



**Arcadia**  
B I O S C I E N C E S

**Bank of America Merrill Lynch  
Global Agriculture and Chemicals Conference**

**March 3, 2016**

# Forward-looking statements



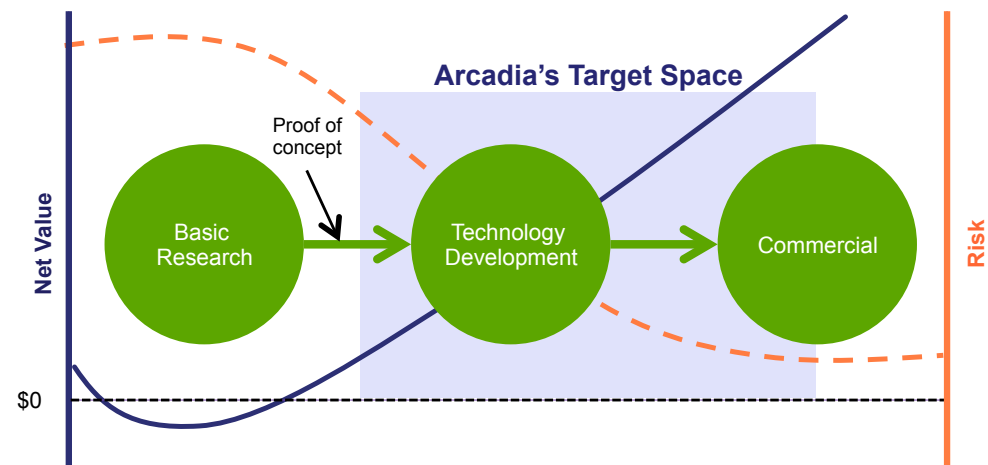
“Safe Harbor” statement under the Private Securities Litigation Reform Act of 1995: This presentation contains forward-looking statements about the company and its products, including statements relating to components of the company’s long-term financial success; the company’s traits, commercial products, 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.

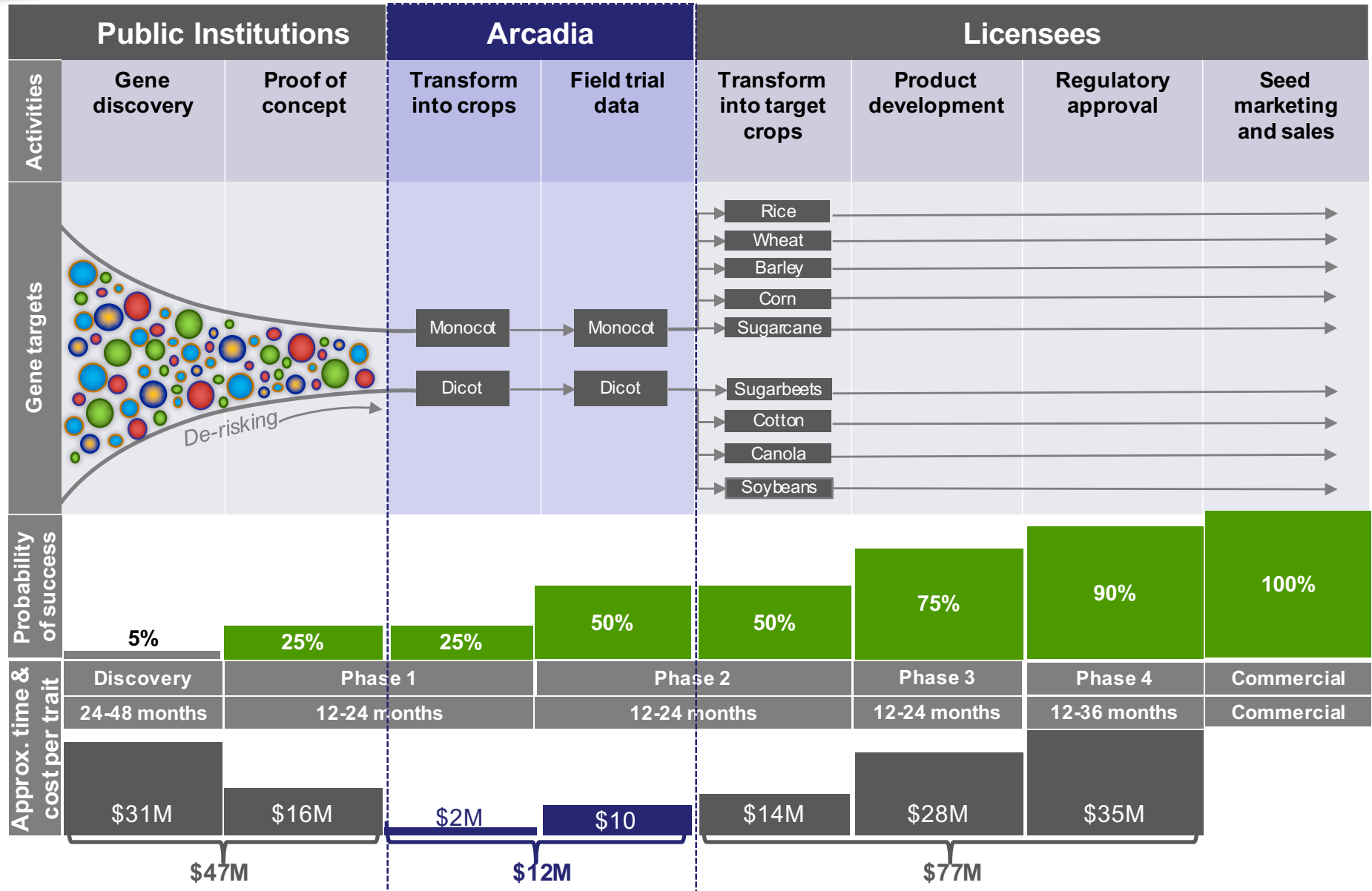
Further information on these and other factors that could affect the company’s financial results are included in filings it makes with the Securities and Exchange Commission from time to time, including the section entitled “Risk Factors” in the company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2015. 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 is creating next wave of value in untapped agricultural markets

- ④ Leading ag-biotech trait company with more than a decade of global experience developing GM and non-GM traits
- ④ Catalytic role: We bridge and de-risk the gap between basic research and commercial development
- ④ Diversified portfolio of late-stage yield and product quality traits
- ④ Partnered with market leaders in target crops
- ④ Clear path to sustained financial growth



# Open architecture maximizes technology access and global market penetration



# Arcadia employs a range of technologies to address growers' needs

Technology	Genetic Modification (GM)	Site-Specific Modification of Naturally Existing Genes	TILLING
<b>Function</b>	<ul style="list-style-type: none"> <li>• Agrobacterium used for gene transfer</li> <li>• Agrobacterium used with crispr-Cas for gene editing or to stack transgenes</li> <li>• Biolistics used with Dow Exzact® for gene editing or to stack transgenes</li> </ul>	<ul style="list-style-type: none"> <li>• Agrobacterium used with crispr-Cas for gene modification or editing</li> <li>• Biolistics used with Dow Exzact® for gene modification or editing</li> </ul>	<ul style="list-style-type: none"> <li>• Arcadia's proprietary seed random-mutagenesis method</li> <li>• Supercharged by genomic analyses and high-throughput robotics</li> </ul>
<b>Regulatory Status</b>	<ul style="list-style-type: none"> <li>• Global regulatory processes in place for cultivation and import of GM crops</li> <li>• GM crops not approved in some countries</li> </ul>	<ul style="list-style-type: none"> <li>• Regulatory status mixed</li> <li>• Requires GM process in some countries</li> <li>• Considered non-GM in others</li> </ul>	<ul style="list-style-type: none"> <li>• Considered non-GM</li> </ul>

# Benefits from TILLING underpin Arcadia's R&D success

## Targeting Induced Local Lesions IN Genomes Discovery of new genetic diversity

### Source of novel phenotypes

- Starch composition
- Fiber
- Oil content
- Oil composition
- Oxidation
- Yield

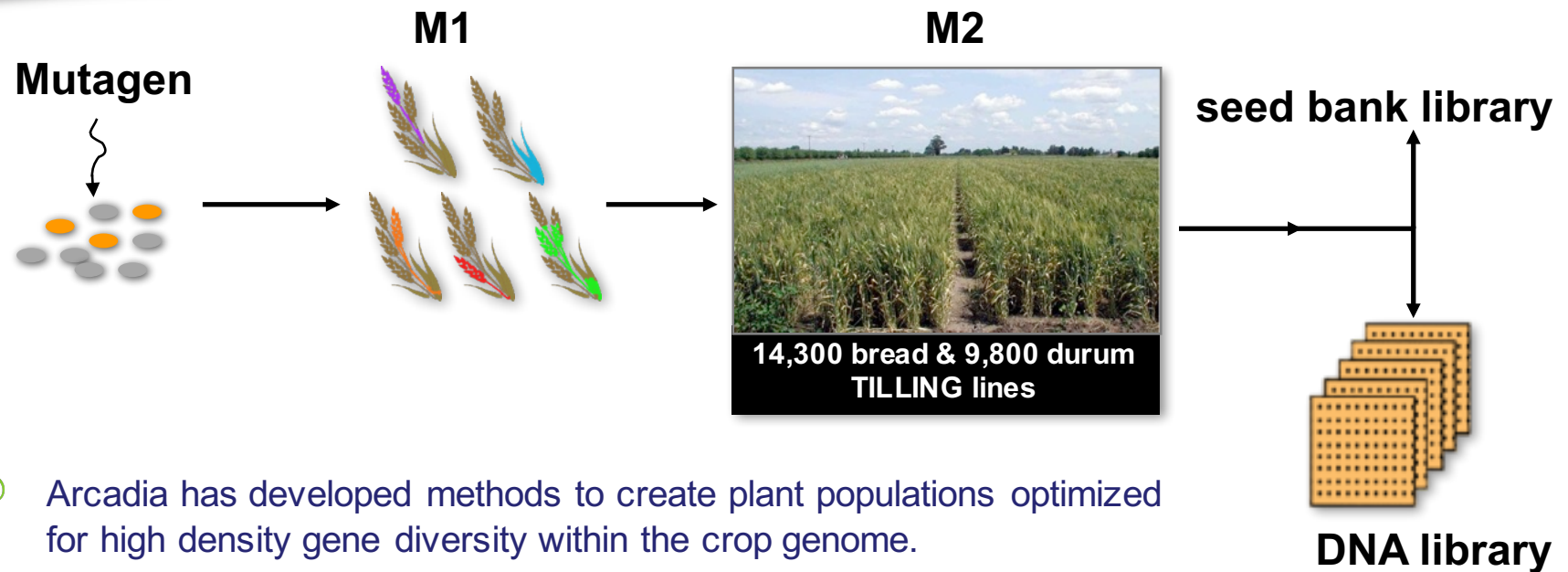
### Benefits

- **Non-GM**, single nucleotide changes
- Insight into gene function and pathways
- Wide allelic diversity all in same genetic background

### Effective applications

- Knockout gene function
- Modulate expression, kinetic properties or allosteric regulation
- Increase activity as dominant in some cases

# TILLING overview



- ④ Arcadia has developed methods to create plant populations optimized for high density gene diversity within the crop genome.
- ④ Thousands of lines are maintained at our California site in the forms of matched seed and DNA samples for each accession.
- ④ Can sort through entire populations and deliver seed to a breeder within 12 weeks.
- ④ Ten to twenty different gene targets can be pursued in parallel with high throughput genomics.
- ④ Seed provided to the breeder for each accession will each have a unique gene variant clearly "marked" for rapid deployment into a breeding program.



# Key patent issued for non-GM Resistant Starch Wheat Wheat that improves health qualities of wheat

## Resistant Starch Wheat (non-GM)

### DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%	50%	75%	90%	

## Market Potential

- Global
- \$2B market opportunity

## Value Creation

- Based on delivery of greater total dietary fiber in wheat products
- Trait share potential: Medium

## Market Channel

- Multiple major milling and consumer product companies (in development)

## Data Notes

- Resistant starch increases dietary fiber, benefitting health and decreasing glycemic index; important in diabetes mitigation
- Pasta made from Resistant Starch Wheat achieved highest consumer preference rankings in tests carried out by a major consumer products company
- Bread made with 50% Resistant Starch Wheat achieved multiples higher total dietary fiber than bread made from standard wheat
- US patent issued for wheat with increased resistant starch levels

## Resistant Starch Wheat Consumer Preference



Source: MarketsandMarkets, Company information



# Non-GM Reduced Gluten Wheat expands grain use in \$2B+ market

## Reduced Gluten Wheat (non-GM)

### DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%				

## Market Potential

- Global
- \$2.1 B market opportunity

## Value Creation

- Based on gluten reduction in wheat products
- Trait share potential: Medium

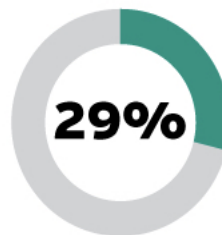
## Market Channel

- Multiple major milling and consumer product companies (in development)

## Data Notes

- Reduced Gluten Wheat offers food manufacturers new product formulation options
- Low-gluten products made with Arcadia's Reduced Gluten Wheat contain 100 times less gluten than whole wheat flour
- Gluten-free diet achievable by combining Reduced Gluten Wheat products with glutenase pill
- Research funded by NIH National Institute of Diabetes and Digestive and Kidney Diseases

## Gluten-Free Wheat Market Is Expanding



Percent of American adults who are trying to cut back or eliminate gluten



Percent increase of gluten-free takeout orders from Grubhub since April 2012

## Main Markets

% of global forecasted sales actuals

US	36%
Australia	19%
France	9%
Italy	6%
Norway	5%
Russia	3%
Germany	3%
Netherlands	2%
UK	2%
Finland	2%

Source: EuroMonitor International, The Huffington Post, Company information