

DISCLAIMER



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further create, launch, and scale cannabinoid or other consumer products; the expected growth in the biosynthetic cannabinoid market, including demand for cultured cannabinoids from the pharmaceutical, cosmetics and consumer packaged goods industries; expectations regarding the regulatory framework for cultured cannabinoids; changes in prices and costs of inputs; the medical benefits, viability, safety, efficacy, dosing and social acceptance of cannabinoids; the capital markets and the general economy; changes to cannabis laws and regulations in Canada, the United States and Europe; the legalization of the use of cannabis for medical and/or adult use in jurisdictions outside of Canada; and applicable laws not changing in a manner that is unfavorable to the Company.

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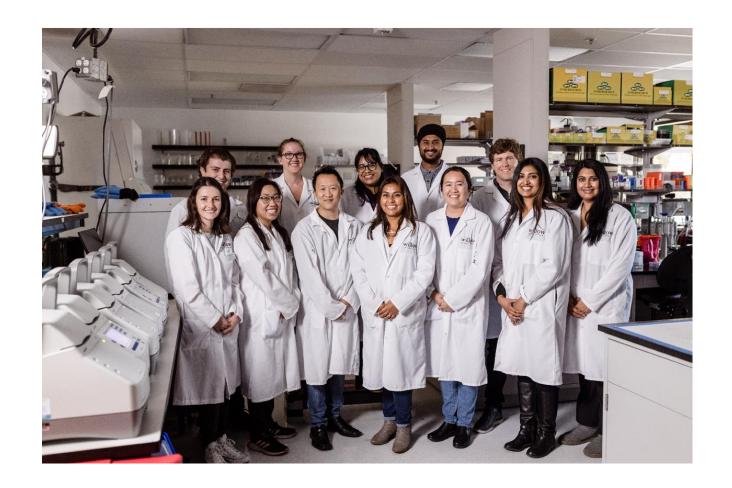
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- Precision fermentation for commercial manufacturing
- High value functional ingredients sustainably at lower cost
- Complete lab-to-customer market-scaled process solution
- Pipeline of fully owned ingredients and partnerships
- Research & Development is strategically located in Mountain View, California
- 40 staff, with over 70% in scientific and technical roles



CAPITAL MARKET SUMMARY - STRONG FINANCIAL POSITION TO SUPPORT GROWTH



- Over CAD\$85.0 million raised to date with Management and Board investing more than \$8.0 million personally into Willow
- Uplisted to the TSX Main Board in 2019 (TSX: WLLW) and trade on the OTCQB® Venture Market (OTCQB: CANSF)
- Sept 30, 2022 cash position is CAD\$18.4 million with no debt
- Strong insider ownership at 30%



Willow share capitalization (TSX: WLLW) - As of Sept 30, 2022	
Basic shares outstanding	123.7
Employee options, PSU's and RSU's ¹	11.1
Performance warrants ²	15.0
Incentive performance warrants ³	12.1
Warrants and compensation warrants	1.6
Fully diluted shares outstanding	163.5

- 1. Weighted average strike price of \$1.20 for options.
- 2. 15.0mm issued in the April 2019 financing to strategic investors, management and board with a 5 year term. These warrants have a strike price of \$0.88 per share. 1.0mm broker warrants issued in connection with the February 2021 financing with a 2 year term, strike price of \$2.15 per warrant and the ability for Willow to force convert at a 20 day VWAP of \$3.05. Remaining warrants have a weighted average strike price of \$4.00 per share.
- 3. Additional warrants issued if the 20 day VWAP exceeds a share price of \$3.50 per share and Willow is listed on the TSX (or equivalent exchange).

HISTORY OF SUCCESSFUL EXECUTION IN A SHORT TIME FRAME POSITIONS US FOR FUTURE SUCCESS IN DIVERSE MARKETS





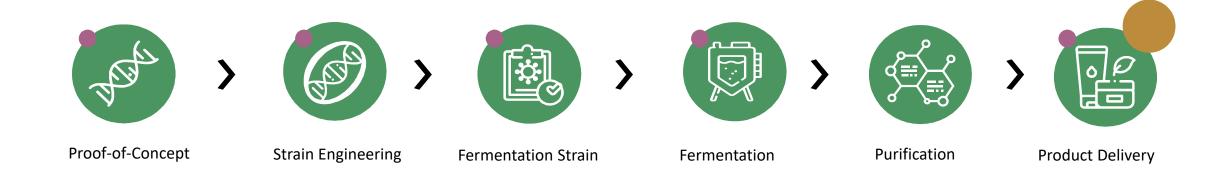
- Go public transaction via RTO raised \$37 million, with Tuatara Capital committing \$20 Million to financing
- Established state-of-the-art strain engineering lab in Mountain View, CA
- Commenced trading on OTC in U.S. (OTCQB: CANSF)
- Uplisted to the TSX Main board (TSX: WLLW)
- Scale-up of CBG with Curia to produce 99% pure material
- Raised \$28.75 Million via prospectus offering to advance R&D and commercialization efforts
- Completed first commercial scale fermentation run of CBG
- Announced supply agreement for CBG with Cellular Goods
- Presented CBG data on human skin at Society for Investigative Dermatology conference¹
- Completed first human clinical trial of CBG for skincare¹



WILLOW'S ESTABLISHED MULTI-CHANNEL REVENUE MODEL



Willow delivers high-value functional ingredients through effective product selection, integrated technologies and capabilities, regulatory understanding, and expert manufacturing network





- Willow generates R&D revenue, project milestones, and back-end license payments
- Willow may supply product, or license strain for partner to manage supply chain
- IP generated belongs to Willow, enabling foundation to accelerate future programs



- Willow develops product, from proof-of-concept through scale-up to delivery
- Simple \$/kg revenue model
- Options to grow distribution channels or partner post-launch

WILLOW'S KEY ADVANTAGES TO FOSTER REVENUE GROWTH AND DIVERSIFICATION





Best in class precision fermentation technology platform Proven scale-up capabilities



Technical credibility demonstrated by successful CBG product launch in 2021 Expansion of platform into related product verticals



Strong Willow intellectual property position; 12 patents filed to date



Existing multi-channel revenue model Near- and long-term revenue streams



ESG Solution – significant environmental and sustainability benefits
Increasingly frowned upon by consumers and market participants



Experienced and accomplished management team that's vested in the business

EXPERIENCED AND ACCOMPLISHED MANAGEMENT TEAM POSITIONED TO LEAD GROWTH INTO DIVERSE MARKETS





Peter Seufer-Wasserthal, Ph.D. **CEO** and President



Chris Savile, Ph.D. COO



Travis Doupe, CPA, CA



Trish Choudhary, Ph.D. VP - Research and Development

Willow's scientific team draws its experience from top companies and products:

















Willow's team has previously executed commercial deals with world-leading partners:

















KEY FUTURE MILESTONES AND CATALYSTS FOR GROWTH







2023+



CANNABINOIDS

- Continue to expand CBG market through product sales & distribution agreements
- Complete GRAS work for CBG, enabling food & beverage consumer products
- Take advantage of newly opened jurisdictions for cannabinoids
- Continue development of additional cannabinoids to meet market needs

EXPANDED PORTFOLIO BEYOND CANNABINOIDS INTO DIVERSE MARKETS

- Expanded portfolio with a new partnered projects for key functional ingredient for nutraceutical and pharmaceutical products
- Utilize technology platform, production and partner network to expand functional ingredient range
- Build portfolio of partnered and fully owned products to balance risk, time to market, and value creation
- Expand presence in health and wellness, food and beverage, and personal care through collaborations with Sandhill One and Kalsec as well as internal projects
- Started 2023 with Phase 2 for pharmaceutical product planned for commercialization in 2024 with Sandhill One

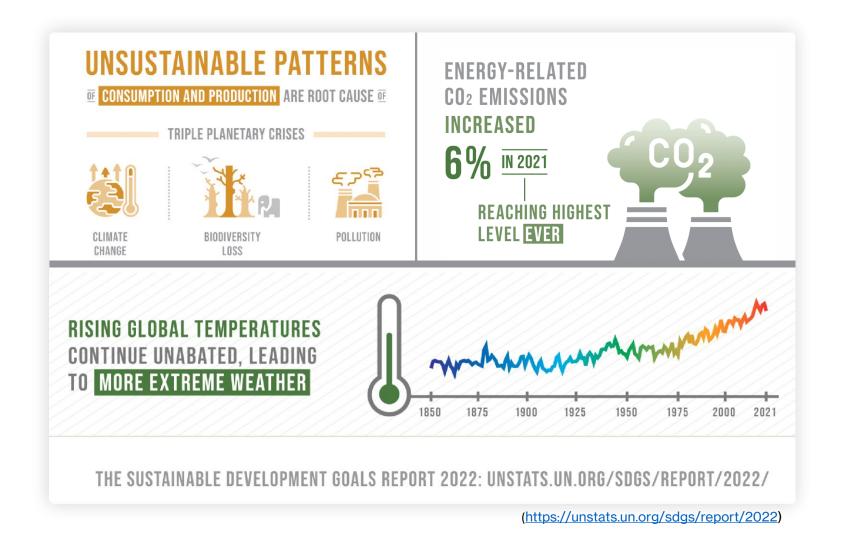
¹ https://www.mdpi.com/1420-3049/27/2/491

INDUSTRY AND MARKET DRIVERS

willow.







- Current levels of production and consumption of many ingredients, chemicals and materials are ecologically Unsustainable
- Raw materials from animal, plant and petrochemical sources are becoming severely depleted, endangering delicate eco-systems
- Traditional manufacturing processes contribute 10% of greenhouse gas emissions, and create persistent waste
- Educated consumers are voting with their pocketbooks to support companies and brands responsive to this crisis

THE SOLUTION:

PRECISION FERMENTATION - THE NEXT INDUSTRIAL REVOLUTION



Biosynthesis can be used to produce over 60% of existing chemicals, with improved performance and sustainability¹

SEVERAL THINGS CHANGED THAT MAKE BIO-BASED PRODUCTS MORE ATTRACTIVE THAN IN THE RECENT PAST:



Government Response

Governments have recognized the strategic importance of this area and are infusing significant new investment (e.g., Executive Order on Advancing Biotechnology and Biomanufacturing Innovation, Sept. 12, 2022²)



Technological Scalability

Recent developments in strain engineering, data analytics, artificial intelligence and machine learning have significantly accelerated development of biobased processes, reducing costs and timelines to market



Consumer Action

Consumers are willing to pay a premium for sustainable products



Commitment from Major Corporations

Multinational food, consumer goods, chemical and ingredient providers are committed to using sustainable ingredients, meeting their and their customer's ESG goals

"Precision fermentation is the most important environmental technology humanity has ever developed."

George Monbiot in "The Future of Food", The New York Times, July 29, 2022³

- 1 Science and Innovation for Sustainability Green chemicals, sustainable fibers, and advanced materials from synthetic biology and advanced manufacturing. SRI Report June 2022, https://sri2022.org/science-and-innovation-for-sustainability-green-chemicals-sustainable-fibres-and-advanced-materials-from-synthetic-biology-and-advanced-manufacturing/
- 2 https://www.whitehouse.gov/briefing-room/presidential-actions/2022/09/12/executive-order-on-advancing-biotechnology-and-biomanufacturing-innovation-for-a-sustainable-safe-and-secure-american-bioeconomy/

3 - https://www.nytimes.com/2022/07/29/podcasts/precision-fermentation.html

TSX: WLLW / OTCQB: CANSF

COMMITMENT FROM MAJOR CORPORATIONS TO BIO-BASED PRODUCTS IS ACCELERATING





"We are partnering to advance innovation in materials derived from renewable, bio-based, or recycled carbon across brands"



"The number of bio-based materials entering Unilever's supply chain has increased and will continue to increase.
Unilever aims to be 'carbon positive' by 2030"



"By 2030, 95% of our ingredients in formula will be bio-based"



"We believe that bio-based products can help meet environmental goals and decrease dependence on nonrenewable resources"



"We are developing bio-based materials for our functional ingredient portfolio, which will be renewably sourced without compromising performance or value"



"We strive to help society transform to a circular, biobased economy"



"Consumers are looking for renewable, sustainable solutions. Ingredients produced via biotech are one way of doing that"



"We are excited to use biology to unlock more wonders of nature in a sustainable way"

LARGE DIVERSE MARKETS WHERE WE CAN LEVERAGE OUR EXPERTISE TO PROVIDE FUNCTIONAL INGREDIENTS



Our core precision fermentation technology developed during the CBG program provides the foundation for other product classes

Willow's Potential Addressable Markets

Willow Technology Platform ~\$1.0 billion market **Cannabinoids** Functional ingredients in health & wellness ~\$1.5 billion market Provide nutrients either extracted from food **Supplements** sources or that are synthetic ~\$0.5 billion market Food Food processing practices which prevent the **Preservatives** growth of microorganisms >\$5 billion market Flavor & Taste and scent compounds used in a wide Fragrance (F&F) variety of consumer goods ~\$3.0 billion market **Carotenoids** Food coloring and health & wellness potential











TECHNOLOGY AND COMPANY OVERVIEW

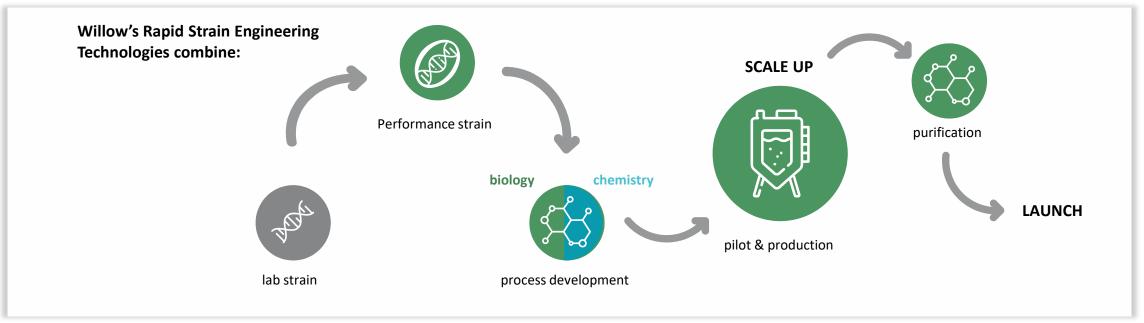
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WILLOW'S FUTUREGROWN™ TECHNOLOGY PLATFORM – PRECISION FERMENTATION DERIVED INGREDIENTS



A fully-integrated, proven solution for rapid strain optimization, process development and scale-up for manufacturing of highly pure ingredients with supply chain reliability at lower cost















CASE STUDY: CANNABIGEROL (CBG) SOLUTION



FutureGrown™ Platform	 50,000-fold strain performance improvement in 18 months Commercially relevant productivity (4 g/l) at large scale 	~
Fermentation	 Successfully scaled to 10,000 L (~30 kg per batch) 	/
Downstream Process	 Robust, simple purification (>80% yield); exceeds norms 	•
Ongoing Steps	 Scaling to 100,000 L (~400 kg per batch) in Q2 2023 GRAS for food & beverage complete in Q2 2023 	~
Proven Efficacy for Skin Care	Clinical study with 0.1% CBG formulation	~
Commercial Sales	 Currently selling to cosmetic & personal care market Sampled nutrition, food & beverage companies, sales pending GRAS conclusion 	•

CBG is commercially available now as functional ingredient for skin care

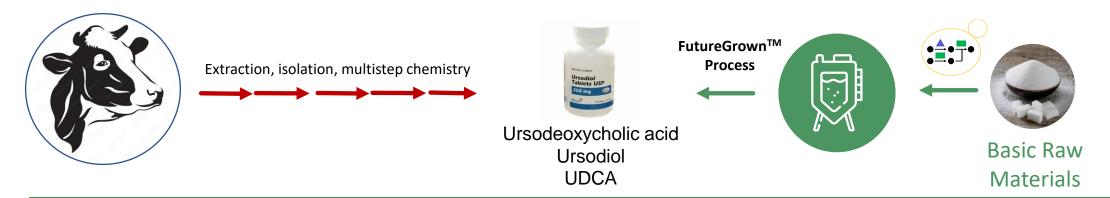
Additional cannabinoids may be produced using Willow's CBG platform





The Product: Ursodeoxycholic acid (UDCA), multi-hundred tons per year

- Treatment of cholestatic liver disease and gallstone conditions
- Intermediate for Tauroursodeoxycholic acid (TUDCA) for treatment of amyotrophic lateral sclerosis (ALS)



The Willow Solution:

- Partnered with large, global nutraceutical and pharmaceutical company
- Replaced chemical synthesis with bioconversion approach
- Replaced animal-based starting material
- Proof-of-concept complete; fully customer funded development ongoing for commercialization in 2024
- Revenue generation via R&D fees, milestones & license payments

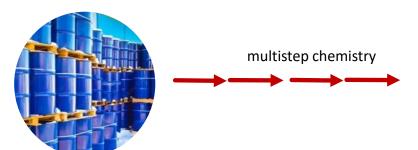




kalsec

The Product: high volume, natural food opportunity

- Bulk product for use in food applications, currently chemically synthesized
- Brings a natural, sustainable product to an existing, accessible market









The Willow Solution:

- Replaced chemical synthesis with bioconversion approach
- Finished Phase 1, optimization is ongoing for commercialization in 2024
- Revenue generation via R&D fees, milestones & license payments

"We look forward to this collaboration with Willow to introduce new, precision-fermented products to benefit our customers and the environment."

Dr. Roger Nahas, Executive Vice President of Global R&D and Chief Innovation Officer

CASE STUDY: ASTAXANTHIN EXAMPLE

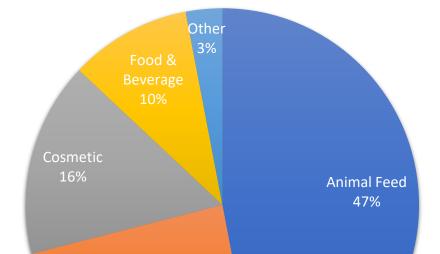


The Opportunity

- Powerful antioxidant belonging to the carotenoid class of compounds
- Own-product opportunity for Willow
- Large, addressable market
- \$750m in 2022, 8% CAGR (>\$1bn in 2027)
- High market price point
- >90% of market is chemically produced
- Cost competitive, "natural" astaxanthin in demand



Current Astaxanthin Market (% revenue)



The Market



Animal Feed
Salmon / shrimp colorant
Egg yolk colorant
General health promoter



Nutraceutical
Antioxidant
Cholesterol control
Cognitive performance



Cosmetic
Anti-aging
Reduces free radicals
UV protectant



Food & Beverage
Colorant
Antioxidant
Cognitive performance



CASE STUDY: ASTAXANTHIN SOLUTION









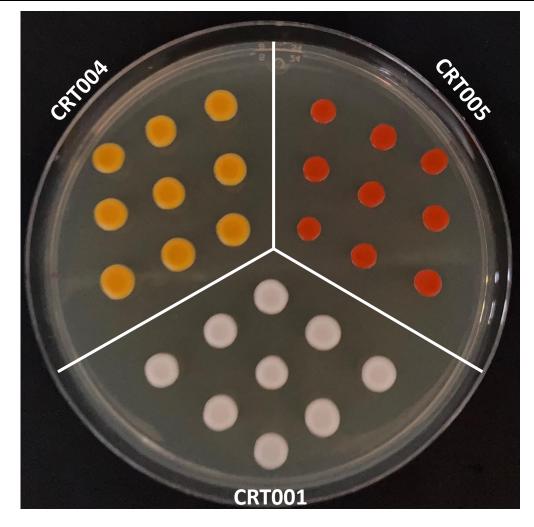




The Willow Solution

- Project began with strains previously developed for cannabinoids
- Proof-of-concept complete (see photo)
- Strains developed for β-carotene & astaxanthin
- Strain engineering underway to establish commercial process
- Final product is bio-identical to that found in nature, and cost-competitive with chemically produced material

Development Timeline Learn, Design, Build, Test Development Development 2023 2024 2025 Development De



Representative colonies of Willow's Saccharomyces cerevisiae engineered strains: CRT001: parent strain; CRT004: β -carotene producing strain; CRT005: Astaxanthin producing strain.

GOALS AND FUTURE CATALYSTS

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EXECUTING ON OUR 2022 GOALS AND FUTURE CATALYSTS





Expanding
Portfolio Into
Diversified
Markets

- Two external partners and functional ingredients grow Willow's portfolio
- Astaxanthin added to portfolio, a high value functional ingredient with a large addressable market
- Continue to access significant new markets (food & beverage, health & wellness) with near-term commercialization potential



Manufacturing
Sustainably At
Ever Larger Scale
To Meet Demand

- Second, larger-scale, CDMO to manufacturing network
- 10,000s L commercial production to commence in H1 2023
- Fully integrated process (strain, fermentation, purification) expected to result in higher yields, shorter campaign times, and lower costs



Delivering
Growing Revenue
Across Expanding
Customer Base

- Two new revenue-generating partners added to date in 2022
- Revenue generated from research fees and milestone payments
- Revenue at commercialization captured by license agreements or product supply
- P IP retained by Willow to further build utility of FutureGrown[™] platform across other endmarket applications

