# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

## FORM 8-K

**CURRENT REPORT**
**Pursuant to Section 13 or 15(d)**
**of the Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): August 8, 2019**

# INTREXON CORPORATION
**(Exact Name of Registrant as Specified in Charter)**

| Virginia | 001-36042 | 26-0084895 |
|---|---|---|
| (State or Other Jurisdiction of Incorporation) | (Commission File Number) | (I.R.S. Employer Identification No.) |

**20374 Seneca Meadows Parkway, Germantown, Maryland 20876**
**(Address of Principal Executive Offices) (Zip Code)**

**(301) 556-9900**
**(Registrant's Telephone Number, including area code)**

**N/A**
**(Former Name or Former Address, if change since last report)**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Securities registered pursuant to 12(b) of the Act:**

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| **Intrexon Corporation Common Stock, No Par Value** | **XON** | **Nasdaq Global Select Market** |

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

**Item 2.02 Results of Operations and Financial Condition.**

Attached as Exhibit 99.1 is a copy of a press release of Intrexon Corporation, dated August 8, 2019, reporting its financial results for the quarter ended June 30, 2019.

This information, including the Exhibit attached hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, except as shall be expressly set forth by specific reference in such filing.

**Item 7.01 Regulation FD Disclosure.**

On August 8, 2019, Intrexon Corporation provided a slide presentation to accompany its press release. A copy of the presentation is furnished as Exhibit 99.2 hereto.

This information, including the Exhibit attached hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, except as shall be expressly set forth by specific reference in such filing.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

| Exhibit No. | Description |
|---|---|
| 99.1 | Press release dated August 8, 2019. |
| 99.2 | Slide presentation of Intrexon Corporation dated August 8, 2019. |

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**Intrexon Corporation**

By: /s/ Rick L. Sterling
Rick L. Sterling
Chief Financial Officer

Dated: August 8, 2019

**Intrexon Reports Second Quarter and First Half 2019 Financial Results**

*– Quarterly GAAP revenues of $36.0 million and net loss attributable to Intrexon of $38.8 million including non-cash charges of $8.0 million –*

**GERMANTOWN, MD, August 8, 2019** – Intrexon Corporation (NASDAQ: XON), a leader in the engineering and industrialization of biology to improve the quality of life and health of the planet, today announced its second quarter and first half financial results for 2019.

**Recent Business Highlights:**

- Precigen, Inc., a wholly owned subsidiary of Intrexon, announced the first patient dosed with PRGN-3005, an investigational autologous chimeric antigen receptor T (CAR-T) cell therapy developed using Precigen's non-viral UltraCAR-T™ platform. PRGN-3005 UltraCAR-T™ therapy is under investigation for the treatment of patients with advanced, recurrent platinum resistant ovarian, fallopian tube or primary peritoneal cancer (clinical trial identifier: NCT03907527);
- Precigen, Inc., announced the first patient dosed with PRGN-3006, an investigational autologous CAR-T cell therapy developed using Precigen's non-viral UltraCAR-T™ platform for the treatment of patients with relapsed or refractory acute myeloid leukemia or higher risk myelodysplastic syndrome (clinical trial identifier: NCT03927261);
- Intrexon entered into an agreement under which it will contribute its Methane Bioconversion Platform, together with all its associated technologies and facilities, to MBP, LLC, a newly formed company that will be headed by David Dewhurst, who is purchasing equity capital in the venture;
- Oxitec, Ltd., a wholly owned subsidiary of Intrexon, successfully completed the first pilot project of its 2nd Generation Friendly™ *Aedes aegypti* technology in Brazil, a mosquito strain that unlocks new performance features, greater cost-effectiveness and scalability over Oxitec's 1st generation with limited production requirements. Oxitec's new mosquitoes achieved excellent results in urban, dengue-prone environments, demonstrating its ability to achieve significant suppression with five times fewer mosquitoes. To pilot the technology in the US, Oxitec is working with the US Environmental Protection Agency (EPA) leadership on its Experimental Use Permit (EUP) in preparation for implementing a pilot project in 2020 in Florida;
- ActoBio Therapeutics, Inc., a wholly owned subsidiary of Intrexon, announced that following a review by the independent Data and Safety Monitoring Board (DSMB) it will progress to the next stage of the Phase Ib/IIa clinical trial for investigational drug AG019 for the treatment of early onset type 1 diabetes (T1D). ActoBio Therapeutics has initiated enrollment of the next two patient cohorts of the study: AG019 dosing in patients 12-17 years of age and combination dosing of AG019 plus teplizumab in adults;
- Triple-Gene LLC has proceeded to enrollment of the second cohort of the Phase 1 clinical trial of INXN-4001, an investigational new drug which is the world's first triple effector gene drug candidate being evaluated for the treatment of heart failure, following review of the first cohort data by the DSMB;
- Intrexon Laboratories Hungary and Surterra Wellness (Surterra) partnered in an exclusive global licensing agreement to advance Surterra's cannabinoid production at a reliable, efficient, cost-effective, industrial scale utilizing Intrexon's proprietary yeast fermentation platform. The deal, including milestones and royalties, will leverage each company's expertise to ultimately bring new legal and ethical cannabinoid products to market to meet growing demand, boost innovation, and improve product development;

- Intrexon announced it is advancing its non-browning GreenVenus™ Romaine lettuce to commercial-size production trials as initial data under commercial indoor production conditions indicate that it has improved shelf-life up to 2 weeks and a potential for higher marketable yield with no tip burn. Non-browning GreenVenus™ lettuce has also been assessed by the United States Department of Agriculture and determined not to be subject to regulation under 7CFR Part 340 for plants altered or produced through genetic engineering; and
- Intrexon entered into a nonbinding letter of intent, and received a nonrefundable cash deposit, for the sale of Exemplar Genetics, a wholly owned subsidiary of Intrexon focused on developing miniature swine models of human disease. The transaction is expected to close within the next thirty days pending completion of diligence.

**Second Quarter 2019 Financial Highlights:**

- Total revenues of $36.0 million;
- Net loss of $38.8 million attributable to Intrexon, or $(0.25) per basic share, including non-cash charges of $8.0 million; and
- Cash, cash equivalents, and short-term investments totaled $125.8 million and the value of common equity securities totaled $21.5 million at June 30, 2019.

**First Half 2019 Financial Highlights:**

- Total revenues of $59.3 million;
- Net loss of $99.5 million attributable to Intrexon, or $(0.65) per basic share, including non-cash charges of $28.2 million.

“Earlier this year we announced our intent to focus the Company’s business, directing capital to certain of our most strategic programs. We also established a goal of ending the year with approximately the same net cash and short-term investment position that the company held on April 3, 2019, which included initiating plans to sell or partner certain divisions and to reduce our original 2019 operating budget by approximately $70 million,” commented Randal J. Kirk, Chairman and Chief Executive Officer of Intrexon.

Mr. Kirk concluded, “Based on the significant steps we have taken with respect to the sales of certain subsidiaries and assets, the partnering of programs, as well as operating cost reductions, we continue to believe our goal with respect to achieving the same net cash and short-term investment position should be achieved. Moreover, I believe we will meet this goal while retaining for the company the core technologies and valuable product candidates that represent the most important future value for our shareholders.”

“We have identified and implemented significant operating cost reductions. However, based on progress to date and the ongoing evaluation of the Company’s strategic direction and long-term best interest, management has determined not to proceed in continuing its efforts to achieve the full initial target of $70 million in operating cost reductions. Instead, we will concentrate our focus on our overall net cash and short-term investment position,” added LTG (Ret.) Thomas Bostick, PhD, PE, Chief Operating Officer of Intrexon and President, Intrexon Bioengineering.

There are risks and uncertainties inherent in forecasts of this nature, including with respect to the challenges in identifying and negotiating with counterparties, transactions taking longer or generating lower proceeds than expected, changes in strategic directions, general market developments, costs and expenses being higher than anticipated, developments in clinical, market or competitive data, and other factors of the type generally applicable to the Company’s business, including those discussed under the Safe Harbor Statement below.

With regard to the agreement to build a standalone energy company to be led by Governor Dewhurst on the foundation of Intrexon’s Methane Bioconversion Platform, Mr. Kirk further commented,

“Governor Dewhurst brings a lifetime of experience that perfectly suits him to lead the revolution in energy that should be made possible through our Methane Bioconversion Platform. From his experience as an intelligence officer, in public service (including serving as Lieutenant Governor of Texas for twelve years) and in building successful energy companies, he has throughout demonstrated leadership, intelligence, courage and personal integrity that inspire and that achieve significant results. We look forward to his leadership at MBP and to working with him to fully realize its great potential.”

“As I have followed Intrexon, I have learned to admire and respect RJ’s acumen and visionary creation to improve the quality of life for all people. As an innovator, who has repeatedly implemented technologies successfully, I feel driven to seize this opportunity to work alongside RJ and the incredibly talented team as CEO of the Methanotroph Bioconversion Platform, to build a safer, healthier planet, and a more promising future. I’m excited by this opportunity and dedicated to bringing together great minds in synthetic biology with industry to solve big challenges facing today’s society,” Governor Dewhurst stated.

**Second Quarter 2019 Financial Results Compared to Prior Year Period**

Total revenues decreased $9.3 million from the quarter ended June 30, 2018. Collaboration and licensing revenues decreased $8.4 million, or 48%, from the quarter ended June 30, 2018 primarily due to the reacquisition of rights previously licensed to some of our most significant collaborators in the second half of 2018 and the result of which eliminated or substantially reduced revenues previously generated from those collaborations.

Research and development expenses decreased $7.5 million, or 18%. The 2018 amounts include $5.3 million of one-time costs associated with closing one of Oxitec’s research and development facilities as the Company decentralized operations previously conducted in this facility. Additionally, depreciation and amortization decreased $2.2 million primarily due to intangible assets that were impaired or abandoned in 2018. Selling, general and administrative (SG&A) expenses decreased $12.9 million, or 38% and of this amount, $10.6 million was primarily attributable to decreased share-based compensation expense which arose primarily from the departure of former employees.

**First Half 2019 Financial Results Compared to Prior Year Period**

Total revenues decreased $25.6 million from the six months ended June 30, 2018. Collaboration and licensing revenues decreased $22.2 million, or 60%, from the six months ended June 30, 2018 primarily due to the reacquisition of rights previously licensed to some of our most significant collaborators in the second half of 2018 and the result of which eliminated or substantially reduced revenues previously generated from those collaborations. Product revenues decreased $4.0 million, or 24%, primarily due to lower customer demand for pregnant cows, live and weaned calves, and cloned products. Gross margin on products declined in the current period as a result of fewer products sold, decreased sales prices, and increased costs associated with new product offerings.

Research and development expenses decreased $11.6 million, or 15%. The 2018 amounts include $5.3 million of one-time costs associated with closing one of Oxitec’s research and development facilities as the Company decentralized operations previously conducted in this facility. Additionally, depreciation and amortization decreased $4.3 million primarily due to intangible assets that were impaired or abandoned in 2018. Research and development salaries, benefits and other personnel costs decreased $2.0 million primarily due to the closing of one of Oxitec’s research and development facilities. SG&A expenses decreased $19.1 million, or 26% and of this amount, $15.5 million was primarily attributable to decreased share-based compensation expense which arose primarily from the departure of former employees.

**Conference Call and Webcast**

The Company will host a conference call today Thursday, August 8th, at 5:30 PM ET to discuss the second quarter and first half 2019 financial results and provide a general business update. The

conference call may be accessed by dialing 1-888-317-6003 (Domestic US), 1-866-284-3684 (Canada), and 1-412-317-6061 (International) and providing the number 4443860 to join the Intrexon Corporation Call. Participants may also access the live webcast through Intrexon's website in the Investors section at http://investors.dna.com/events.

**About Intrexon Corporation**

Intrexon Corporation (NASDAQ: XON) is Powering the Bioindustrial Revolution with Better DNA™ to create biologically-based products that improve the quality of life and the health of the planet through two operating units – Intrexon Health and Intrexon Bioengineering. Intrexon Health is focused on addressing unmet medical needs through a diverse spectrum of therapeutic modalities, including gene and cell therapies, microbial bioproduction, and regenerative medicine. Intrexon Bioengineering seeks to address global challenges across food, agriculture, environmental, energy, and industrial fields by advancing biologically engineered solutions to improve sustainability and efficiency. Our integrated technology suite provides industrial-scale design and development of complex biological systems delivering unprecedented control, quality, function, and performance of living cells. We call our synthetic biology approach Better DNA®, and we invite you to discover more at www.dna.com or follow us on Twitter at @Intrexon, on Facebook, and LinkedIn.

**Trademarks**

Intrexon, UltraCAR-T, GreenVenus, Friendly, Powering the Bioindustrial Revolution with Better DNA, and Better DNA are trademarks of Intrexon and/or its affiliates. Other names may be trademarks of their respective owners.

**Safe Harbor Statement**

Some of the statements made in this press release are forward-looking statements that involve a number of risks and uncertainties and are made pursuant to the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements made in this press release include, but are not limited to, statements regarding clinical and pre-clinical development activities by Intrexon and its collaborators, commercial and business development plans and the submission of regulatory filings. These forward-looking statements are based upon Intrexon's current expectations and projections about future events and generally relate to Intrexon's plans, objectives and expectations for the development of Intrexon's business. Although management believes that the plans and objectives reflected in or suggested by these forward-looking statements are reasonable, all forward-looking statements involve risks and uncertainties and actual future results may be materially different from the plans, objectives and expectations expressed in this press release. These risks and uncertainties include, but are not limited to, (i) Intrexon's strategy and overall approach to its business model, its efforts to realign its business, and its ability to exercise more control and ownership over the development process and commercialization path; (ii) Intrexon's ability to successfully enter new markets or develop additional products, including the expected timing and results of investigational studies and preclinical and clinical trials, whether with its collaborators or independently; (iii) Intrexon's ability to successfully enter into optimal strategic relationships with its subsidiaries and operating companies that it may form in the future; (iv) Intrexon's ability to hold or generate significant operating capital, including through partnering, asset sales and operating cost reductions; (v) actual or anticipated variations in Intrexon's operating results; (vi) actual or anticipated fluctuations in Intrexon's competitors' or its collaborators' operating results or changes in their respective growth rates; (vii) Intrexon's cash position; (viii) market conditions in Intrexon's industry; (ix) the volatility of Intrexon's stock price; (x) Intrexon's ability, and the ability of its collaborators, to protect Intrexon's intellectual property and other proprietary rights and technologies; (xi) Intrexon's ability, and the ability of its collaborators, to adapt to changes in laws or regulations and policies; (xii) the outcomes of pending and future litigation; (xiii) the rate and degree of market acceptance of any products developed by Intrexon, its subsidiaries, collaborations or joint ventures; (xiv) Intrexon's ability to retain and recruit key personnel; (xv) Intrexon's expectations related to the use of proceeds from its public offerings and other financing efforts; (xvi) Intrexon's estimates regarding expenses, future revenue, capital requirements and needs for additional financing; and (xvii) the successful formation of a stand-alone company for our Methane Bioconversion Platform. For a discussion of other risks and uncertainties, and other important

factors, any of which could cause Intrexon's actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" in Intrexon's Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and subsequent reports filed with the Securities and Exchange Commission. All information in this presentation is as of the date of the release, and Intrexon undertakes no duty to update this information unless required by law.

**For more information regarding Intrexon Corporation, contact:**

**Investor Contact:**
Steven Harasym
Vice President, Investor Relations
Tel: +1 (301) 556-9850
investors@dna.com

**Corporate Contact:**
Marie Rossi, PhD
Vice President, Communications
Tel: +1 (301) 556-9850
publicrelations@dna.com

**Intrexon Corporation and Subsidiaries**
**Consolidated Balance Sheets**
**(Unaudited)**

| (Amounts in thousands) | June 30, 2019 | December 31, 2018 |
|---|---|---|
| **Assets** | | |
| Current assets | | |
| Cash and cash equivalents | $ 58,162 | $ 102,768 |
| Restricted cash | — | 6,987 |
| Short-term investments | 67,641 | 119,688 |
| Equity securities | — | 384 |
| Receivables | | |
| Trade, net | 24,496 | 21,195 |
| Related parties, net | 7,095 | 4,129 |
| Other, net | 2,866 | 2,754 |
| Inventory | 18,192 | 21,447 |
| Prepaid expenses and other | 4,712 | 6,131 |
| Total current assets | 183,164 | 285,483 |
| Equity securities, noncurrent | 21,503 | 1,798 |
| Property, plant and equipment, net | 120,401 | 128,874 |
| Intangible assets, net | 112,526 | 129,291 |
| Goodwill | 149,916 | 149,585 |
| Investments in affiliates | 18,093 | 18,859 |
| Right-of-use assets | 41,558 | — |
| Other assets | 8,027 | 2,287 |
| Total assets | $ 655,188 | $ 716,177 |
| Current liabilities | | |
| Accounts payable | $ 8,563 | $ 13,420 |
| Accrued compensation and benefits | 9,034 | 10,687 |
| Other accrued liabilities | 11,701 | 20,620 |
| Deferred revenue | 16,593 | 15,554 |
| Lines of credit | 387 | 466 |
| Current portion of long-term debt | 468 | 559 |
| Current portion of lease liabilities | 4,813 | — |
| Related party payables | 74 | 256 |
| Total current liabilities | 51,633 | 61,562 |
| Long-term debt, net of current portion | 212,479 | 211,235 |
| Deferred revenue, net of current portion | 66,542 | 54,210 |
| Lease liabilities, net of current portion | 38,757 | — |
| Deferred tax liabilities, net | 6,332 | 7,213 |
| Other long-term liabilities | 222 | 3,235 |
| Total liabilities | 375,965 | 337,455 |
| Commitments and contingencies | | |
| Total equity | | |
| Common stock | — | — |
| Additional paid-in capital | 1,737,449 | 1,722,012 |
| Accumulated deficit | (1,430,020) | (1,330,545) |
| Accumulated other comprehensive loss | (28,206) | (28,612) |
| Total Intrexon shareholders' equity | 279,223 | 362,855 |
| Noncontrolling interests | — | 15,867 |
| Total equity | 279,223 | 378,722 |
| Total liabilities and total equity | $ 655,188 | $ 716,177 |

**Intrexon Corporation and Subsidiaries**
**Consolidated Statements of Operations**
**(Unaudited)**

| (Amounts in thousands, except share and per share data) | Three months ended June 30, 2019 | Three months ended June 30, 2018 | Six months ended June 30, 2019 | Six months ended June 30, 2018 |
|---|---|---|---|---|
| **Revenues** | | | | |
| Collaboration and licensing revenues | $ 9,097 | $ 17,450 | $ 15,067 | $ 37,298 |
| Product revenues | 7,819 | 9,568 | 12,676 | 16,720 |
| Service revenues | 18,400 | 17,718 | 29,783 | 29,965 |
| Other revenues | 670 | 539 | 1,795 | 958 |
| Total revenues | 35,986 | 45,275 | 59,321 | 84,941 |
| **Operating Expenses** | | | | |
| Cost of products | 9,176 | 10,639 | 17,466 | 19,169 |
| Cost of services | 8,218 | 7,895 | 15,310 | 14,678 |
| Research and development | 34,518 | 42,049 | 67,580 | 79,187 |
| Selling, general and administrative | 21,483 | 34,427 | 55,077 | 74,164 |
| Total operating expenses | 73,395 | 95,010 | 155,433 | 187,198 |
| Operating loss | (37,409) | (49,735) | (96,112) | (102,257) |
| **Other Expense, Net** | | | | |
| Unrealized and realized appreciation (depreciation) in fair value of equity securities and preferred stock, net | 5,632 | (19,182) | 5,702 | (20,278) |
| Interest expense | (4,358) | (142) | (8,669) | (241) |
| Interest and dividend income | 1,031 | 5,746 | 2,395 | 11,216 |
| Other expense, net | (2,605) | (93) | (2,099) | (881) |
| Total other expense, net | (300) | (13,671) | (2,671) | (10,184) |
| Equity in net loss of affiliates | (1,747) | (4,550) | (3,387) | (7,010) |
| Loss before income taxes | (39,456) | (67,956) | (102,170) | (119,451) |
| Income tax benefit | 525 | 1,127 | 1,103 | 5,213 |
| Net loss | $ (38,931) | $ (66,829) | $ (101,067) | $ (114,238) |
| Net loss attributable to the noncontrolling interests | 165 | 1,447 | 1,592 | 2,691 |
| Net loss attributable to Intrexon | $ (38,766) | $ (65,382) | $ (99,475) | $ (111,547) |
| Net loss attributable to Intrexon per share, basic and diluted | $ (0.25) | $ (0.51) | $ (0.65) | $ (0.87) |
| Weighted average shares outstanding, basic and diluted | 153,749,929 | 129,299,584 | 153,351,208 | 128,500,897 |

# Intrexon Second Quarter 2019 Business Update

**August 2019**

# Forward Looking Statements

Safe Harbor Statement

Some of the statements made in this presentation are forward-looking statements that involve a number of risks and uncertainties and are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based upon Intrexon's current expectations and projections about future events and generally relate to Intrexon's plans, objectives and expectations for the development of Intrexon's business, discussion of anticipated clinical trials and future collaborations, and possible other transactions. Although management believes that the plans and objectives reflected in or suggested by these forward-looking statements are reasonable, all forward-looking statements involve risks and uncertainties and actual future results may be materially different from the plans, objectives and expectations expressed in this presentation. These risks and uncertainties include, but are not limited to, (i) Intrexon's strategy and overall approach to its business model, its efforts to realign its business, and its ability to exercise more control and ownership over the development process and commercialization path; (ii) Intrexon's ability to successfully enter new markets or develop additional products, including the expected timing and results of investigational studies and preclinical and clinical trials, whether with its collaborators or independently; (iii) Intrexon's ability to successfully enter into optimal strategic relationships with its subsidiaries and operating companies that it may form in the future; (iv) Intrexon's ability to hold or generate significant operating capital, including through partnering, asset sales and operating cost reductions; (v) actual or anticipated variations in Intrexon's operating results; (vi) actual or anticipated fluctuations in Intrexon's competitors' or its collaborators' operating results or changes in their respective growth rates; (vii) Intrexon's cash position; (viii) market conditions in Intrexon's industry; (ix) the volatility of Intrexon's stock price; (x) Intrexon's ability, and the ability of its collaborators, to protect Intrexon's intellectual property and other proprietary rights and technologies; (xi) Intrexon's ability, and the ability of its collaborators, to adapt to changes in laws or regulations and policies; (xii) the outcomes of pending and future litigation; (xiii) the rate and degree of market acceptance of any products developed by Intrexon, its subsidiaries, collaborations or joint ventures; (xiv) Intrexon's ability to retain and recruit key personnel; (xv) Intrexon's expectations related to the use of proceeds from its public offerings and other financing efforts; and (xvi) Intrexon's estimates regarding expenses, future revenue, capital requirements and needs for additional financing. For a discussion of other risks and uncertainties, and other important factors, any of which could cause Intrexon's actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" in Intrexon's Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and subsequent reports filed with the Securities and Exchange Commission. All information in this presentation is as of the date of the release, and Intrexon undertakes no duty to update this information unless required by law.

All of the pharmaceutical products described in this presentation are investigational new drugs, which are currently undergoing pre-clinical and/or human clinical trial testing. As a result, none of them have had their safety or efficacy established or are approved by the U.S. Food and Drug Administration or any other regulatory agency.

# First Patients Dosed with Precigen's Transformative PRGN-3005 and PRGN-3006 UltraCAR-T™ Therapies

## PRGN-3005 UltraCAR-T™

Status

- Phase1 study to evaluate safety and maximal tolerated dose is recruiting patients
- Study in collaboration with University of Washington and Fred Hutchinson Cancer Center

Patient Population

- Advanced stage platinum resistant ovarian cancer
  - 300k diagnosed annually[1]/22k in US[2]
  - Stage IV survival as low as 20%[3]

## PRGN-3006 UltraCAR-T™

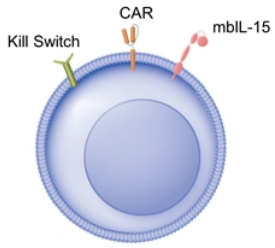
Status

- Phase 1/1b study to evaluate safety and maximal tolerated dose is recruiting patients
- Study in collaboration with H. Lee Moffitt Cancer Center

Patient Population

- Relapsed or refractory acute myeloid leukemia (AML)
  - 20k diagnosed in US in 2018[4]
- Higher risk myelodysplastic syndrome (MDS)
  - US incidence >10k per year[5]

## UltraCAR-T™




Non-viral *Sleeping Beauty* system to co-express CAR, mbIL15 and kill switch

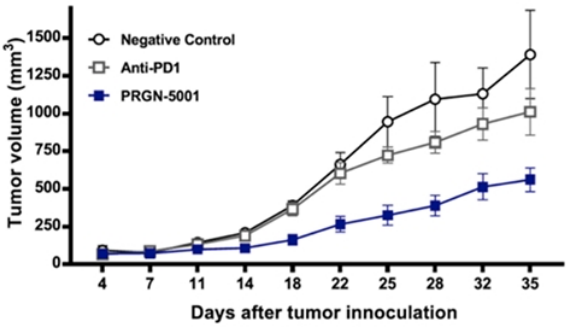
[1]World Health Organization, International Agency for Research on Cancer, Global Cancer Observatory. Cancer Today, Estimated number of new cases in 2018, worldwide, both sexes, all ages. Accessed December 2018 via WHO IARC GCO website.
[2]American Cancer Society Ovarian Cancer Special Section. Access December 2018 via ACS website.
[3]American Cancer Society. Survival Rates for Ovarian Cancer, by Stage. Accessed December 2018 via ACS website.
[4]American Cancer Society. Key Statistics for Acute Myeloid Leukemia (AML). Accessed December 2018 via ACS website.
[5]American Cancer Society. Key Statistics for Myelodysplastic Syndromes. Accessed December 2018 via ACS website.

intrexon

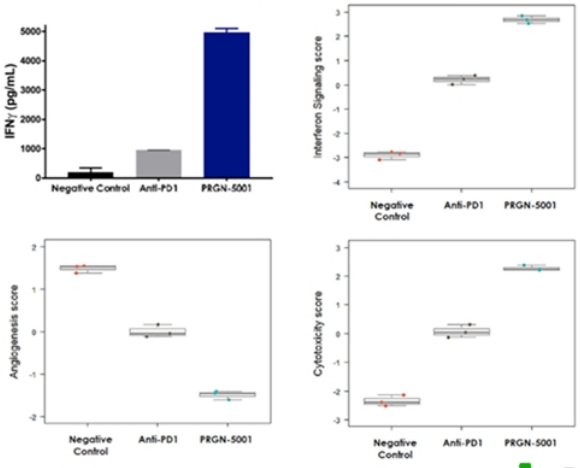
# Precigen's Multigenic Candidate Exhibits Superior Anti-tumor Response

**PRGN-5001 multifunctional therapeutic exhibits superior anti-tumor response compared to anti-PD1 in preclinical head and neck cancer model**

**Humanized mouse model of head and neck cancer**



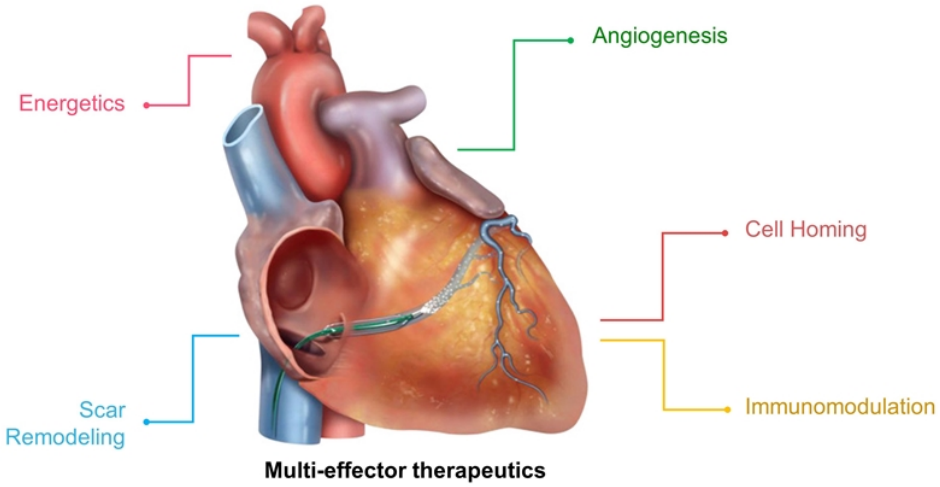

**PRGN-5001 overcomes tumor microenvironment immunosuppression and significantly improves T cell function compared to anti-PD1**




intrexon

# Triple-Gene Completes Cohort 1 Dosing in Phase 1 Clinical Trial of INXN-4001 to Target Heart Failure

- INXN-4001 is an investigational, non-viral, plasmid-based therapeutic candidate designed to drive expression of three cardiac effector genes involved in heart failure
- Triple-Gene completed dosing of first cohort of advanced heart failure patients
- Proceeding to the second cohort following review of data from Cohort 1 by the Data and Safety Monitoring Board




**Multi-effector therapeutics**

Triple-Gene LLC (formerly Xogenex LLC) is Intrexon's majority owned subsidiary

# ActoBio Therapeutics Continues Clinical Progress on Microbe-based Delivery of Biopharmaceuticals

- Initiated enrollment of next two patient cohorts of Phase Ib/IIa clinical trial for investigational drug AG019 for treatment of Type 1 Diabetes
  - AG019 dosing in adolescents (patients 12-17 years of age)
  - Phase IIa arm combination dosing of AG019 plus teplizumab (PRV-031) in adults
- Partner Oragenics nearing completion of enrollment of patients in the Phase IIb clinical trial for AG013 for the treatment of Oral Mucositis


intrexon

# Okanagan Specialty Fruits (OSF) Expanding Market Plans

- Placed fresh sliced Arctic® apples in select markets, as well as dehydrated ApBitz™ apple snack on Amazon and in retail stores
- Planted 955,000 new Arctic® apple trees on 650 acres in Washington State, including first 80 acres of Arctic® Fujis, which received approval from the US FDA in April
- Expecting to crop 217 acres of orchard in Sep/Oct with an estimated 10,000 bins or 8 million lbs of apples anticipated (5-fold increase over 2018)
- Planning on increasing product range to include food service and additional fresh slice retail with 2019 go-to-market plan

*2nd Gen Friendly™ Aedes is designed to enable greater cost-effectiveness and scalability over Oxitec's 1st generation mosquito*

# Oxitec 2nd Gen Friendly™ *Aedes* Advancing Pilot Programs

- Completed the first pilot project of its 2nd Generation Friendly™ *Aedes aegypti* technology in the city of Indaiatuba, Brazil
- Demonstrated the new strain's effectiveness (treatment area compared to untreated control area) in suppressing populations of *Aedes aegypti* in four densely populated urban communities throughout the city of Indaiatuba
- Submitted an Experimental Use Permit (EUP) to the Environmental Protection Agency (EPA) for the first US-based pilot project with its 2nd generation mosquito

intrexon

# Operational Updates

- Identification and implementation of significant operating cost reductions
- Concentrating focus on overall net cash and short-term investment position

| | ***Expected Closing*** |
|---|---|
| • **Transactions and Cost Savings:** | |
| • Prospective acquisition of Exemplar Genetics | *30 days* |
| • Considering offers for sale of Trans Ova Genetics | *Q4* |
| • Implemented targeted reductions of non-essential programs including closure of Animal Sciences Division | *completed* |

intrexon


intrexon