

SURGICAL SOLUTIONS FOR
NERVE RECONSTRUCTION

May 7, 2014

SEMDA CONFERENCE

NASDAQ: *AXGN*

Safe Harbor Statement

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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.

Investment Considerations

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
- High gross margins: 77.7% in 1st Quarter 2014
- Barriers to competitive entry & growing body of clinical data
- Long term expansion potential beyond current market

Need for Nerve Repair

Nerves are Injured in Many Ways

Causes of Nerve Injuries

- Lacerations, power tool / saw accidents, motor vehicle accidents, battle field injuries, gunshot wounds, natural/other disasters
- 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

Need for Nerve Repair

Peripheral Nerve Injuries Impact Quality of Life

Impact of Peripheral Nerve Injuries

- Pain – chronic, stabbing, radiating, debilitating
- Numbness and Loss of Sensation
- Partial or Full Loss of Movement

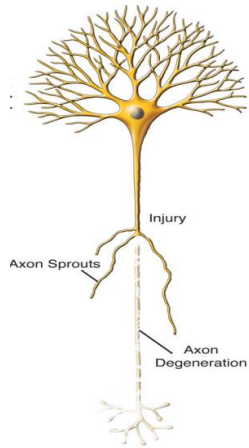


AxoGen Patient Story: Frankie

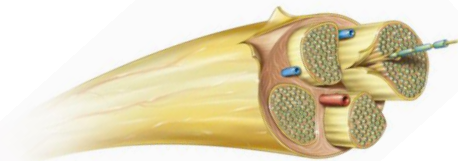
- 12 year old male, injured in an ATV rollover
- 7+cm defect in ulnar nerve
- Parents did not want risk of comorbidities associated with autograft repair
- Repaired with Avance[®] Nerve Graft and 2 AxoGuard[®] Nerve Connectors
- Return of fine motor skills in fingers, planning to join the military

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 scarring

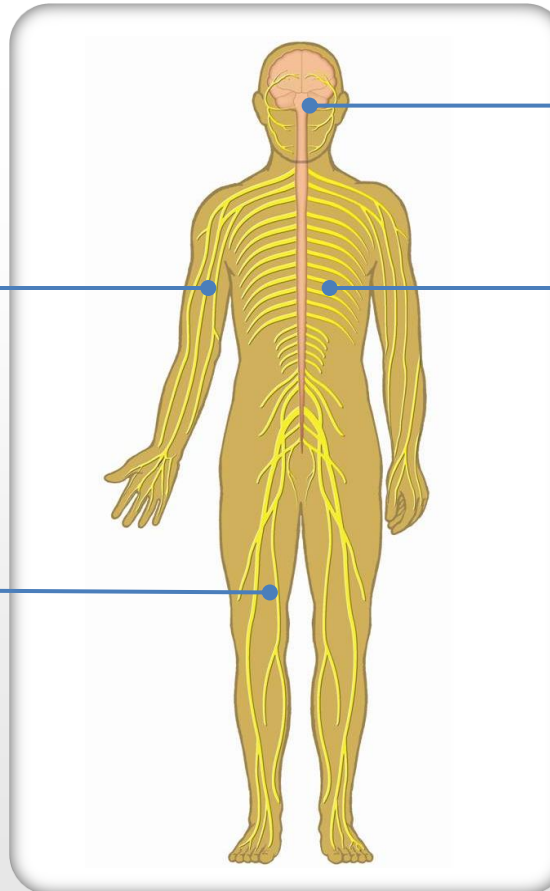
The Market for Nerve Repair

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



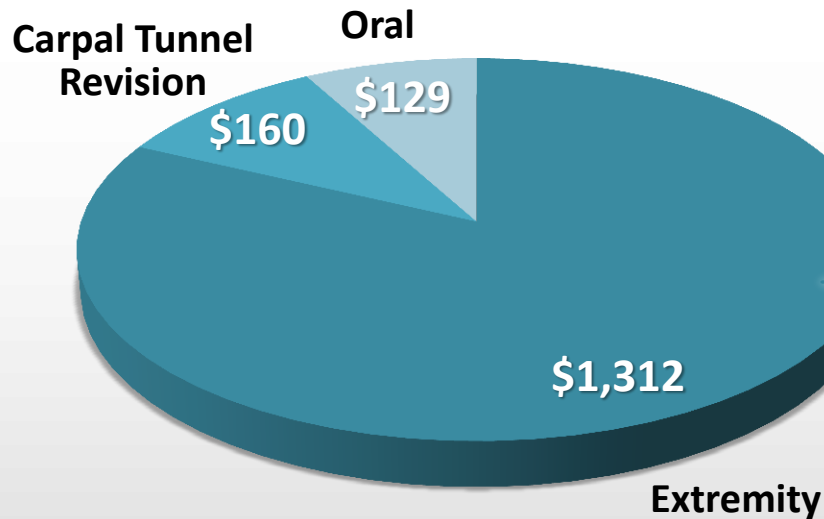
Head and Neck

Torso

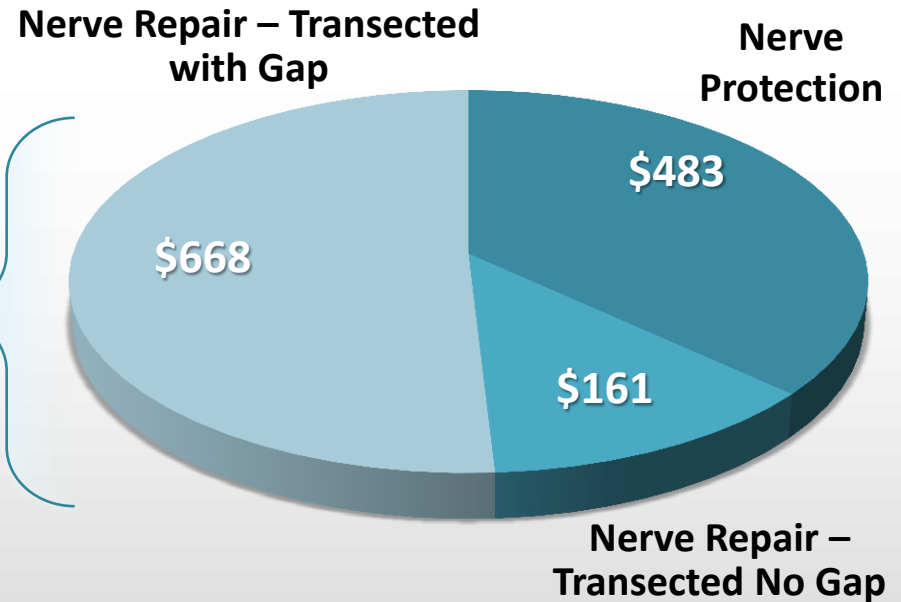
...with future expansion
opportunities in
Facial Reconstruction
Podiatry
Breast Reconstruction
Prostatectomy
Pain Management

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 AxoGen Family of Products

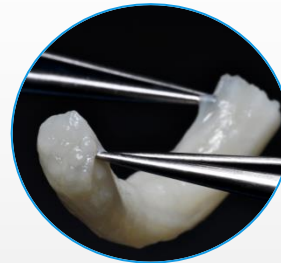
Most Complete Line of Peripheral Nerve Repair Solutions

- Thousands of implants to date
- Currently distributed in the US, Austria, Canada, Israel, Italy, Netherlands, Sweden, Switzerland, and the United Kingdom



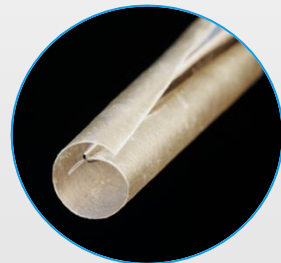
AXOGUARD[®] *Nerve Connector*

only porcine extra-cellular matrix coaptation aid that allows for the close approximation of severed nerves



Avance[®] Nerve Graft

only commercially available decellularized and sterile extra-cellular matrix scaffold processed from human peripheral nerve tissue (i.e. nerve allograft)



AXOGUARD[®] *Nerve Protector*

only porcine extra-cellular matrix implant designed to wrap and protect injured peripheral nerves

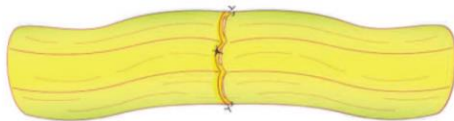
Traditional Peripheral Nerve Repair Options

Transected Nerves

Suture

Direct suture repair of no-gap injuries

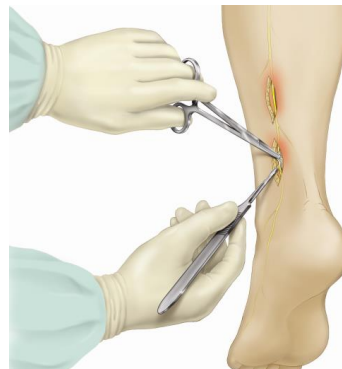
- Common repair method
- May result in tension to the repair leading to ischemia
- Concentrates sutures at the coaptation site



Autograft

Traditional “Gold Standard” despite several disadvantages

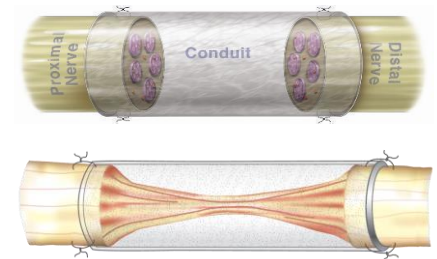
- Secondary surgery
- Loss of function and sensation at harvest site
- 27% complication rate including infection, wound healing and chronic pain¹
- Limited graft length and diameter



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

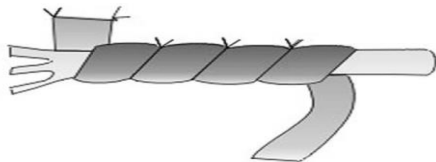
Traditional Peripheral Nerve Protection Options

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

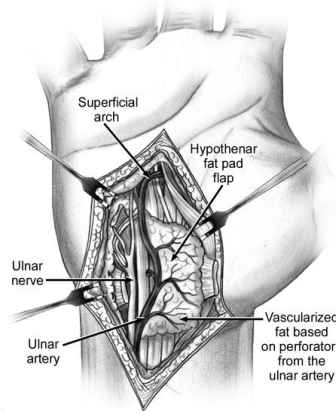


Sotereanos DG, et al., Microsurgery 1995

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

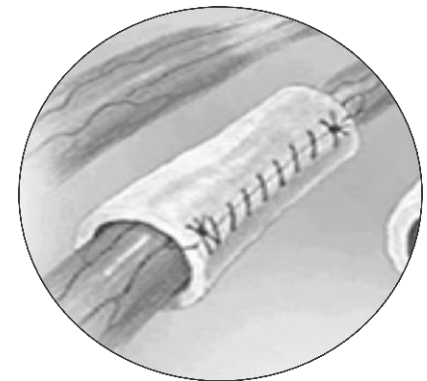


Lippincott and Williams

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



Pioneering Sales & Marketing Strategy

Strong Forward Momentum and Growth

4 PILLAR	Build Market Awareness
APPROACH	Expand Surgeon Education and Advocacy
FOR DRIVING	Grow Body of Clinical Evidence
BUSINESS	Execute Sales Plan
RESULTS	

Build Market Awareness

Building Awareness among Surgeons, Patients & Investors

- Participation in major clinical conferences
 - Educational sales booth
 - Podium presentations
 - Sponsored surgeon panels
- Positive Media Attention
 - Local and National television
 - Wall Street Journal, SF Chronicle



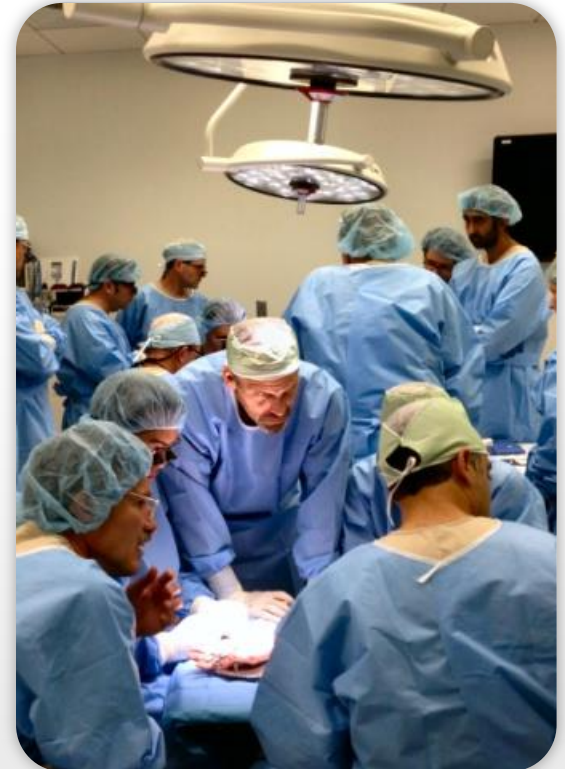
It's time to rethink nerve repair!



Educate Surgeons & Develop KOLs

Educating Surgeons, Developing Advocates

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



Growing Body of Clinical Evidence

A strong and broad clinical program

- RANGER® Study – largest multi-center, on-going registry study in peripheral nerve repair with processed nerve allograft
- CHANGE clinical study – multi-center prospective randomized comparative pilot study of hollow tube conduits and Avance® Nerve Graft
- RECON clinical study - Multicenter prospective randomized comparative pivotal study of hollow tube conduits and Avance® Nerve Graft (begin enrollment late 2014)
- Investigator initiated studies and publications

Execute Sales Plan

Reach, Focus, Geography

- Reach: Growing sales organization
 - 24 direct sales professionals
 - 23 independent distributors
- Focus:
 - Breadth: grow account foot print
 - Depth: utilization of all 3 product lines, increase penetration
 - Quality: High and medium potential accounts
- Geography:
 - US
 - Select countries OUS

Strong Competitive Barriers

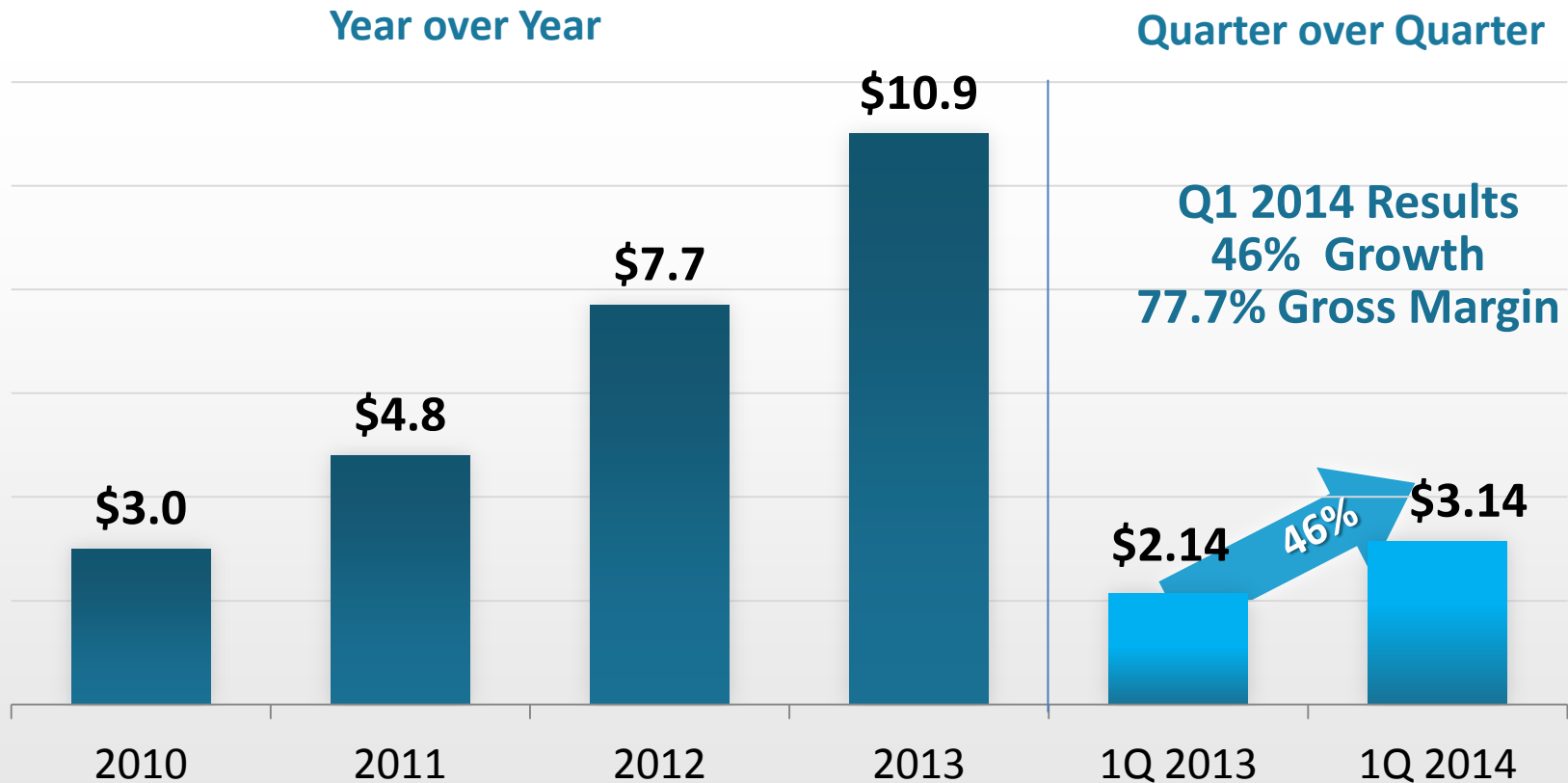
IP and Unique Regulatory Framework

- **Avance® Nerve Graft**
 - 6 issued U.S. patents; 3 pending U.S. patent applications; 6 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

Strong Growth

Annual Sales Revenue 42%+

\$ in millions



Balance Sheet & Capital Structure

Balance Sheet Highlights	March 31, 2014
Cash and cash equivalents	\$16,807,753
Total current assets	\$22,434,498
Total current liabilities	\$ 1,922,861
Note Payable — Revenue Interest Purchase Agreement**	\$26,255,540

Capital Structure	March 31, 2014
Common Stock	17,445,968 shares
Common Stock Options	2,170,543 shares
Common Stock Warrants	89,686 shares
Fully Diluted	19,633,849 shares

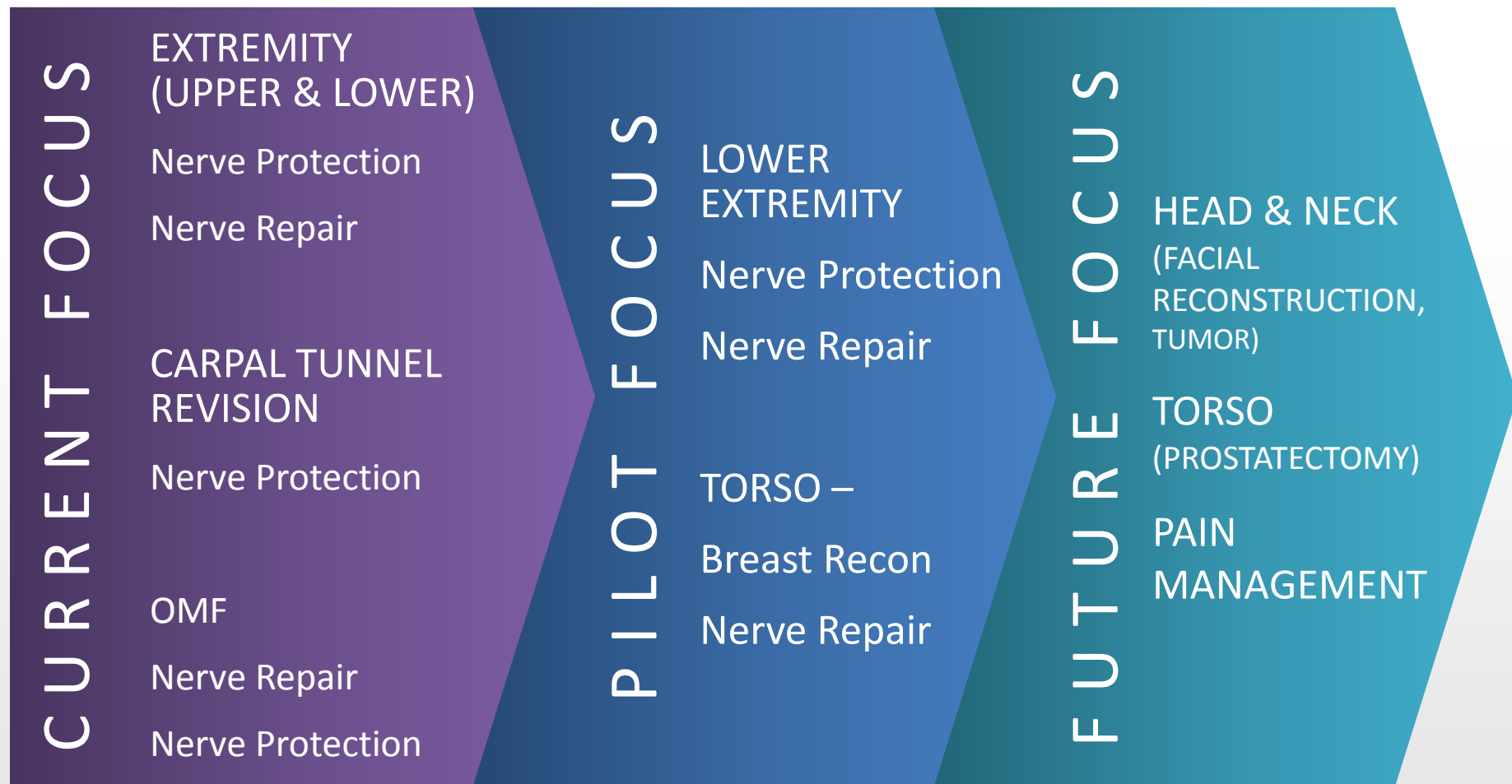
** PDL BioPharma, Inc. \$20.8M Revenue Royalty Agreement:

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



Milestones

Focused on Sales – Positioned For Expansion



Opportunities

Positioning for the future

- Strategic Alliances for New Products
 - Development
 - Licensing
 - Acquisition
- Financial Market Awareness
 - As of May 1,
 - Market cap \$45 million
 - Approximately 4X 2013 revenue
 - Share price \$2.54

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Recognitions

Deloitte & Touche "Fast 500"

Frost & Sullivan 2014 Technology Innovation Award

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