



# Arcadia

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**Company Overview**

**September 2017**

# Forward-looking statements



“Safe Harbor” statement under the Private Securities Litigation Reform Act of 1995: This presentation contains forward-looking statements about the company and its products, including statements relating to components of the company’s long-term financial success; the company’s traits, commercial products, and collaborations; the company’s ability to manage the regulatory processes for its traits and commercial products; the company’s anticipated financial results; current and future products under development; additional collaboration agreements; the regulatory process; business and financial plans; and other non-historical facts.

Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially, and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to: the company’s and its partners’ ability to develop commercial products incorporating its traits and complete the regulatory review process for such products; continued competition in seed traits and other products; the company’s compliance with laws and regulations that impact the company’s business, and changes to such laws and regulations; the company’s reliance on its collaborators to commercialize products incorporating its seed traits; the company’s future capital requirements and ability to satisfy its capital needs; the company’s exposure to various contingencies, including those related to intellectual property protection, success of field trials, regulatory compliance, the speed with which regulatory approvals are received, and public acceptance of biotechnology products; developments related to foreign governmental regulations, political climate, currencies and economies; successful operation of the company’s joint ventures; fluctuations in commodity prices; the company’s ability to obtain a significant portion of the increased value to farmers from products that incorporate its traits; and the effect of weather conditions, natural disasters and accidents on the agriculture business or the company’s facilities.

Further information on these and other factors that could affect the company’s financial results are included in filings it makes with the Securities and Exchange Commission from time to time, including the section entitled “Risk Factors” in the company’s Annual Report on Form 10-K for the year ended December 31, 2016. These documents are or will be available on the SEC Filings section of the Investor Relations pages of the company’s website at [www.arcadiabio.com](http://www.arcadiabio.com). All information provided in this presentation and in the attachments is as of the date hereof, and Arcadia Biosciences, Inc. undertakes no duty to update this information.

## Arcadia develops plants that create value for growers, enhance human health and improve the environmental sustainability of agriculture

- ④ Founded in 2002
- ④ Public company – 2015  
(Nasdaq: RKDA)
- ④ Headquarters in Davis, California
- ④ Health and nutrition products
  - High fiber wheat, improved wheat quality
  - Nutritional oils
- ④ Agriculture products
  - Yield traits
  - Traits that reduce the impact of environmental stress on crops (low water, salinity, low N<sub>2</sub>)



# Arcadia – A company transformed

2002 - 2015

- ④ Established an industry-leading R&D platform for yield and stress trait development
- ④ Strong, experienced R&D team
- ④ Established global partnerships thru licensing model

2016 – A year of transition

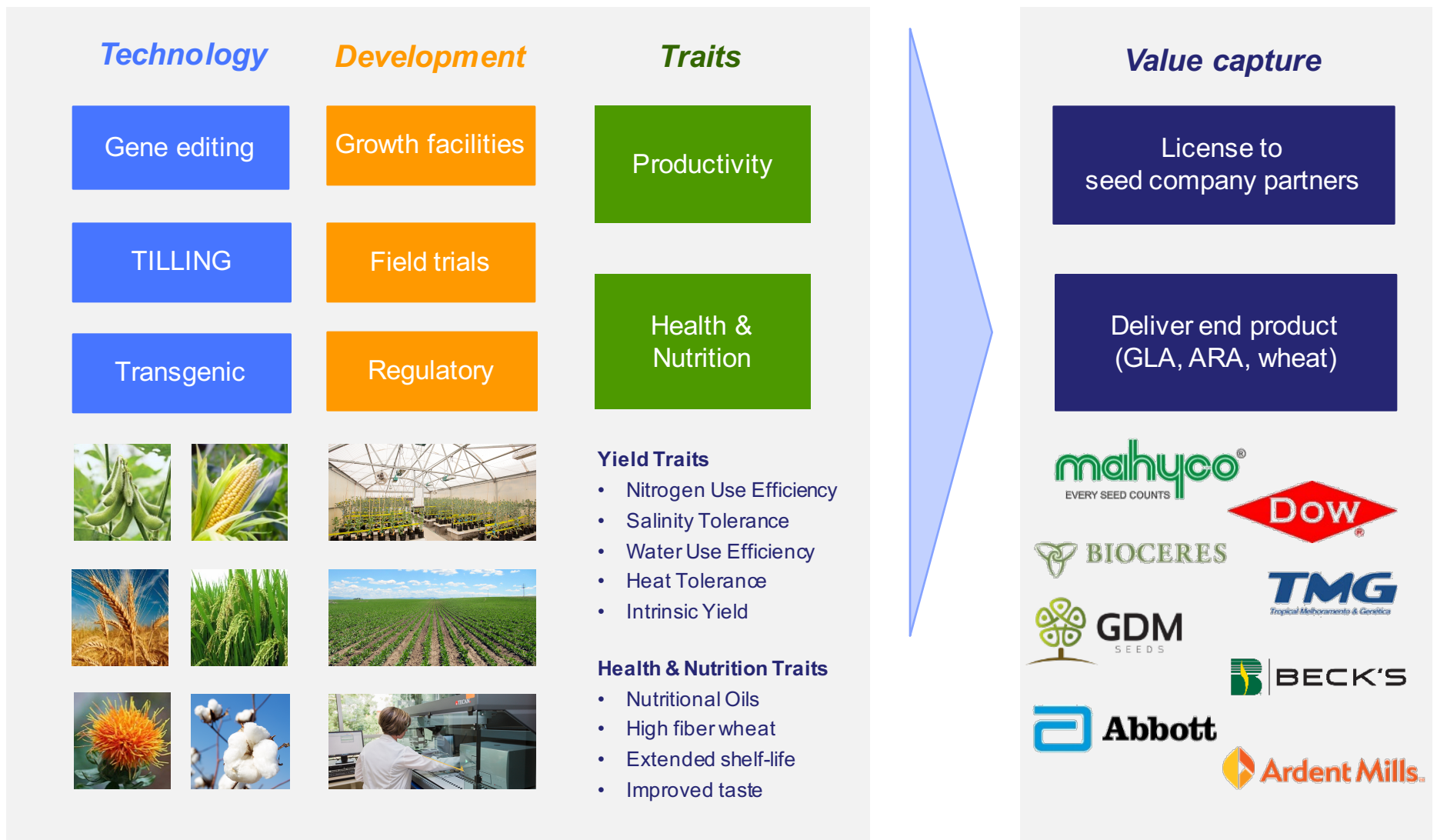
- ④ New management team; optimized cost structure
- ④ Shifted emphasis from research to commercialization of late stage products
- ④ Focused on productivity (yield) and health & nutrition (quality)

2017 forward

- ④ **Accelerating** development through CRISPR-Cas9 gene editing platform
- ④ **Advancing** a balanced pipeline of health ingredient and productivity traits to commercialization
- ④ **Improving** financial results

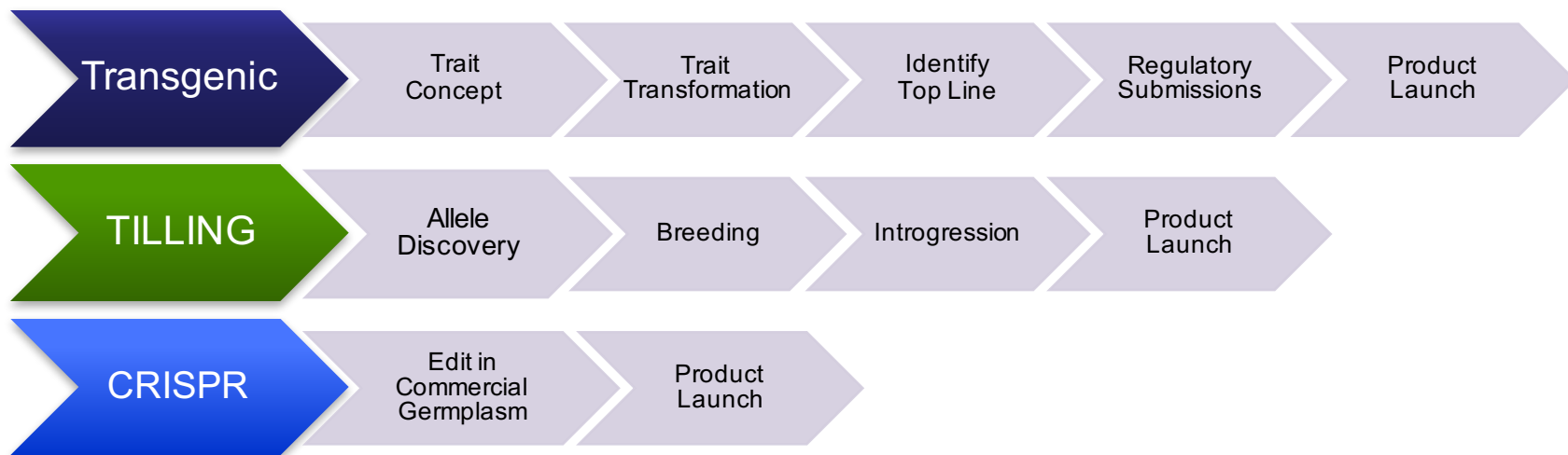


# Arcadia business model provides multiple paths to value capture



# Accelerating product development with CRISPR-Cas9 gene editing system

- ④ Licensed CRISPR-Cas9 system from The Broad Institute, MIT
- ④ Accelerates product development on existing Arcadia traits by ~2-3 years

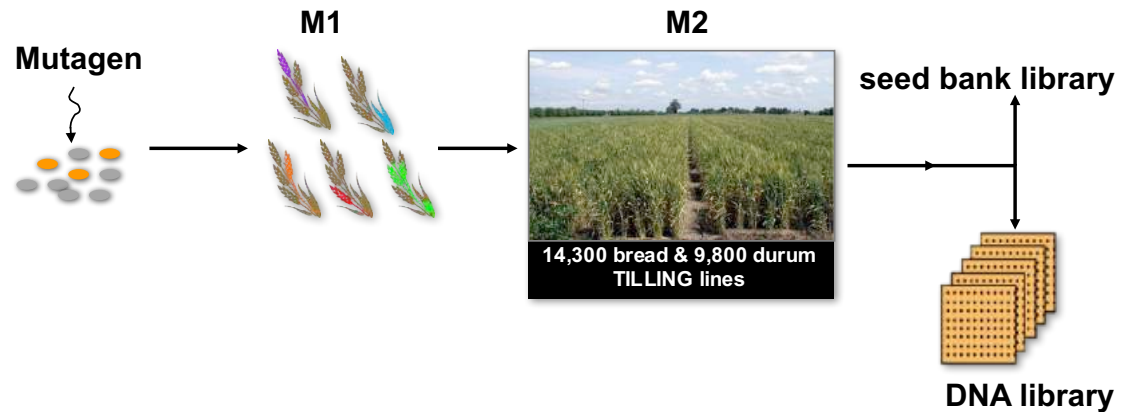


- ④ Initial targets:
  - Resistant Starch (high-fiber) wheat
  - Long Shelf Life wheat
  - Reduced Gluten wheat
  - Work advancing in wheat commercial germplasm

# TILLING as a source of non-GM traits

## The TILLING method

- Can deliver seeds with a marker for rapid deployment into a breeding program within 12 weeks



## Current TILLING libraries



Pasta Wheat



Bread Wheat



Indica Rice



Canola



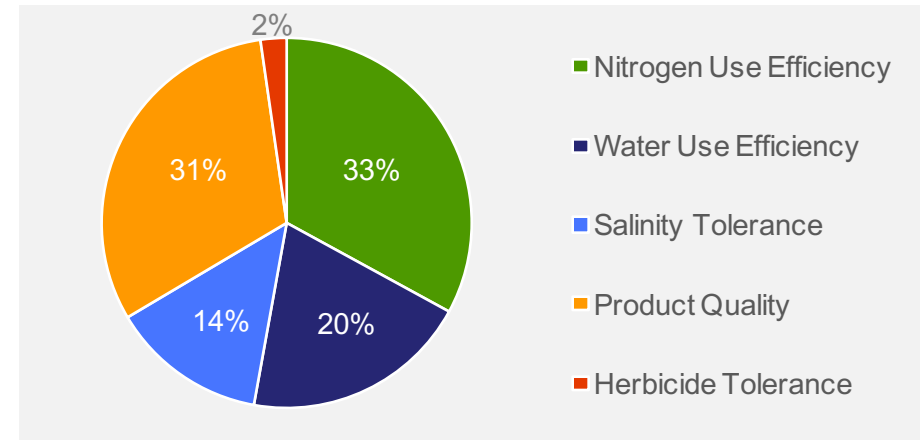
Soybean

Prior development of lines in: corn, tomato, lettuce, castor bean, cypress rice, peanut and pepper

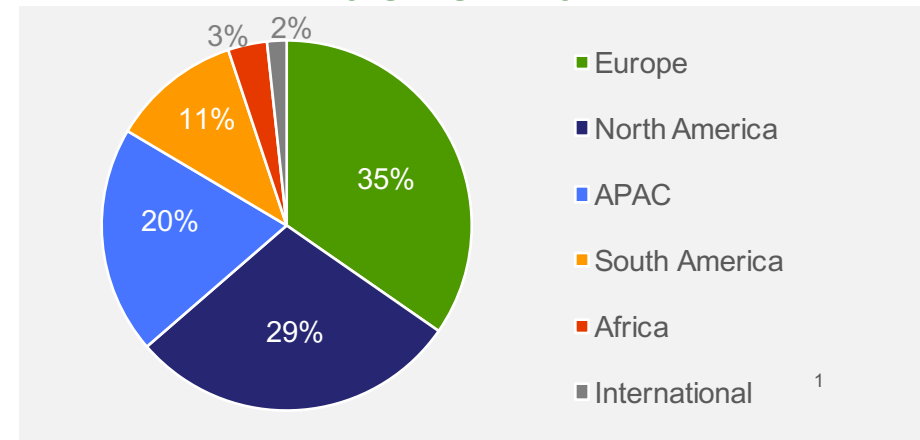
# Strong patent portfolio supports a variety of trait technologies

- Own or exclusively control 176 patents worldwide in 32 families
- Issued 24 patents and filed 14 new patent applications since January 2015
- Own patents in most key production markets for specific crops
- Ability to achieve full control over mutation, from TILLING, enables the company to obtain patents on non-GM traits

## Patent portfolio by technology



## Patent portfolio by geography



Note 1: International applications filed under the Patent Cooperation Treaty

# Arcadia's products focus on two segments of the agriculture and food industry



## Health & Nutrition

- ① Focus on enhancing the quality and nutritional features of crops
- ① Fully integrated nutritional oil business and licensing of other nutritional traits
- ① Identity preserved production up to 5,000 acres

SONOVA GLA safflower oil  
ARA safflower oil  
Resistant starch wheat  
Wheat quality

## Ag Productivity

- ① Improve crop productivity through intrinsic yield and abiotic stress reduction
- ① Focus on large-acre, high value crops including corn, rice, soy and wheat
- ① Trait development carried out in partnership with leading seed companies

Nitrogen use efficiency  
Water use efficiency  
Salinity tolerance  
Wheat yield



# Health & Nutrition: Nutritional oils

## SONOVA® brand GLA safflower oil (gamma linolenic acid)

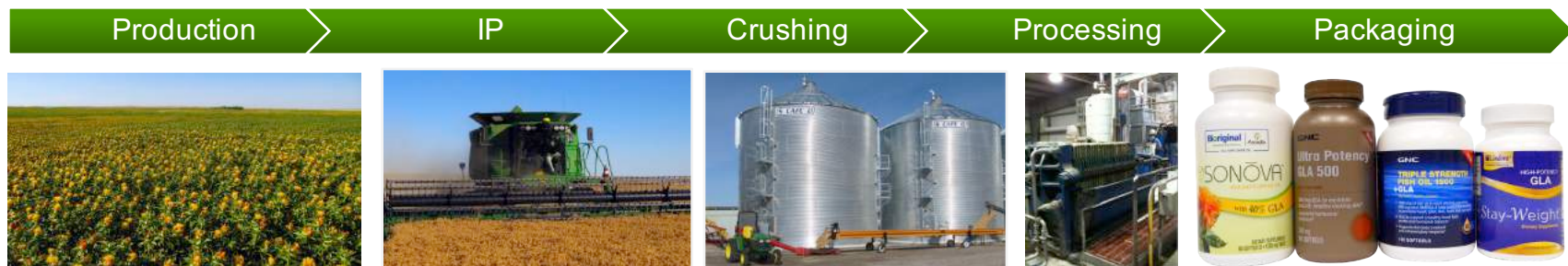
- Sold in products for human health benefits
  - Anti-inflammatory, skin health, weight control
- FDA approved for new markets
  - Pet foods – improved coat, skin health, etc.
  - Medical foods and nutritional beverages



## ARA safflower oil (arachidonic acid) Abbott


- Partnered with Abbott Labs
- Ingredient in 90% of infant formulas

## Demonstrated full supply chain capability





# Health & Nutrition: High-fiber and long shelf-life wheat

- ④ Resistant starch / high fiber white wheat
  - High fiber, low glycemic index
- ④ Long shelf life whole grain flour
  - Reduced rancidity and bitter compounds
- ④ Products are in advanced pre-commercial phase
  - Large-scale trials to demonstrate identity preserved production and large scale milling and processing
  - Partnered with Ardent Mills,  largest wheat processing company in US
  - Introgressing into commercial germplasm



## ④ Integrated supply chain



# Productivity: HB4 drought tolerant soybeans

- ④ Verdeca: joint venture with Bioceres
- ④ Trait licensed to major seed companies in South America
  - Don Mario, TMG, Nidera
  - Breeding into commercial germplasm for Brazil and Argentina
  - 2016-17 trials completed
- ④ Regulatory status
  - Approved in Argentina
  - Approved by FDA in US for food and feed safety
  - Submitted for USDA approval
  - Submitted for import approval in China
  - Conducting studies for regulatory submission in Europe



# Arcadia is well positioned for future growth

- ① Focused on development of traits for improving health, nutrition and agriculture productivity
  - Multiple products in advanced stages of development
- ① Unique business model leverages partnerships with seed companies and processors to bring products to market
  - Numerous licenses in place with global partners in major crops
- ① A leading team of science, product development, regulatory and business professionals



**Arcadia**  
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## Recent Financials

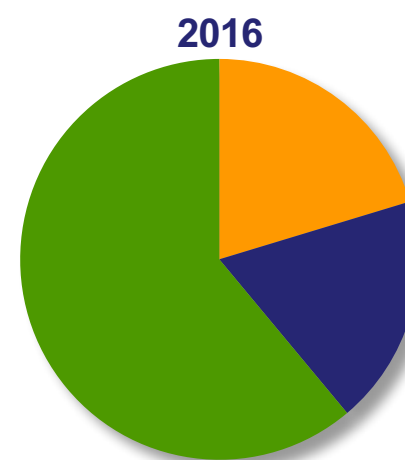
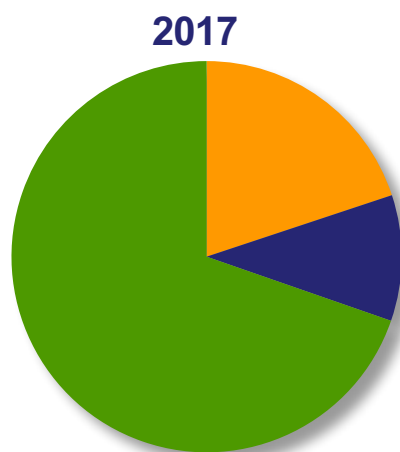
# Revenue

	Second Quarter				First Half			
	2017	2016	Favorable/ (Unfavorable)		2017	2016	Favorable/ (Unfavorable)	
			\$	%			\$	%
Product revenue	195	65	130	200%	400	320	80	25%
License revenue	103	140	(37)	(26)%	209	292	(83)	(28)%
Contract research and government grants	693	516	177	34%	1,400	961	439	46%
Total revenues	991	721	270	37%	2,009	1,573	436	28%

*\$ in thousands; Unaudited*

## First half revenue mix comparison:

- Product revenue
- License revenue
- Contract research and government grants





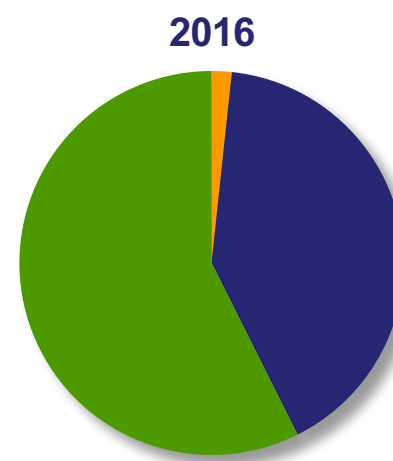
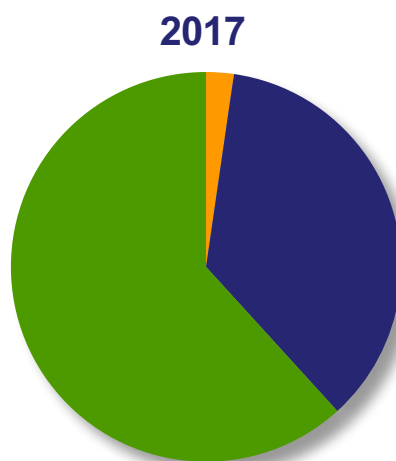
# Operating expenses

	Second Quarter				First Half			
	2017	2016	Favorable/ (Unfavorable)		2017	2016	Favorable/ (Unfavorable)	
			\$	%			\$	%
Cost of product revenues	116	35	(81)	(231)%	222	182	(40)	(22)%
R&D expense	1,669	2,216	547	25%	3,492	4,418	926	21%
SG&A expense	2,943	2,759	(184)	(7)%	5,995	6,195	200	3%
<b>Total operating expenses</b>	<b>4,728</b>	<b>5,010</b>	<b>282</b>	<b>6%</b>	<b>9,709</b>	<b>10,795</b>	<b>1,086</b>	<b>10%</b>

*\$ in thousands; Unaudited*

## First half expense mix comparison:

- Cost of product revenues
- R&D expense
- SG&A expense





# Key financial results



	Second Quarter				First Half			
	2017	2016	Favorable/(Unfavorable)		2017	2016	Favorable/(Unfavorable)	
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Loss from operations	(3,737)	(4,289)	552	13%	(7,700)	(9,222)	1,522	17%
Interest expense, tax provision and other income, net	(269)	(262)	(7)	(3)%	(522)	(519)	(3)	(1)%
Net loss and net loss attributable to common stockholders	(4,006)	(4,551)	545	12%	(8,222)	(9,741)	1,519	16%
Net loss per share attributable to common stockholders	(0.09)	(0.10)			(0.19)	(0.22)		
Basic and diluted shares outstanding (weighted average)	42,664,821	44,308,245			43,572,936	44,274,508		

*\$ in thousands, except share and per share data  
Unaudited*



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**Thank you!**