TROY L. THORNTON
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SUMMARY: **Results-oriented R&D leader with over 30 years of cardiovascular device design, development and management experience, including clinical training and support.**

CURRENT:
2015 to Present: Consulting for medical device companies, focused on early design and development, problem-solving and IP. Also provide due diligence and technical assessment for companies evaluating potential investments and acquisitions.

PRIOR EXPERIENCE:
June 2012 – December 2014: Program Director, Abbott Ventures
Responsible for technical assessment and analysis of potential investments in cardiovascular and non-cardiovascular medical device technologies.

- Worked with the Abbott Ventures team with a primary focus on technical due diligence for cardiovascular investment / acquisition opportunities.
- Worked with Abbott Vascular Structural Heart senior management to develop and implement a broader structural heart business strategy.

June 2000 – May 2012: Vice President, Research & Development, Evalve, Inc., Menlo Park, California (acquired by Abbott Vascular in 2009)
Responsible for managing all aspects of research and development for a novel cardiovascular device implant and delivery system.

- Led the R&D team in developing the MitraClip percutaneous mitral valve repair system, consisting of three complex catheters and a permanent mechanical implant.
- Included physician training, field clinical support, Clinical Specialist training, and analysis of clinical results.
- *The MitraClip system is currently available in over 30 countries, was approved by FDA in 2013, and is currently a >$900 million product line for Abbott Vascular.*

June 1995 – May 2000: Project Manager, Prograft Medical, Inc. (1997 acquired by W.L Gore & Associates, Inc.) Sunnyvale, Calif.
Responsible for development and successful commercial introduction of a bifurcated, modular stent-graft used in the treatment of abdominal aortic aneurysms ('Excluder').

- Designed and built the first prototypes, conducted acute and long-term animal studies, and managed the overall project from inception through initial commercialization (outside U.S.).
- Hired and managed a team of six engineers and three technicians.
- Worked closely with clinical and regulatory departments in writing IDE filings, instructions for use, and clinical protocols.
- Developed physician and in-house training materials. Trained Gore clinical specialists and sales associates worldwide.
- Provided physician training and case support during the U.S. IDE trial.
- Supported physicians during five live case transmissions at endovascular symposia worldwide.
- *Result was exponential growth of implants from 140 in 1998 to 600+ in 1999, with total sales generated of over $5 million prior to initial market release. Product is currently >$350 million product line for W.L. Gore.*

IMPERATIVE Ex. 1004
IPR Petition - US 11,744,691

August 1989 – May 1995: Project Group Leader, Senior Engineer for Advanced Cardiovascular Systems (Guidant), Santa Clara, CA.

1993 – 1995: Project Group Leader, Perfusion PTCA Catheters

- Responsible for conceiving, prototyping, and testing innovative coronary perfusion catheter concepts. Proved feasibility, and filed two patents relating to the most promising concepts.

1989 – 1993: Senior R&D Engineer, Rapid Exchange PTCA Catheters

- Developed an elliptical coronary PTCA catheter from initial concept to market launch. Responsible for catheter design, material selection, process development, performance testing, physician evaluation, and animal studies.
- Direct supervision of two engineers and two technicians. Managed a large project team which finalized development and implemented the design in full-scale manufacturing.
- The catheter gained 20 market share points, and became the top-selling PTCA in the U.S. with over $60 million / year in sales.

1987 – 1989: Manufacturing Engineer, Symbion, Inc., Salt Lake City, UT

Developed and improved processes for class III medical device product lines. Developed ultrasonic welding processes for four parts of a centrifugal blood pump. Designed packaging, validated sterilization, and designed/installed a new clean room.

1985 – 1987: Process Engineer, Becton-Dickinson, Inc., Sandy, UT

Validated processes and implemented into pilot manufacturing a thermodilution catheter. Conducted cost-saving programs and process improvements on central venous catheter products.

EDUCATION: B.S. Engineering Science with Biomedical Engineering emphasis, 1985 Iowa State University, Ames, IA

PATENTS: Over 37 issued patents