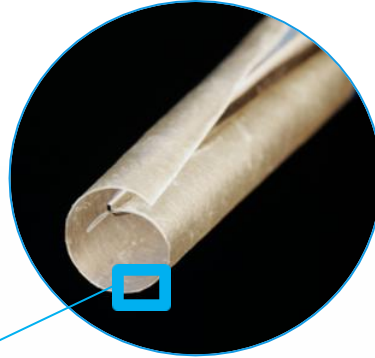


AxoGuard® Family of Products

AXO **GUARD**
Nerve Connector



AXO **GUARD**
Nerve Protector



- Only porcine extracellular matrix/scaffold for nerve repair and protection
- ECM preserved to support natural healing response
- Semi-translucent to allow visualization of underlying nerve
- Conforms to nerve
- ECM revascularizes and remodels into patient's own tissue, does not degrade ^{1, 2, 3, 4}
- Available in tube and wrap forms

"I use AxoGuard® Nerve Connector for all anastomotic coaptations of nerves. It allows me an effective method of ensuring that the anastomosis is done in the most appropriate way."

Ivan Ducic, MD PhD
McLean, Virginia

Past President American Society for Peripheral Nerve

1. Badylak, et al., 1998, J Biomater Sci Polym Ed 9(8):863-878.
2. Hodde, et al., 2007, J Mater Sci Mater Med 18(4):545-550.
3. Nihsen, et al., 2008, Adv Skin Wound Care 21(10):479-486.
4. Data on file at AxoGen, Inc.



Pioneering Sales & Marketing Strategy

Strong Forward Momentum and Growth

4 PILLAR	Build Market Awareness
APPROACH	Educate Surgeons, Develop Advocates
FOR DRIVING	Grow Body of Clinical Evidence
BUSINESS	Execute Sales Plan
RESULTS	

Build Market Awareness

Continuing focus on building awareness among Surgeons, Patients & Investors

- Participated in in major clinical conferences
 - Technical exhibits
 - Podium presentations
 - Sponsored surgeon panels
- Garnered Positive Media Attention
 - Local and National television
 - Wall Street Journal, SF Chronicle



It's time to rethink nerve repair!



Educate Surgeons & Develop Advocates

Increased emphasis on education & hands-on training

- Launched AxoGen Professional Education Program
 - Educate on “best practices”, science of nerve repair
- Continued Surgeon Advocacy and Speakers’ Bureau
 - National and International Key Opinion Leaders
 - Data presentations, panel events and publications

"As a peripheral nerve surgeon and educator, I really appreciated the forum and organization of the Best Practices Nerve Course. AxoGen encouraged us to teach principles and explain all available repair tools. Though participants learned about AxoGen's products, this was not the focus of the presenters... the focus was on strategies to maximize nerve recovery and improve clinical outcomes."

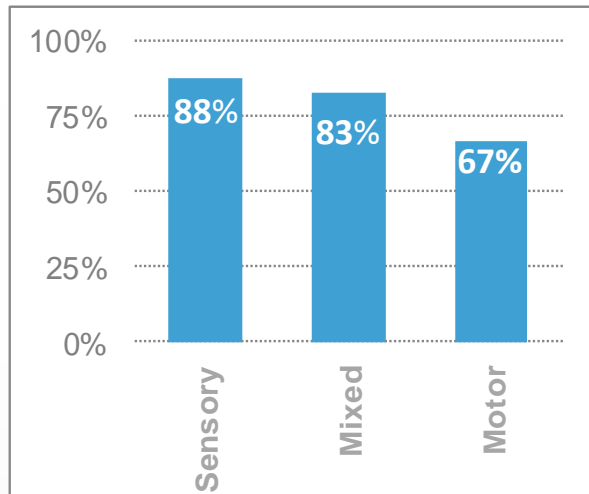
Jonathan Isaacs, MD
AxoGen Best Practices Nerve Course Faculty
Herman M. & Vera H. Nachman Distinguished Research Professor
Professor and Chief, Division of Hand Surgery, Department of Orthopedic Surgery, VCU Medical Center



Clinical Data - RANGER® Study

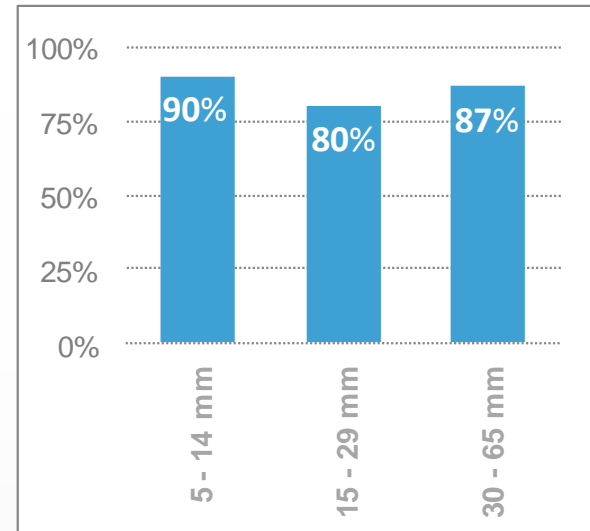
Largest Multi-center Study in Peripheral Nerve Reconstruction

Injuries Achieving Meaningful Recovery
by Nerve Type⁺⁺



87%
Meaningful
Recovery^{*,++, 1}

Injuries Achieving Meaningful Recovery
by Gap length⁺⁺



- Open enrollment observational study
- First data milestone
 - 12 centers, 25 surgeons, 132 nerve injuries
 - No graft-related complications
- Peer reviewed publications
 1. Brooks, et al. Microsurgery, January 2012
 2. Cho, et al. Journal of Hand Surgery, November 2012

- Expanded data milestone presented at 5th Vienna Symposium on Surgery of Peripheral Nerves, March 2014
 - 18 centers, 36 surgeons, 431 repairs enrolled
 - 85% meaningful recovery ⁺⁺

* Meaningful recovery defined at S3-S4 and M3-M5 from the works of (Kim and Kline), (Frykman and Gramyk) and (Kallio).

++ Includes repairs with qualitative outcomes data.



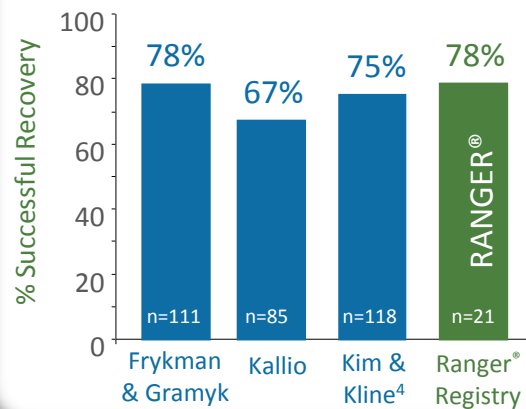
RANGER® Study Results Compare Favorably to Other Repairs

Comparison to Historical Reference Literature

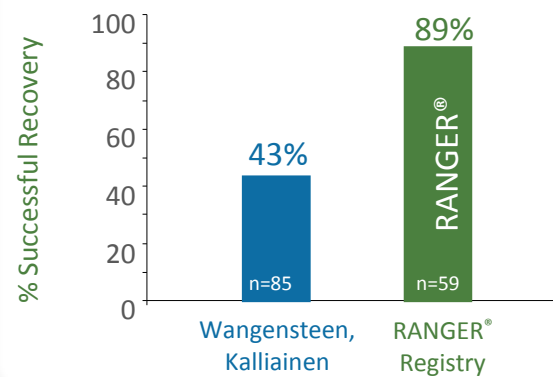
Study	Nerve Injury Types	Test Article	Positive Outcomes*
RANGER® Study			
(Brooks, et al, 2012; Cho, et al, 2012)	Sensory, Mixed and Motor Nerve Injuries	Avance® Nerve Graft	87%
Autograft Studies			
Weber, et al., 2000	Sensory Nerves	Direct Repair and Autograft	86%
Kim and Kline 2001- 2006	Sensory and Mixed Nerves	Direct Suture and Autograft	67-86%
Frykman and Gramyk, 1991	Sensory Nerves	Autograft for Digital Nerve Injury under 5 cm	80%
Frykman and Gramyk, 1991	Mixed Nerves	Direct Suture and Autograft	75-78%
Kallio, et al., 1993	Sensory Nerves	Autograft and Direct Repair	70%
Conduit Studies			
Haug, et al., 2013	Sensory Nerves	NeuraGen® Type 1 Bovine Collagen Tube	40%
Weber, et al., 2000	Sensory Nerves	Neurotube® PGA tube	74%
Wangenstein and Kalliainen, 2009	Sensory, Mixed and Motor Nerve Injuries	NeuraGen® Type 1 Bovine Collagen Tube	43%

* As reported, based on individual study parameters for acceptable recovery: M3-M5, S3-S4 by MRCC

Autograft vs. Avance® Nerve Graft Motor Recovery Outcomes in Mixed and Motor Nerves



Conduit vs. Avance® Nerve Graft Overall Recovery Outcomes



Execute Sales Plan

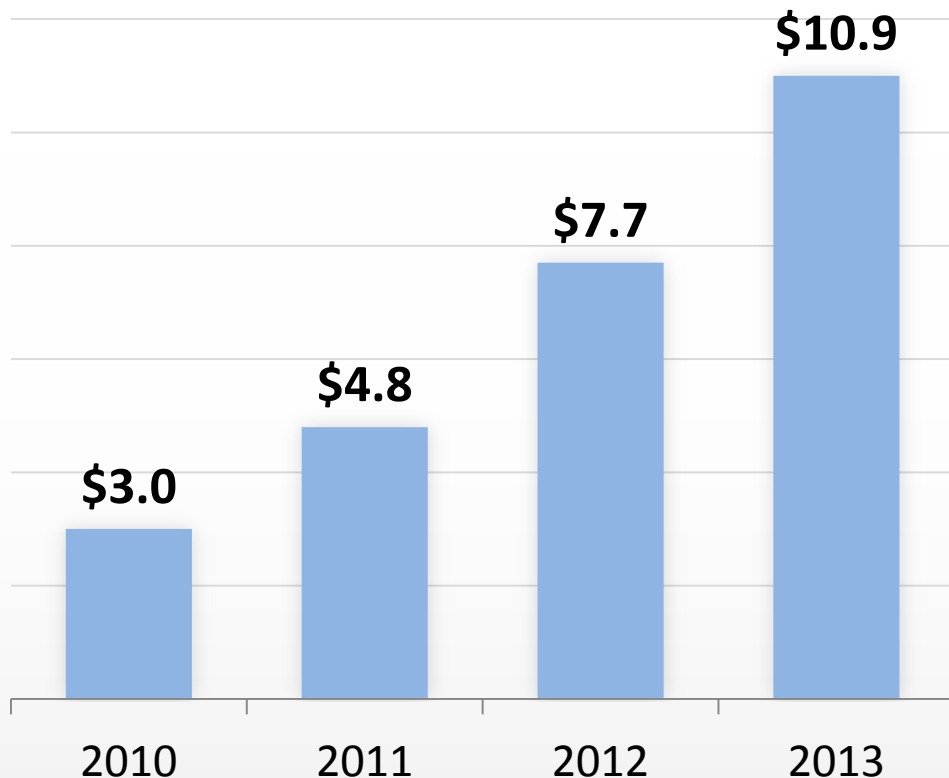
Expanded Reach, Focus on Sales Execution

- Expanded Reach:
 - 22 direct sales professionals
 - 23 independent distributors
 - Available in 8 countries
- Focused Sales Execution:
 - Breadth: grow account foot print
 - Depth: utilization of all 3 product lines, increase penetration
 - Quality: High and medium potential accounts
 - Reorder rate

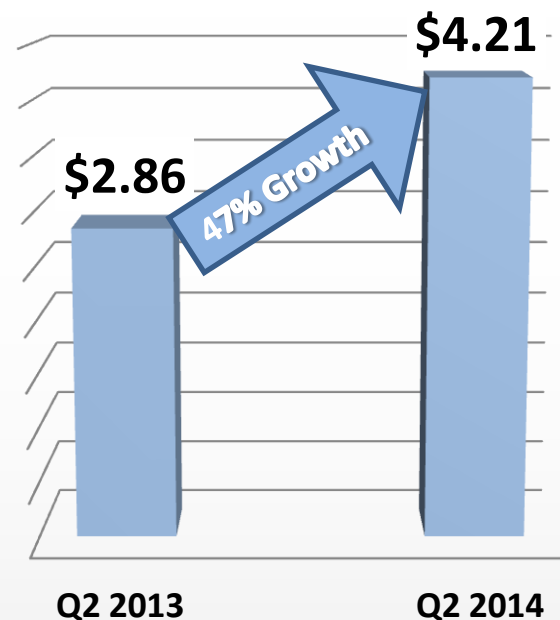
Strong Growth

\$ in millions

Year over Year 42%+ Annual Sales Revenue Growth



Quarter over Quarter 47% Revenue Growth



79% Gross Margin Q2 2014

Strong Competitive Barriers

IP and Unique Regulatory Framework

- Avance® Nerve Graft
 - 6 issued U.S. patents; 4 pending U.S. patent applications; 3 issued international patents and 9 pending international patent applications
 - Regulatory path US: Biologic Transition Process
 - November 2010: Enforcement Discretion letter from FDA allowing continued sales under controls applicable to HCT/P with agreed transition plan to Biologic (BLA)
 - BLA requires a phase III clinical trial; SPA approved by FDA
 - Regulatory path ex-US: Country by country
 - Registration completed in Austria, Canada, Israel, Italy, Netherlands, Switzerland and the United Kingdom.
- AxoGuard® Nerve Connector & AxoGuard® Nerve Protector
 - FDA 510(k) Clearance, CE Mark and Health Canada Approval
 - Patents held by Cook Biotech, AxoGen exclusive WW license for nerve

Balance Sheet & Capital Structure

Balance Sheet Highlights	June 30, 2014
Cash and cash equivalents	\$14,170,332
Total current assets	\$20,252,702
Total current liabilities	\$ 2,253,173
Note Payable — Revenue Interest Purchase Agreement**	\$27,242,589

Capital Structure	June 30, 2014
Common Stock	17,466,091 shares
Common Stock Options	2,290,783 shares
Common Stock Warrants	89,686 shares
Fully Diluted	19,846,960 shares

** PDL BioPharma, Inc. \$20.8M Revenue Royalty Agreement:

- Maximum 8 years (10/2020) paying 9.95% on Gross Revenue from current products
- No re-payment after last royalty payment

Investment Considerations

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NASDAQ: *AXGN*

Recognitions

Deloitte & Touche "Fast 500"

Frost & Sullivan 2014 Technology Innovation Award

Russell MicroCap Index 2014

It's time to rethink nerve repair!

**AxoGen is the only company dedicated to the
\$1.6 billion US nerve repair market**

Visit us at www.AxoGenInc.com

Follow us on Twitter @AxoGen