



# Sunshine Heart, Inc. (NASDAQ:SSH)

## Investor Presentation

### March 2017

[www.sunshineheart.com](http://www.sunshineheart.com)

## Forward Looking Statement



This presentation contains forward-looking statements. All forward-looking statements are management's present expectations of future events and are subject to a number of risks and uncertainties. Various factors could cause actual results to differ materially from these statements including our ability to execute on our strategic realignment and to grow our Aquadex business, our post-market clinical data collection activities, benefits of our products to patients, our expectations with respect to product development and commercialization efforts, our ability to increase market and physician acceptance of our products, potentially competitive product offerings, intellectual property protection, our expectations regarding anticipated synergies with and benefits of the Aquadex business, and the other risks set forth under the caption "Risk Factors" and elsewhere in our periodic and other reports filed with the U.S. Securities and Exchange Commission, including our Annual Report or Form 10-K for the fiscal year ended December 31, 2016. We are providing this information as of the date of this presentation and do not undertake to update any forward-looking statements contained in this presentation as a result of new information, future events or otherwise.

Although the Company believes that the forward-looking statements are reasonable and based on information currently available, it can give no assurances that the Company's expectations are correct. All forward looking statements are expressly qualified in their entirety by this cautionary statement.

Aquapheresis and Aquadex FlexFlow are registered trademarks of Sunshine Heart, Inc.

# Statement about Free Writing Prospectus



- This presentation highlights basic information about us and the offering. Because it is a summary that has been prepared solely for informational purposes, it does not contain all of the information that you should consider before investing in our company. Except as otherwise indicated, this presentation speaks only as of the date hereof.
- This presentation does not constitute an offer to sell, nor a solicitation of an offer to buy, any securities by any person in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation.
- Neither the Securities and Exchange Commission (the "SEC") nor any other regulatory body has approved or disapproved of our securities or passed upon the accuracy or adequacy of this presentation. Any representation to the contrary is a criminal offense.
- This presentation includes industry and market data that we obtained from industry publications and journals, third-party studies and surveys, internal company studies and surveys, and other publicly available information. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this presentation, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions that were used in preparing the forecasts from the sources relied upon or cited herein.
- We have filed a Registration Statement on Form S-1 with the SEC, including a preliminary prospectus dated March 28, 2017 (the "Preliminary Prospectus"), with respect to the offering of our securities to which this communication relates. Before you invest, you should read the Preliminary Prospectus (including the risk factors described therein) and, when available, the final prospectus relating to the offering, and the other documents filed with the SEC and incorporated by reference into the Preliminary Prospectus, for more complete information about us and the offering. You may obtain these documents, including the Preliminary Prospectus, for free by visiting EDGAR on the SEC website at <http://sec.gov>.
- Alternatively, we or any underwriter participating in the offering will arrange to send you the prospectus if you request it by contacting Ladenburg Thalmann & Co. Inc., 570 Lexington Ave, 11th Floor, New York, NY 10022 or by email at [prospectus@ladenburg.com](mailto:prospectus@ladenburg.com).



- An investment in our securities has a high degree of risk. Before you invest you should carefully consider the risks and uncertainties described below, in the Preliminary Prospectus and elsewhere in our periodic and other reports filed with the U.S. Securities and Exchange Commission, including our Annual Report or Form 10-K for the fiscal year ended December 31, 2016.
- Our integration of the operations of the Aquadex Business requires significant efforts and we may need to allocate more resources to integration and product development activities than originally anticipated. These efforts will result in additional expenses and involve significant amounts of management's time. Our failure to manage and coordinate the growth of the company could also have an adverse impact on our business.
- Our near-term prospects are highly dependent on the development of a single product, the Aquadex FlexFlow, and we have no other commercial products or products in active development at this time. Failure to successfully commercialize Aquadex could have a material impact on our future operations.
- The established market or customer base for our Aquadex FlexFlow is limited and our success depends on our ability to increase adoption of the Aquadex FlexFlow. Failure to achieve sufficient market acceptance will significantly limit our ability to generate revenue and be profitable.
- We have no experience in commercially manufacturing the Aquadex FlexFlow and related components. As a result, we may not be able to develop and implement efficient, low-cost manufacturing capabilities and processes that will enable us to manufacture the Aquadex FlexFlow or related components in significant volumes.
- We will rely on third-party suppliers, including single source suppliers, to provide us with certain components of the Aquadex FlexFlow and to provide key components or supplies for use with our products. Any failure by our suppliers could have a material impact on our business.
- The number of shares of common stock underlying our outstanding warrants is significant in relation to our currently outstanding common stock and could cause downward pressure on the market price for our common stock and conversion of such outstanding convertible securities will cause dilution to holders of our common stock.
- We have incurred operating losses since our inception and anticipate that we will continue to incur operating losses in the near-term. The report of our independent registered public accounting firm issued in connection with its audit of our financial statements for the fiscal year ended December 31, 2016 expresses substantial doubt about our ability to continue as a going concern.
- On November 11, 2016, we received notice from the Staff that we no longer satisfied Nasdaq Listing Rule 5550(b) insofar as we did not expect to report stockholders' equity of at least \$2.5 million upon the filing of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 and that the deficiency could serve as an additional basis for the delisting of the Company's common stock from The Nasdaq Capital Market. We have sought an extension of the March 20, 2017 compliance deadline; but we cannot assure you that Nasdaq will grant our extension request. While we believe that the proceeds from this offering will be sufficient to evidence compliance with the minimum stockholders' equity requirement of Nasdaq, we cannot assure you that we will be able to meet the minimum stockholders' equity requirement. If it appears to the Nasdaq staff that we will not be able to meet the minimum stockholders' equity or any other listing standard, our common stock may be subject to delisting.

## Aquadex Business Overview

### Business and Product Overview

- Sunshine Heart provides Aquadex and its Aquapheresis technology, a form of ultrafiltration to reduce fluids in patients, particularly when diuretics are not effective.
  - Acquired from Baxter in August 2016.
  - FDA 510(k) market cleared and CE marked.
  - Installed base of 500+ consoles and successfully used on over 60k patients
- Aquadex is used to treat fluid overload in congestive heart failure ("CHF") patients, a leading cause of hospitalization in the United States, particularly in those ages 65+.

### Aquadex Highlights

- Clinically proven to reduce nearly 40% more fluid in patients than conventional diuretic drug therapy over the same period of time.
- Patients have 50% lower 90-day readmission rates than those treated solely with diuretics.
- Aquadex realizes gross margins in excess of 70%



Aquadex Console



Venous Catheter



Blood Circuit Set

# Executive Leadership Team



**John Erb**

Chief Executive Officer, Chairman

- 40+ years experience in medical devices
- CEO of 4 med-tech start-up companies
- Chairman of 3 public boards
- BA in Business Administration from California State University, Fullerton



**Megan Brandt**

VP of Regulatory Affairs and Quality Assurance

- 15 years medical device/pharma experience
- Veteran regulatory & quality professional with proven track record
- B.S. in Biochemistry & Microbiology



**Claudia Napal Drayton**

Chief Financial Officer

- 15 year finance career with Medtronic in United States and Europe
- 20+ years finance/accounting experience
- CPA, MBA Finance and Strategy University of Minnesota



**David Lerner**

Senior VP, R&D

- 25+ years of medical device development experience
- Founder of several vascular diagnostic device firms
- Graduate degrees in Medical Physics and Technology Management



**Sandra Eayrs**

VP of Human Resources

- 20 years experience in human resources with medical device experience with Boston Scientific and St. Jude Medical
- B.A. degree in Business Administration from the University of Wisconsin

**Currently recruiting a VP of Sales & Marketing**

# Board of Directors



**John Erb**  
Chief Executive Officer, Chairman

- 40+ years experience in medical devices
- CEO of 4 med-tech start-up companies
- Chairman of 3 public boards
- BA in Business Administration from California State University, Fullerton



**Jon Salvesson**  
Non-Executive Member

- Investment Banking and Chairman of the Healthcare Investment Banking Group at Piper Jaffray, focus on the medical device industry
- B.A. in Chemistry from St. Olaf College and an M.M.M. in Finance from the Kellogg Graduate School of Management at Northwestern University



**Warren Watson**  
Non-Executive Member

- 35+ years of medical device experience
- 33 years of experience at Medtronic in CRM, HF, Cardiac Ablation, and Cardiology
- Undergraduate and graduate degrees in Engineering from the University of MN



**Greg Waller**  
Non-Executive Member

- 40+ years of financial management experience
- Current and past Board member for multiple medical device companies
- 30 years experience as CFO
- MBA in Accounting from California State University at Fullerton



**Matthew Likens**  
Non-Executive Member

- President and CEO of Ulthera, Inc. from 2006 to 2016
- President of GMP Wireless Medicine from 2001 to 2006
- Baxter Healthcare Corporation from 1978 to 2001, President of Baxter's Renal U.S.
- B.B.A. in Marketing from Kent State University



**Steve Brandt**  
Non-Executive Member

- 35+ years of experience in medical devices.
- VP, Global Sales and Marketing at Thoratec, 2004 to 2015
- VP Sales & Marketing, CHF Solutions 2002 to 2004
- VP of Global Marketing, Cardiovascular Surgery Division for St. Jude Medical, 2000 to 2002
- B.S. from Franklin Pierce College





## Indications For Use

The Aquadex FlexFlow<sup>®</sup> System is indicated for:

- Temporary (up to 8 hours) ultrafiltration treatment of patients with fluid overload who have failed diuretic therapy
- Extended (longer than 8 hours) ultrafiltration treatment of patients with fluid overload who have failed diuretic therapy and require hospitalization



# Aquapheresis Therapy

- A simplified form of ultrafiltration (UF)
  - Removes both salt and water
- Safe method to achieve euvolemia (dry weight)
- Ease of Use
  - Highly automated setup and operation
  - Inpatient or outpatient settings
  - Peripheral or central venous access
  - Used often with 4:1 RN ratios in Stepdown
  - Ambulatory capabilities



# A Viable Option When Diuretics Fail

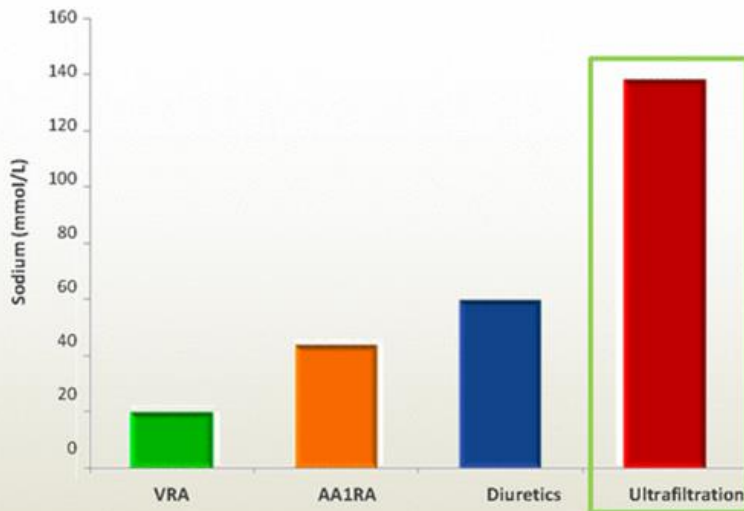
- Aquapheresis provides complete control over rate and total volume of fluid removed
- After Ultrafiltration, neurohormonal activation is reset toward a more physiological condition and diuretic efficacy is restored<sup>1</sup>
- Ultrafiltration effectively and safely decreases Length-of-stay (LOS) and readmissions<sup>2</sup>

*Patient outcome data with Aquapheresis included fewer days in the hospital, fewer emergency room, and unscheduled office visits.<sup>3</sup>*

1. Marenzi G, et al. *J Am Coll Cardiol*. 2001 Oct; 38(4): 963-968.  
2. Costanzo MR, et al. *J Am Coll Cardiol*. 2005 Dec 6; 46(11): 2047-2051.  
3. Costanzo MR, et al. *J Am Coll Cardiol*. 2007 Feb 13; 49(6): 675-683.

# Aquapheresis Removes More Salt than Diuretics Alone

- Ultrafiltration removes isotonic fluid and therefore the greatest possible amount of sodium per unit of fluid withdrawn<sup>1</sup>
- No effect on serum electrolytes<sup>2</sup>



1. Agostoni PG, et al. *Cardiology*. 2001; 96(3-4): 183-189.

2. Bart BA, et al. *J Am Coll Cardiol*. 2005 Dec 6; 46(11): 2043-2046.

Kazory A. *Clin J Am Soc Nephrol*. 2013; 8(10): 1816-1828



# Aquadex FlexFlow Console & Circuit

- Simple operator interface (two user settings) and tailored treatment
  - rate of withdrawal, 10 to 40ml/min. in 5ml increments
  - the desired rate of fluid removal, 10 to 500ml/hour in 10ml increments
- Peripheral venous access and a transportable console (with battery) allows the patient to move about during treatment
- List price = \$28,500
- 33cc of blood extracorporeal in circuit
- Blood is extracorporeal <1 minute
- Access typically via peripheral vein in the arm, central access an option and two OTN capable
- No impact on electrolyte balance, heart rate or blood pressure
- List price = \$900

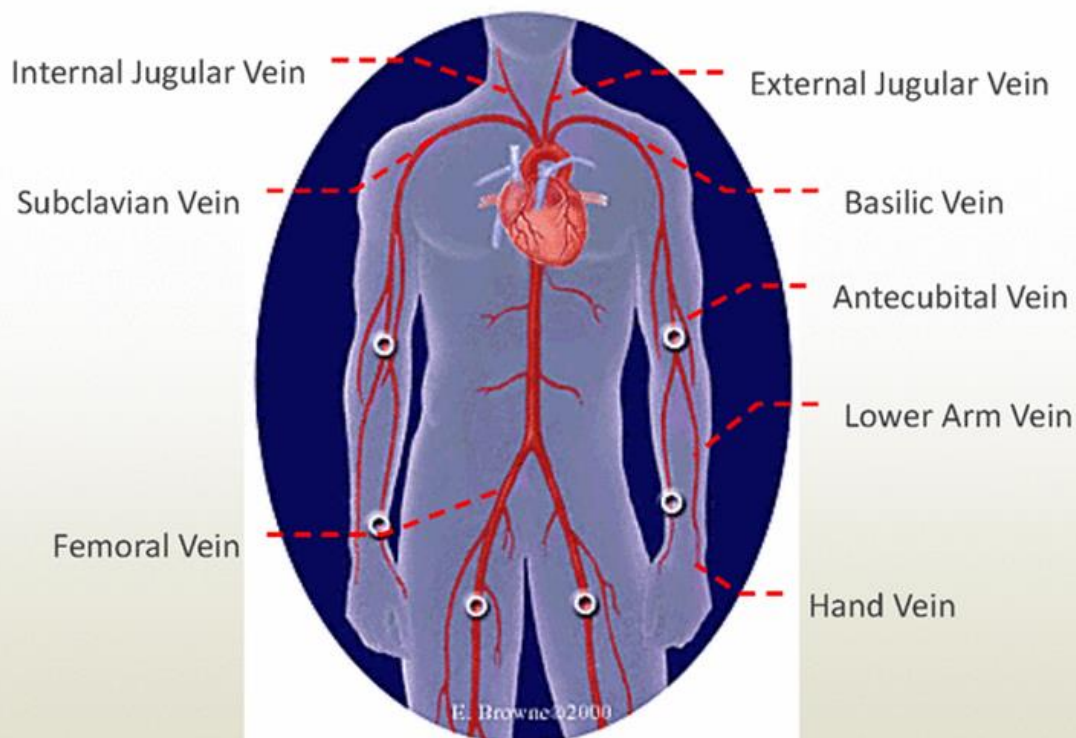


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# Venous Access Sites

Central or Peripheral



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## Upcoming Milestones



- Outpatient clinical evaluation designed to decrease readmission rates and length of hospital stay while improving quality of life
- A U.S. university has received FDA and IRB approval to move forward with an Investigational Device Exemption (IDE) pivotal study. The investigation is limited to 8 US institutions and 45 US subjects studying the use of Aquadex FlexFlow (or ultrafiltration) in pediatrics
- US Registry for hospital observation units to support outpatient reimbursement to begin in Q3-17

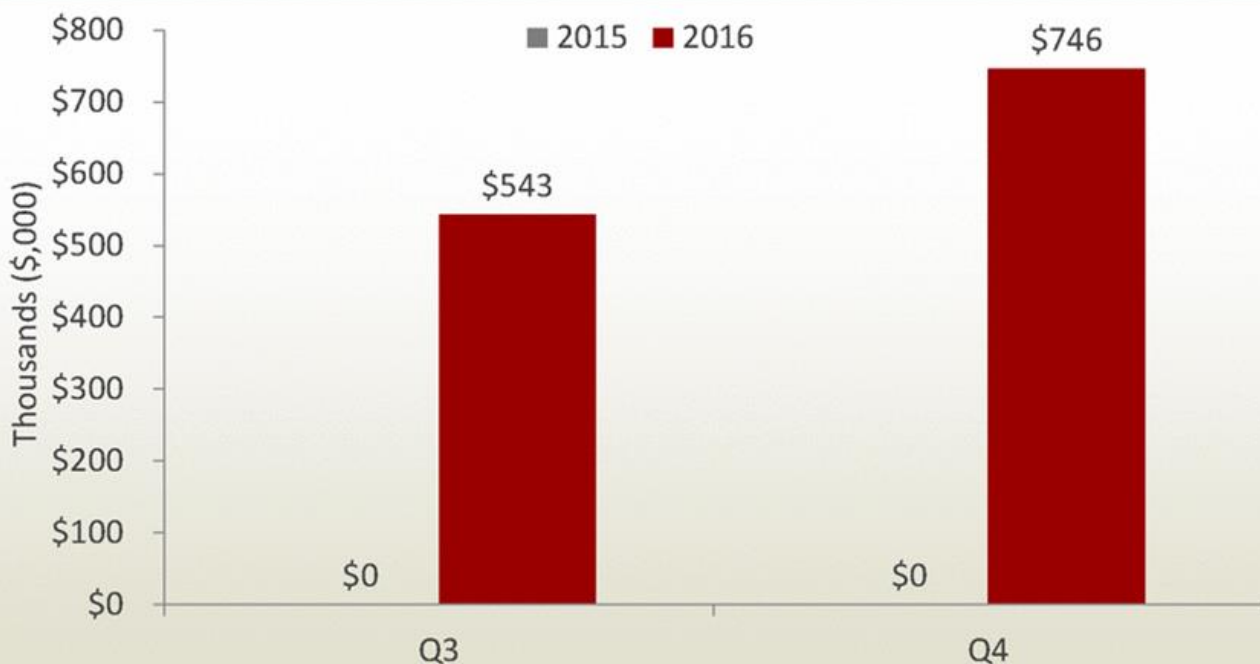


# Aquadex Revenue Overview

## Actual Revenue (\$,000)

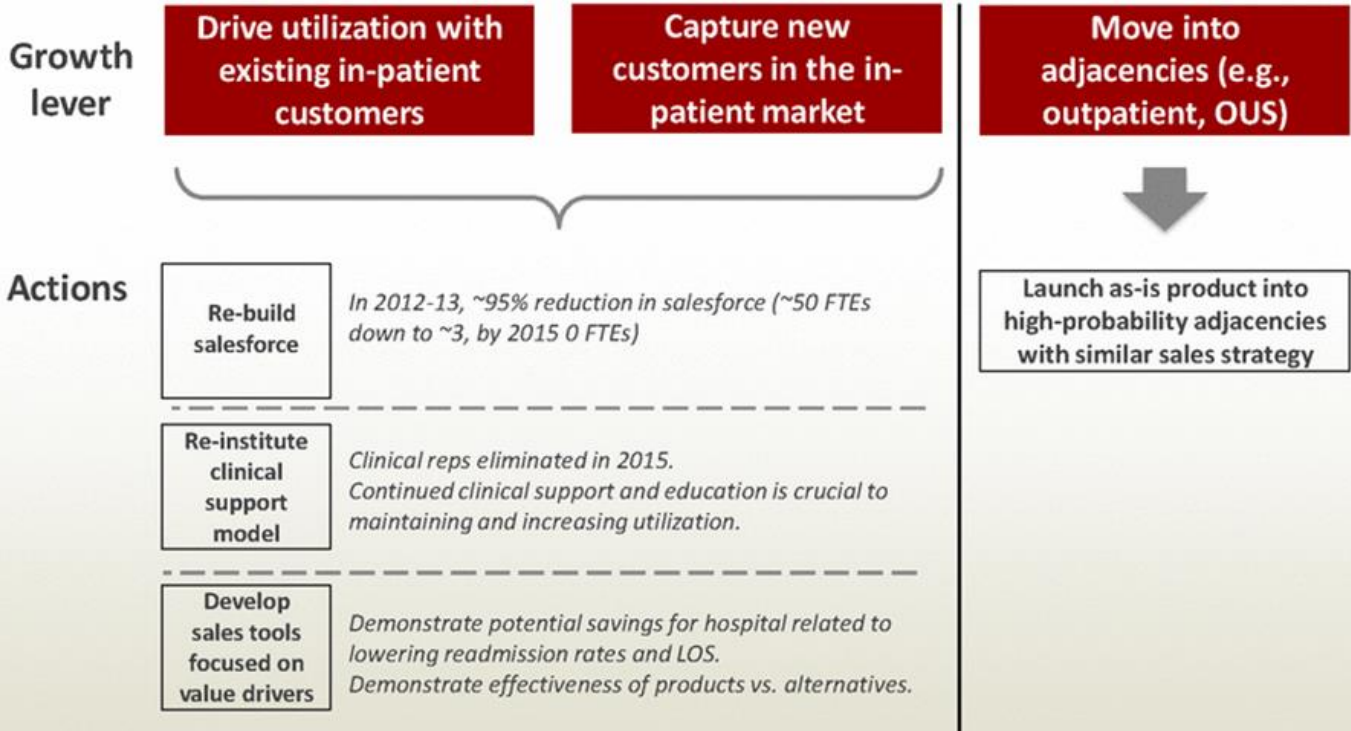
- The acquisition of the Aquadex business in August 2016 coupled with management’s new business strategy has resulted in increasing revenues.

Quarterly Revenue – 2015 vs. 2016





# Grow Revenue with Existing and New Customers



Sources: Management, Gambro.com/Aquapheresis, UNLOAD trial

## Re-engaging and Revitalizing Hospital Accounts



- In 2016, 55 hospital accounts accounted for 80% of revenue
- In Q1-17 there are 115 hospital accounts that have ordered product from Sunshine Heart
- 23 dormant accounts revitalized in Q1-17

## Reimbursement - Outpatient



- CMS established a new ICD-9 code (99.78) for Aquapheresis
- CPT code 36516, Physician reimbursement
  - Appropriate use of existing CPT 36516 - Therapeutic Apheresis with extracorporeal selective adsorption or selective filtration and plasma re-infusion; reimbursement ≈ \$75.00-\$90.00
- APC 0112, Therapeutic Apheresis for Outpatient Clinic
  - CPT 36516 maps to APC 0112; reimbursement ≈ \$1,500 to \$3,600

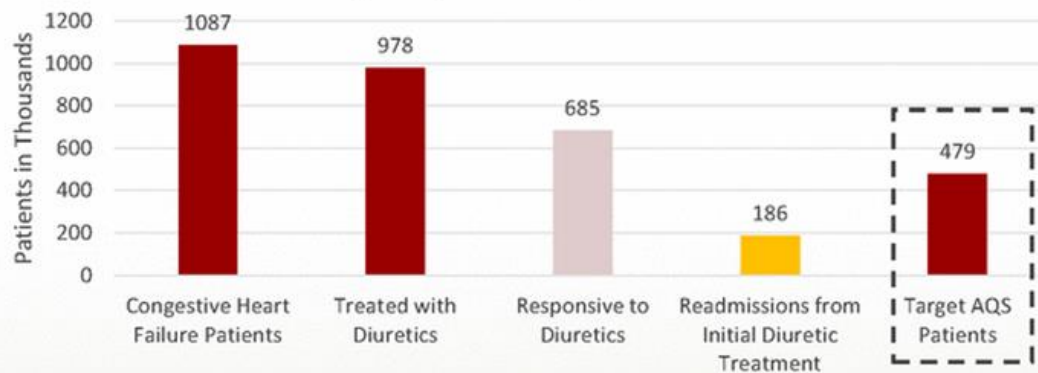


# Market Opportunity



# Defining the Market Opportunity

## U.S. Target Inpatient Aquadex Patients



### Aquadex Core Market

- CHF resulted in more than 1M hospitalizations in 2015, 90% of which presented with fluid overload
- Nearly half of these patients are the primary target market for Aquadex technology

### Additional Market Opportunities

#### Outpatient Therapy

- Over 1 million hospitalizations annually in US for acute heart failure, with 90% of heart failure patients present with symptoms of fluid overload<sup>1</sup>
- Nearly half are eligible for in-patient Aquapheresis therapy totaling 497k patients
- Average hospital stay is ≈6 days<sup>2</sup> (Medicare reimbursement only covers 4 days)

#### International Markets

**Combined, the inpatient and outpatient market potential in the US is over 800,000 patients annually.**

Sources: Management, CDC.gov.

# CHF is the Leading Cause of Fluid Overload

## Causes of Fluid Overload

### Excessive intake of fluid or sodium

- High intake of sodium
- IV therapy
- Transfusion reaction as a result of blood transfusions

### Fluid shift into the intravascular space

- Fluid remobilization after burn treatment
- Administration of hypertonic fluids, such as mannitol or hypertonic saline solution
- Administration of plasma proteins, such as albumin

### Retention of Water or Sodium

- Congestive heart failure
- Liver cirrhosis
- Nephrotic syndrome
- Corticosteroid therapy
- Hyperaldosteronism
- Low protein intake

## Symptoms and Treatment of Fluid Overload

### Symptoms

- Increased weight gain, particularly over short period
- Swelling in legs and arms
- Fluid in abdomen

### Treatment

- Diuretic (e.g. Lasix/Furosemide)
- Secondary pharmacologics
- Ultrafiltration

## Congestive Heart Failure

- ~ 5 million people annually in the U.S. experience congestive heart failure
- Weakening pumping ability of heart causes blood and fluid to back up into the lungs

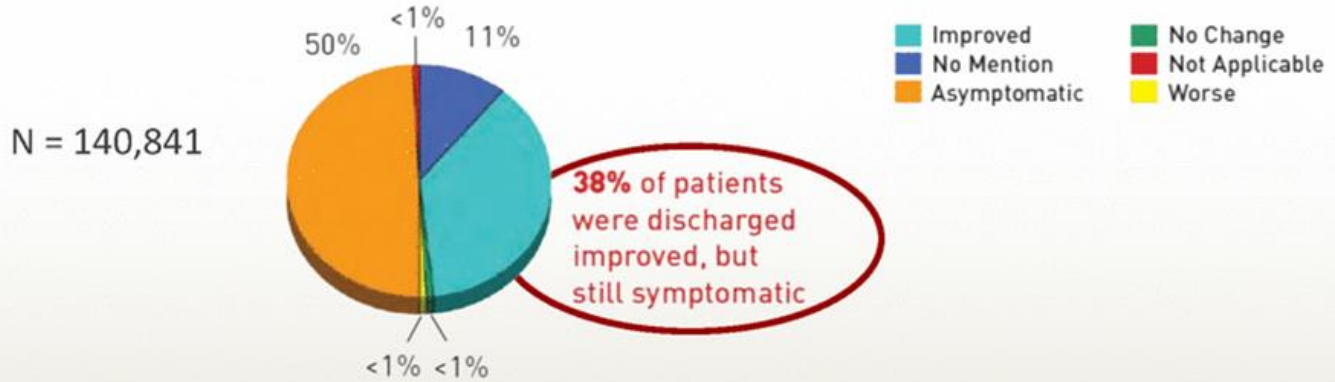
Sources: Portable Fluids and Electrolytes (Lippincott Williams & Wilkins 2007); MedlinePlus, Decision Resources PatientBase, American Heart Association

# ADHERE Registry Gathered Nationwide

## Acute Decompensated Heart Failure Data



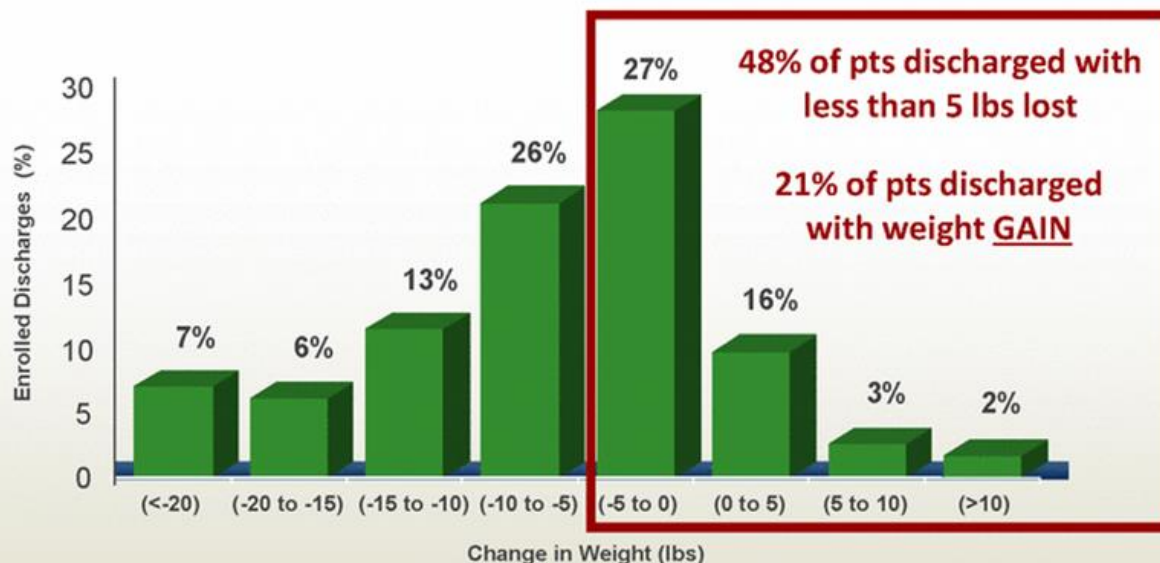
### Clinical Status: All Enrolled Discharges at Time of Discharge



*"To shorten lengths of stay, patients are discharged too early while they still have evidence of volume overload."<sup>1</sup>*

ADHERE Scientific Advisory Committee. ADHERE Final Cumulative National Benchmark Report. Mountain View, CA: Scios Inc.; 2006  
1. O'Connor CM, et al. *J Card Fail.* 2005 Apr; 11(3): 200-205.

Change in Weight During Hospitalization  
January 2001 to April 2006 (n=96,094)



ADHERE Scientific Advisory Committee. ADHERE Final Cumulative National Benchmark Report. Mountain View, CA: Scios Inc.; 2006

## A Single Center Experience

### Good Samaritan Hospital – Dayton, OH

- Independent study on 67 patients who received Aquapheresis
  - No 30-day readmissions for volume overload
    - 62% of patients were not readmitted after Aquapheresis therapy for 8 months
  - Average of 5.7L removed per patient
  - Length-of-Stay when started within 24 hours was 2.2 days compared to national average of 4.9 for comparable time period<sup>1</sup>
  - With the introduction of Aquapheresis therapy, readmission rates dropped from 12% to 4%

<sup>1</sup>Center for Disease Control (CDC.gov) - <http://www.cdc.gov/diabetes/statistics/cvd/hosp/hf/fig2.htm>

Single Hospital Experience Source: Poster presented at National Teaching Institute & Critical Care Exposition (NTI), Chicago, IL, May 5-8, 2008. Peterangelo M. *Prog Cardiovasc Nurs*. 2008 Fall; 23(4):168-172.



# Affordable Care Act



- Hospital Readmission Reduction Program effective as of Oct 1, 2012 (FY 2013)
- Requires CMS to reduce payments to hospitals with excess heart failure readmissions, among other conditions
- **Penalty:** hospitals can lose  $\leq 3\%$  of total Medicare reimbursement †

Readmission Data	Readmission Rate
30 day readmissions	22% <sup>1</sup>
6 month readmissions	44% <sup>2,3</sup>
Admitted patients with Emergency Department as first point of care:	78% <sup>4</sup>

†Readmission Penalties Source: Readmissions Reduction Program (HRRP). Centers for Medicare & Medicaid Services website: <https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html>. Updated April 18, 2016. Accessed May 25, 2016.

1. Centers for Medicare & Medicaid Services. Hospital Compare datasets. National Rate (READM\_30\_HF); 3Q2011 – 2Q2014. <https://data.medicare.gov/data/hospital-compare>. Accessed June 10, 2016.


2. Krumholz HM et al. *Arch Intern Med*. 1997 Jan 13;157(1): 99-104.

3. Ross JS, et al. *Circ Heart Fail*. 2010 Jan; 3(1): 97-103.

4. Gheorghide M, Filippatos G. *Eur Heart J*. 2005 Mar 15; 7 (Suppl): B13-B19.



## Clinical Trials

Trial	Overview	Conclusions and Additional Considerations
<b>SAFE:</b> J Am Coll Cardiol Failure 2003; 9(3):227-31	<ul style="list-style-type: none"> <li>The Safe trial was a prospective observational study to verify the safety and function of the Aquadex system as an alternative ultrafiltration treatment that does not require a central venous catheter</li> </ul>	<ul style="list-style-type: none"> <li>Rapid removal of extracellular and intravascular fluid volume excess can be safely achieved via peripherally inserted ultrafiltration (Aquadex) without the need for central venous catheter placement.</li> </ul>
<b>RAPID:</b> J Am Coll Cardiol Cardiol 2005; 46(11): 2043-6	<ul style="list-style-type: none"> <li>Rapid was a randomized controlled trial to assess the safety and efficacy of ultrafiltration in patients admitted with decompensated congestive heart failure.</li> </ul>	<ul style="list-style-type: none"> <li>The study concluded that early application of UF for patients with CHF was feasible, well-tolerated, and resulted in significant weight loss and fluid removal.</li> </ul>
<b>EUPHORIA:</b> J Am Coll Cardiol 2005;46 (11):2047-51	<ul style="list-style-type: none"> <li>Euphoria sought to determine if ultrafiltration before intravenous diuretics in patients with decompensated heart failure and diuretic resistance results in euvolemia and early discharge without hypotension or worsening renal function.</li> </ul>	<ul style="list-style-type: none"> <li>Ultrafiltration before IV diuretics effectively and safely decreases length of stay and readmissions. Clinical benefits persist at three months.</li> <li>Early ultrafiltration in patients with fluid overload and diuretic resistance permitted the discharge of 60% of high-risk ADHF patients in &lt;3 days.</li> <li>Aggressive fluid withdrawal (8,500 ml) with ultrafiltration was not associated with worsening renal failure, electrolyte abnormalities, or symptomatic hypotension</li> </ul>
<b>UNLOAD:</b> J Am Coll Cardiol 2007;49 (6):675-83	<ul style="list-style-type: none"> <li>The Unload trial was a randomized multicenter trial of early ultrafiltration versus intravenous diuretics in 200 patients hospitalized with heart failure and hypervolemia.</li> </ul>	<ul style="list-style-type: none"> <li>Ultrafiltration safely produces greater weight and fluid loss than intravenous diuretics.</li> <li>Ultrafiltration was associated with a 50% reduction in the number and length of hospital readmissions in the 90 days following the initial treatment.</li> </ul>
<b>CARRESS:</b> N Engl J Med. 2012;367:2296-2304	<ul style="list-style-type: none"> <li>Randomly assigned 188 patients with acute heart failure and worsened renal function</li> <li>The primary end point was the bivariate change in the serum creatinine level and body weight at 96 hours.</li> </ul>	<ul style="list-style-type: none"> <li>A stepped pharmacologic-therapy algorithm was superior to a strategy of ultrafiltration for the preservation of renal function at 96 hours, with a similar amount of weight loss with the two approaches</li> </ul>
		<b>Considerations</b> <ul style="list-style-type: none"> <li>The study population in this trial had more advanced disease than that which is indicated for Aquapheresis™</li> <li>Ultrafiltration was performed at a fluid-removal rate of 200 ml per hour, which may have been inappropriate for this patient population.</li> <li>Rates of intravascular volume refill were not monitored.</li> <li>Ultrafiltration was started a median of 8 hours after random assignment, placing ultrafiltration at a disadvantage in the 96 hour trial measurements relative to diuretics.</li> </ul>

# Aquapheresis Clinical Evidence: Guidelines

Society	Source	Recommendation / Key Findings
ACC / AHA - American College of Cardiology / American Heart Association	2013 ACCF/AHA Guideline for the Management of Heart Failure <sup>1</sup>	Ultrafiltration may be considered for patients with obvious volume overload to alleviate congestive symptoms and fluid weight. <b>(Level of Evidence: B)</b> Ultrafiltration may be considered for patients with refractory congestion not responding to medical therapy. <b>(Level of Evidence: C)</b>
HFSA - Heart Failure Society Of America	HFSA 2010 Comprehensive Heart Failure Practice Guidelines <sup>2</sup>	Ultrafiltration may be considered in lieu of diuretics. <b>(Strength of Evidence: B)</b>
ESC / HFA - European Society of Cardiology and Heart Failure Association	ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012 <sup>3</sup>	If an adequate diuresis cannot be achieved by doubling the dose of loop diuretic with dopamine and the patient remains in pulmonary oedema, venovenous isolated ultrafiltration should be considered.
CCS - Canadian Cardiovascular Society	2012 Canadian Cardiovascular Society Heart Failure Management Guidelines Update <sup>4</sup>	Patients with persistent congestion despite diuretic therapy, with or without impaired renal function, may, under experienced supervision, receive continuous venovenous ultrafiltration.

\* Sunshine Heart is not recommending the use of Aquapheresis in lieu of diuretics. The Aquadex FlexFlow System is indicated for ultrafiltration treatment of fluid overload in the event of diuretic failure.

1. Yancy CW, et al. *J Am Coll Cardiol*. 2013 Oct 15; 62(16): e147 – e239.  
2. Lindenfeld J, et al. *J Card Fail*. 2010 Jun; 16(6): 475 – 539.

3. McMurray JJ, et al. *Eur Heart J*. 2012 Jul; 33(14): 1787 – 1847.  
4. McKelvie RS, et al. *Can J Cardiol*. 2013 Feb; 29(2): 168 – 181.



# Sunshine Heart US Registry

## Study Concept: Observation Unit ADHF Management



## Outpatient

- High-risk patients self-identify with ADHF hospitalization
- Salvageable cases diverted from Emergency Department to Observation Unit/Clinical Decision Unit for UF & subsequent release
- Early initiation of UF to maximize benefit
- Followed 90 Days from discharge for outcomes

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## Strategic Opportunity with AAHFN



**Industry Beat**  
The Official eNewsletter of AAHFN Industry Partners

**Sunshine Heart System**  
We are now taking your orders!

**Order Fulfillment from Eastern**  
We are pleased to announce that, as of November 1, 2016, all equipment orders will ship from Eastern. This change includes all previous orders, shipped, on-site, and pending.

**Product Ordering Information**

Product Name	Price	Lead Time
Aquapheresis Console	\$1,495	1-2
Aquapheresis Console with Training	\$1,495	1-2
Aquapheresis Console with Training & Certification	\$1,495	1-2
Aquapheresis Console with Training & Certification & On-site	\$1,495	1-2

### American Association of Heart Failure Nurses Industry Beat Sponsored email

A monthly "sponsored" email delivered from AAHFN to their distribution list of about 3,100 members.

- Featured announcement of Sunshine heart transitioning order fulfillment and we are taking orders with Customer Support contact options
- Featuring a link to the introduction of the Aquadex FlexFlow Computer Based Training
- Launched: 11/3/2016

### Full Page Advert in Quarterly Digital Magazine Service Offer & Announcement of order fulfillment

Launched: Nov, 2016

**Aquapheresis**  
An Effective Treatment for Fluid Overload

**Now Taking Your Orders!**  
Get \$150 OFF a Console Calibration\*

**Product Ordering Information**

Product Name	Price	Lead Time
Aquapheresis Console	\$1,495	1-2
Aquapheresis Console with Training	\$1,495	1-2
Aquapheresis Console with Training & Certification	\$1,495	1-2
Aquapheresis Console with Training & Certification & On-site	\$1,495	1-2

**To Place an Order:**

- Call Customer Support: 1-800-899-4337 (Mon-Fri)
- Email: [orders@sunshineheart.com](mailto:orders@sunshineheart.com)
- Web: [www.sunshineheart.com/orders](http://www.sunshineheart.com/orders)
- Fax: 603-255-8721

**Aquadex FlexFlow®**  
Computer Based Training

- Overview of the Aquapheresis therapy
- Patient selection
- System operation setup and priming
- Treatment steps and considerations

**Register Today**


### Web Ad in Monthly Newsletter The Pulse

Links to [Training & Certification page](#)

Launched: Nov, 2016

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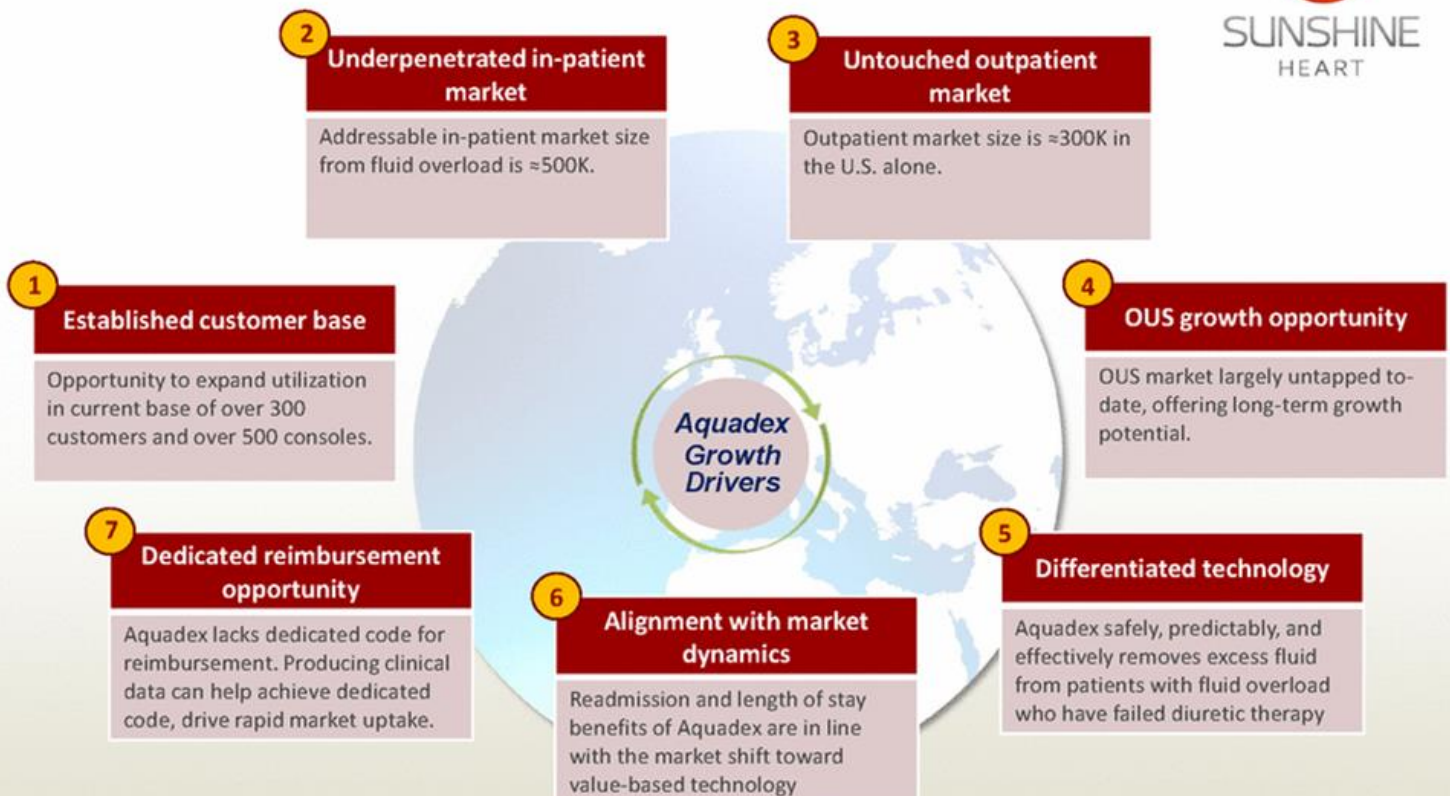
**Capitalization / Ownership Table  
Investment Considerations**

# Capitalization / Ownership Table

CAPITALIZATION TABLE (as of March 28, 2017)	
Securities	No. of shares
Common shares outstanding	3,119,492
Warrants (weighted average price \$4.05)	927,223
Options (weighted average price \$81.27)	57,102
Restricted Stock Units	10,465
<b>Total Fully Diluted Shares Outstanding</b>	<b>4,114,282</b>

Note: None of the warrants contain anti-dilution protection

# Investment Considerations



*Sunshine Heart will benefit from re-engaging existing clients, targeting new customers and markets, as well as benefit from positive industry dynamics favoring technologies that reduce hospital readmission rates.*



**Thank you**





# APPENDIX

## Fluid Overload Hospitalization

### Congestive Heart Failure Fluid Retention

- Congestive heart failure is a leading cause of fluid overload hospitalizations.<sup>1</sup>
  - 90% of these patients present with symptoms of fluid overload.
  - 2% of all US hospital admissions are for decompensated heart failure.<sup>2</sup>
  - Average hospital stay is ~6 days.<sup>2</sup>
  - Rehospitalization rates during the 6 months following discharge are up to 50%.<sup>2</sup>
- The estimated prevalence and cost of care for heart failure will increase markedly because of the aging population.<sup>3</sup>

### Postoperative Fluid Retention

- Postoperative Fluid Retention:
  - Third-space fluid accumulation in the postoperative cardiac surgery patient is the most common issue dealt with in the early recovery phase.<sup>1</sup>
  - Contributes to postoperative hypoxemia, pulmonary edema, pleural effusions, and hepatic and peripheral congestion.
  - "Peri-operative fluid overload is common in cardiac surgery patients. Many of them have been on diuretics for months if not years prior to seeking medical attention and surgical intervention."<sup>2</sup>

*In 2012, the estimated total cost of heart failure in the US was \$30.7 billion.*

**Sources:**

1. Gheorghide M, et al. Am J Med 2006; 119: S3-S10.
2. Roger VL, et al. AHA Stat Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics; 123(4): e18-e209.
3. Heidenreich PA, et al. Circ Heart Fail. 2013; 6: 606-619.

## What is Diuretic Therapy?

Diuretics are commonly known as “water pills” – they help your body get rid of unneeded water and salt through the urine

## What is Failure of Diuretic Therapy?

- Diuretic failure criteria is established by the clinician or institution
- Examples include\*:
  - Patient presents 10 lbs or more over dry weight
  - Previous hospitalizations where diuretic treatment was ineffective
  - Patient cannot achieve a goal of -2 liters at 24 hours
  - No significant difference in patient’s global assessment of symptoms in 24 hours
  - Non-significant symptom improvement noted after escalating to high-dosing strategy
  - Observed worsening of renal function during diuretic treatment plan
  - Post and peri-operative fluid overload

*\*Sunshine heart takes no position with respect to the examples listed above.*