IMMUCELL CORP /DE/
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Registration No.: 333-228479

PROSPECTUS SUPPLEMENT

(To Prospectus dated November 29, 2018)

$9,000,002 of Shares of Common Stock

ImmuCell Corporation

We are offering $9,000,002.00 of shares of our common stock pursuant to this prospectus supplement and the accompanying prospectus. Our common stock is listed on The NASDAQ Capital Market under the symbol “ICCC”. On March 26, 2019, the last reported sale price of our common stock on The NASDAQ Capital Market was $6.6737 per share.

	Per Share	Total
Public offering price	$5.50	$9,000,002
Underwriting discount[(1)]	$0.33	$540,000
Proceeds, before expenses, to us	$5.17	$8,460,002

(1) We refer you to the section entitled “Underwriting” of this prospectus supplement for additional information regarding total underwriting compensation.

As of January 29, 2019, the aggregate market value of our outstanding common equity held by non-affiliates was approximately $37,378,737 based on 5,568,962 shares of outstanding common stock, of which 4,620,363 shares are held by non-affiliates, and a price of $8.09 per share, which was the last reported sale price of our common stock on The Nasdaq Capital Market on January 29, 2019. As of the date of this prospectus supplement, we have not sold any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12-calendar month period that ends on,

and includes, the date of this prospectus supplement.

Investing in our securities involves certain risks. Before deciding whether to invest in our securities, you should review carefully the information described under the heading "Risk Factors" beginning on page S-10 of this prospectus supplement, on page 6 of the accompanying prospectus, and in our Annual Report on Form 10-K for the year ended December 31, 2018 .

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriter expects to deliver the shares of our common stock on or about March 29, 2019, subject to customary closing conditions.

Craig-Hallum Capital Group

The date of this prospectus supplement is March 27, 2019.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process. Under this process, we may sell from time to time in one or more offerings up to an aggregate of $20,000,000 of our securities described in the accompanying prospectus.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus. The second part is the accompanying prospectus, which provides general information, some of which may not apply to this offering. If information in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement.

You should rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not, and the underwriter has not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are making an offer to sell common stock only in jurisdictions where offers and sales are permitted. You should assume that the information appearing in this prospectus supplement, in the accompanying prospectus and in the documents incorporated by reference is accurate only as of their respective dates or other dates which are specified in those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

It is important for you to read and consider all of the information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus in making your investment decision. See "Where You Can Find More Information" on page S-16 of this prospectus supplement and "Where You Can Find Additional Information" on page 5 of the accompanying prospectus.

Unless the context otherwise requires, references in this prospectus supplement to "ImmuCell", the "Company", "we", "us" and "our", or similar terms, refer to ImmuCell Corporation.

FORWARD-LOOKING STATEMENTS

Some of the statements contained in or incorporated by reference in this prospectus supplement and in the accompanying prospectus that are not historical facts constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements relate to future events concerning our business and to our future revenues, operating results and financial condition,

and involve a number of known and unknown risks, uncertainties and other factors that could cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may”, “will”, “could”, “would”, “should”, “expect”, “plan”, “anticipate”, “aim”, “intend”, “believe”, “forecast”, “predict”, “project”, “propose”, “potential”, “seek” or “continue”, or the negative of those terms or other comparable terminology.

These statements are only estimates or predictions of future events based on information currently available to our management and management’s current beliefs about the potential outcome of future events. There are a number of important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements, including the following:

Our reliance on sales of our existing products;

Our dependence on a small number of significant customers and the concentration of our existing product sales;

Our ability to complete the development of (including obtaining required regulatory approvals for), and to achieve successful commercialization of, a key new product;

The risk of cost overruns or delays in expanding our manufacturing facilities for our **First Defense®** product line and our **Re-Tain™** mastitis product, including inadequacy of available funding for these projects;

Uncertainties arising from the volatile economics of the dairy and beef cattle industries;

Risks related to ongoing regulatory compliance and associated substantial costs;

Our dependence on third parties for raw materials and manufacturing services, including the loss or interruption of such services and the risk of consequent delays in bringing our **Re-Tain™** mastitis product to market;

Risks of sales order backlogs and possible loss of key customers due to product delivery issues or concerns;

Competitive pressures from larger and better capitalized competitors;

Possible technical obsolescence or loss of cost competitiveness of our products;

Our small size and dependence on key personnel;

Risks of product recalls and product liability claims;

Risks associated with the substantial additional indebtedness we incurred to fund our recently completed Nisin manufacturing facilities expansion;

Our reliance on our intellectual property rights and risks associated with protecting such rights; and

Other risks listed in Item 1A. “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2018, which is incorporated by reference in this prospectus supplement and the accompanying prospectus.

Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results. Forward-looking statements contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus present our views only as of the date of the applicable document containing such forward-looking statements. We do not assume any obligation, and do not intend, to update any forward-looking statement except as required by law. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained in or incorporated by reference in this prospectus supplement. It does not contain all the information you should consider before investing in shares of our common stock. Before deciding to invest in shares of our common stock, you should carefully read this entire prospectus supplement, the accompanying prospectus and the documents incorporated herein and therein by reference, including the "Risk Factors" beginning on page S-10 of this prospectus supplement, our financial statements and the related notes and other information that is incorporated by reference in this prospectus supplement.

Overview

ImmuCell Corporation is a growing animal health company focused on developing, manufacturing and delivering scientifically-proven, practical and effective products that improve the health and productivity of dairy and beef cattle. Our lead product, **First Defense®**, is derived from colostrum collected from dairy cows and provides significant, immediate immunity against scours in newborn dairy and beef cattle. On November 13, 2017, we received approved licensure from the USDA, Center for Veterinary Biologics, for a new product, **Tri-Shield First Defense®**, the first calf-level scours preventative with claims against all three newborn calf scours-causing pathogens: *E. coli*, coronavirus and rotavirus, and have begun marketing this product. We are in the late stages of developing and securing final regulatory approvals for **Re-Tain™**, an intramammary treatment for subclinical mastitis in lactating dairy cows, the active ingredient of which is Nisin, an antibacterial peptide that has been demonstrated in clinical studies to be an effective aid in the reduction of mastitis-causing organisms in dairy cows. We currently expect to be in a position to commence commercial sales of **Re-Tain™** in the United States in 2020 (subject to receipt of final approvals from the U.S. Food and Drug Administration's Center for Veterinary Medicine (FDA) and reaching agreement with our existing third party manufacturer on an amendment of our existing agreement or, alternatively, entering into a comparable agreement with another third party manufacturer who can provide the needed services without delay).

Across all product lines, our product sales during the year ended December 31, 2018 increased by 5%, or $555,000, to $10,986,000 from $10,431,000 for the year ended December 31, 2017, and gross margin as a percentage of product sales was 47% during the year ended December 31, 2018, as compared to 50% during the year ended December 31, 2017. Sales of the **First Defense®** product line aggregated 97% and 94% of our total product sales during the year ended December 31, 2018 and the year ended December 31, 2017, respectively. Sales of the **First Defense®** product line increased by 9% and 11% during the years ended December 31, 2018 and December 31, 2017, respectively, in comparison to the corresponding prior years.

First Defense® Product Line

First Defense® is manufactured from hyper-immune cows' colostrum (the milk that a cow produces immediately after giving birth) utilizing our proprietary vaccine and milk protein purification technologies. The target disease, bovine enteritis (calf scours), causes diarrhea and dehydration in newborn calves and often leads to serious sickness and even death. **First Defense**® is the only orally delivered scours preventative product on the market for calves that is licensed by the U.S. Department of Agriculture (USDA) with claims against *E. coli* K99 and coronavirus (two leading causes of scours). On November 13, 2017, we received approved licensure from the USDA, Center for Veterinary Biologics, for a new product, **Tri-Shield First Defense®**, the first calf-level scours preventative with claims against all three newborn calf scours-causing pathogens: *E. coli*, coronavirus and rotavirus. No other calf-level product in the market contains all three claims in a one-time preventative dose. With this expanded claim set, we believe that we can compete more effectively against dam-level scours vaccine products that are given to the cow to improve the quality of her colostrum (first milk) that is fed to the newborn calf. It is generally believed that only 80% of cows respond to a vaccine, leaving approximately 20% of calves treated in this manner unprotected against scours. Also, we believe that vaccine treatment protocols are often not adhered to, leaving even more calves unprotected. **First Defense**® provides bovine antibodies that newborn calves need but are unable to produce on their own immediately after birth. Our milk antibody products provide **Immediate Immunity ™** during the first few critical days of life when calves need this protection most. Studies have shown that calves that scour are more susceptible to other diseases later in life and under-perform calves that do not contract scours. We estimate that scours causes approximately $740 million in economic losses to the U.S. dairy and beef industries per year. We believe that the U.S. market for calf-level scours prevention products is approximately $18 million and that the market for dam-level scours prevention products is approximately twice that size. With the new rotavirus claim for our product (**Tri-Shield First Defense®**) we are now competing against dam-level vaccine products that are given to the mother cow to increase the antibody level against scours-causing pathogens in the colostrum that she produces for her newborn. Those products are sold by Elanco (Scour Bos™), Merck (Guardian®) and Zoetis (ScourGuard®). Despite the best-managed dam vaccine program, colostrum quality is naturally variable and newborn calves do not always get the antibodies they need from maternal colostrum. We believe that the guaranteed dose of antibodies in our product provides more consistent protection than such vaccine products.

When compared to the other USDA-approved calf-level scours preventatives, we believe we are first in sales dollars and second in volume. This product category is comprised of five primary brands (increased from four during the fourth quarter of 2016) that are given either orally or intra-nasally to newborn dairy and beef calves immediately after birth. Market research that we subscribe to suggests that our product comprised approximately 34% and 33% of the total doses sold in this product category (one dose equates to one calf, according to label administration on all products) during 2018 and 2017, respectively. These estimates are down from 36% during 2016 and 40% during 2015, when the product category included only four primary brands (one of which experienced lack of supply to the market during late 2014 and into the middle of 2015). This market share estimate is slightly up from 32% in 2014 and up from 26% and 22% in 2013 and 2012, respectively, as the total volume in the product category has steadily increased. These estimates do not include sales of vaccine products that are given to the dam (mother cow), which is discussed below. The third quarter of 2018 marked the 27th anniversary of the original USDA approval of this product in 1991. During the fourth quarter of 2018, our cumulative sales of **First Defense®** since inception exceeded 22,000,000 doses. We believe that these milestones demonstrate the value of our technology and the long-term market acceptance of our product.

The majority of our international sales are to Canada. We price our products in U.S. dollars. To the extent that the value of the dollar declines with respect to any other currency, our competitive position may be enhanced. Conversely, an increase in the value of the dollar in any country in which we sell products may have the effect of increasing the local price of our products, thereby leading to a potential reduction in demand. Generally, our international sales have been generated through relationships with in-country distributors that have knowledge of the local regulatory and marketing requirements. We are initiating our plan to expand the number of countries to which our **First Defense®** product line is approved for export. Generally, it is our intent to be the holder of these product registrations for each country rather than rely on distribution partners to gain and hold these registrations. This is a long regulatory process but allows us to maximize the use of our product label claims and avoid long-term exclusive distribution agreements. We continue our efforts to grow sales of the **First Defense®** product line in North America, where there are approximately 41,300,000 dairy and beef cows in the United States and 4,645,000 dairy and beef cows in Canada. We believe that even greater market opportunities exist in other international territories. There are estimated to be approximately 67,400,000 dairy and beef cows in China, 35,450,000 in the European Union, 18,470,000 in Australia and New Zealand, 11,150,000 in Mexico, 1,700,000 in South Korea and 1,470,000 in Japan. The statistics above are provided by an industry compilation of USDA data for 2019. However, industry practices, economic conditions, cause of disease, distribution channels and regulatory requirements may differ in these international markets from what we experience in North America making it more difficult or costly for us to generate and sustain sales volumes at profitable margins in these markets.

Novel Treatment for Subclinical Mastitis (Re-Tain™)

The majority of our product development budget since 2000 has been focused on the development of **Re-Tain™**, a Nisin-based intramammary treatment of subclinical mastitis in lactating dairy cows. Mastitis is a very common infection in dairy cows that results in inflammation of the mammary gland. It is the largest single cause of economic harm to the U.S. dairy industry, with an estimated cost of approximately $2 billion per year, including approximately $300 million in discarded milk from cows that have been treated with traditional antibiotic mastitis drugs. During the period that began on January 1, 2000 (the year we began the development of **Re-Tain™**) and ended on December 31, 2018, we invested an aggregate of approximately $15.5 million in the development of this product (excluding depreciation and the capital cost ($20.8 million) of our Nisin production facility). This estimated allocation of product development expenses reflects only direct expenditures and includes no allocation of product development or administrative overhead expenses. Approximately $2.9 million of this investment was offset by related product licensing revenues and grant income.

Nisin is an antibacterial peptide that has been demonstrated in clinical studies to be an effective aid in the reduction of mastitis-causing organisms in dairy cows. Because dairy producers are required to discard milk for a period of time during and after treatment with all currently marketed mastitis treatment products due to concerns about antibiotic residue in milk, it is generally current practice to only treat mastitis when the disease has progressed to the clinical stage where the milk from an infected cow cannot be sold. We believe that **Re-Tain™** could revolutionize the way that mastitis is treated in the United States by making earlier treatment of subclinically infected cows economically feasible by not requiring a milk discard during, or for a period of time after, treatment. No other FDA-approved

mastitis treatment product on the market can offer this value proposition. Growing concerns about the presence of traditional antibiotics in our food supply, we believe, will aid in the marketing of our product and growth in its sales.

Based on publicly available information on the size of the U.S. dairy herd, the incidence of mastitis and likely mastitis treatment protocols, we have estimated that the market potential for **Re-Tain™** could be $5.8 million during the first year of sales with potential growth for the fifth year to $36.1 million. Our near-term sales goal is to double our current sales through continued growth in sales of the **First Defense®** product line and a successful launch of **Re-Tain™** as soon as possible. As market penetration is achieved and additional resources are dedicated to sales, marketing and technical services, our longer term goal is to triple our current sales as soon as possible during the five-year period after market launch of **Re-Tain™**.

Commercial introduction of our product in the United States is subject to approval of our New Animal Drug Application by the FDA, which approval cannot be assured. We have received FDA Complete Letters with respect to four of the five principal Technical Sections required for FDA approval of commercial sales of **Re-Tain™**. During the first quarter of 2019, we made the first of two phased Drug Substance submissions to the FDA relating to the fifth Technical Section – Chemistry, Manufacturing and Controls (CMC). This Technical Section includes data from the Nisin Drug Substance Registration Batches produced at commercial scale in our new manufacturing facility. This submission is subject to a six-month review period. A successful FDA inspection of our Nisin manufacturing facility must also be achieved. The second phased Drug Product submission for the CMC Technical Section (which will include responses to the FDA's review of the first phased submission and detailed information about the manufacturing process and controls for the sterile Nisin Drug Product) is also subject to a six-month review period, and will not be made in time to achieve product approval by our original goal of December 2019. After FDA approval of the CMC Technical Section, there is a sixty (60) day FDA administrative review before the anticipated product license approval can be issued and commercial sales of **Re-Tain™** can begin. Foreign regulatory approvals would be required for sales of **Re-Tain™** in key markets outside of the United States, which would involve some similar and some different requirements, likely including some milk discard requirements.

Since 2010, we have been a party to a long-term exclusive product development and contract manufacturing services agreement with Norbrook Laboratories Limited of Newry, Northern Ireland, an FDA-approved Drug Product manufacturer, covering the final formulation, aseptic filling and final packaging services for **Re-Tain™**. Norbrook has provided services to us under this contract throughout the FDA process for use in all of our pivotal studies. During the fourth quarter of 2015, this agreement was amended and restated to, among other things, extend the term of the agreement to January 1, 2024. It has been our expectation that we would have these services available through both the remainder of the development process and approximately the first four years of commercial sales of **Re-Tain™**. However, the agreement includes a provision potentially entitling Norbrook to terminate the agreement if we do not receive FDA approval for **Re-Tain™** by mid-December 2019. Due to unexpected difficulties and delays encountered by Norbrook during this late stage of the development and the usual FDA timeline for processing CMC Technical Sections, we do not expect to receive FDA approval by the December 2019 date.

In anticipation of this potential issue, we have made requests to Norbrook to amend the existing agreement to avoid early termination, including proposing a shorter term and increased payments to Norbrook. However, we have not yet reached resolution on an amendment, and it remains unclear whether we will be able to reach agreement on a suitable amendment, or if we do, for how long we will continue to have access to Norbrook's services. Consequently, we have been actively investigating multiple alternatives, including securing an agreement for such services with another qualified third party and performing the services in-house by constructing an aseptic filling capability within our new Drug Substance production facility. Because both of these alternatives would likely delay our commencement of commercial sales of **Re-Tain™** to at least 2021, we believe, in the case of transitioning to a new third party manufacturer, and to at least 2022, we estimate, in the case of constructing our own facilities and performing these services in-house, our strong preference would be to reach at least an interim arrangement with Norbrook, while we pursue the implementation of the chosen alternative in parallel. If we are unable to reach an arrangement with Norbrook, our alternative approach would be to seek an interim agreement for such services with another qualified third party while we proceed to construct and equip our own drug product manufacturing facility in order to reduce or avoid a delay in commencing sales of **Re-Tain™** or an interruption of such sales after commencement. Due to the unique requirements associated with manufacturing **Re-Tain™** (the facility cannot also handle products containing traditional antibiotics), there can be no assurance that we will be able to locate and reach agreement with a suitable alternative third-party provider. In light of the challenges and risks associated with reliance on third-party services, it is likely that we will take the steps necessary to become self-sufficient with respect to the manufacturing process for **Re-Tain™**, and will utilize these third-party arrangements, if available to us, as a necessary but temporary solution pending the completion of our own facilities; however, whether and when we implement those steps will depend, in part, on developments in the upcoming weeks or months with respect to third party arrangements with Norbrook or another provider.

First Defense® Facilities Expansion

We have decided to undertake an expansion of our **First Defense®** manufacturing facilities to better assure our ability to meet growing market demand for this product line. We first experienced a prolonged period of order backlog for our **First Defense®** product line (which began early in 2015 and extended through the middle of 2016), which disrupted our normal product shipping patterns. In response, we completed investments necessary to increase our liquid processing capacity by 50% during the fourth quarter of 2015 and our freeze drying capacity by 100% during the first quarter of 2016. With this expanded production capacity, we can now produce **First Defense®** product with an annual sales value of approximately $18 million. The actual value of the production output will vary subject to product yields, selling price and product format mix. Since the third quarter of 2016 and through most of 2017, we had sufficient available inventory and were shipping in accordance with the current demand of our distributors. However, we quickly sold out of our initial launch quantities of **Tri-Shield First Defense®** soon after regulatory approval was obtained during the fourth quarter of 2017. Presently, we are only accepting purchase orders for **Tri-Shield First Defense®** from customers to match available inventory, which requires a careful allocation of product supply directly to certain farms. Production of this new product format has not kept pace with demand primarily because of our inability to produce enough of the new, complex rotavirus vaccine that is used to immunize our source cows in this time frame. Recent production improvements in our vaccine laboratory will allow us to immunize more source cows, but the increased supply of finished product will not be available for sale in a significant way until the second half of 2019. While this product shortage is a problem and has adversely impacted customer relations and resulted in lost sales, it is also a positive indication that the market is accepting our new product offering.

During the first quarter of 2018, sales demand for **Dual-Force™ First Defense®** also exceeded available inventory, resulting in a backlog of orders worth approximately $901,000 as of March 31, 2018, which was filled during the second quarter of 2018. The estimated value of this backlog was calculated by multiplying the number of units for which customer orders had been received but were not shipped at the end of the period by the expected selling price. In order to produce more doses quickly to clear the 2015/2016 order backlog, we significantly increased the quantity of our supply of colostrum at the same time that we were making the investments to increase our production capacity, discussed above. The 2018 backlog problem was largely caused by a reduction in the biological yield from this new colostrum supply. To address the inherent variability in our biological yields, among other process improvements, we have optimized and standardized the mix of early milk that is rich with antibodies and later milk that contains less antibodies but is required to run our production process. As we rebuild target inventory levels of **Dual-Force™**, we are confident that we will again consistently supply product to the market because of the improved production methods to increase yields and the enhanced manufacturing redundancies that we have implemented.

Given the strength of what we are seeing for potential demand for the **First Defense®** product line in North America, we plan to further increase our liquid processing capacity by 100% and our freeze drying capacity by 50%. Our very preliminary estimate of the cost of this investment is approximately $3 million. We anticipate finalizing the plans for this expansion, contracting for the necessary equipment and construction services, and commencing work in mid-2019 and, based on that expected start time, completing this project in the fourth quarter of 2020.

Re-Tain™ Facilities Expansion

As discussed above, it is becoming increasingly likely that we will determine that our long-term interests will be best served by developing our own drug product manufacturing facilities and capability for **Re-Tain™**, and ending our reliance on third-party services for the **Re-Tain™** manufacturing process. We expect that this shift to internal manufacturing will result in operating cost savings relative to the expected cost of third-party services. We believe that the elimination of the risk of interruption or loss of third-party services or substantial cost increases for those services together with these anticipated operating cost savings justify the estimated $4 million of capital expenditures we expect to incur to develop this facility.

We estimate that this project, once commenced, would likely require approximately three years to complete and be approved by the FDA. Therefore, during the coming weeks and months, we intend to continue our efforts to amend our existing agreement with Norbrook or secure an agreement for alternative third-party manufacturing services, and will assess on an on-going basis whether such efforts seem likely to produce a favorable outcome and, in that light, when and whether to proceed with planning, designing, constructing and equipping this facility on our existing premises, in order to reduce the period during which we remain dependent on third-party manufacturing services or to minimize any delay in commencing sales of **Re-Tain™** resulting from the unavailability of such third-party services.

During the third quarter of 2018, at a total cost of approximately $20.8 million, we completed a new manufacturing facility that enables us to generate our own Nisin supply at commercial scale, with sufficient capacity to achieve approximately $10.0 million in annual sales. Our facility, as originally designed and constructed, included enough room for a second production line to be purchased and installed to effectively double our Nisin production output. However, the **Re-Tain™** drug product manufacturing facility discussed above would, if constructed, occupy the space in our new Nisin production facility that we had originally intended to use to double our Nisin production capacity if warranted by **Re-Tain™** sales volumes during the initial years following product launch, thus limiting the maximum production capacity of our new **Re-Tain™** facilities. This could possibly leave us unable to meet growing customer demand for **Re-Tain™** until and unless we are able to expand that capacity elsewhere or otherwise relocate certain manufacturing activities to enable the expansion to occur.

Recent Developments

We are in the process of finalizing our results for the three-month and twelve-month periods ended March 31, 2019.

Based on currently available information, we estimate that, as of and for the three-month and twelve-month periods ended March 31, 2019:

- Product sales during the three-month period ended March 31, 2019 are anticipated to be approximately $4,252,000, compared to $2,881,000 during the three-month period ended March 31, 2018, an increase of $1,371,000 or 48%;
- Product sales during the twelve-month period ended March 31, 2019 are anticipated to be approximately $12,357,000 compared to $ 9,768,000 during the twelve-month period ended March 31, 2018, an increase of $ 2,589,000 or 26%;
- Cash, cash equivalents and short-term investments are anticipated to be approximately $2,410,000 as of March 31, 2019 (exclusive of the net proceeds from this offering), as compared to $3,060,470 as of March 31, 2018.

This unaudited preliminary financial information for the three-month and twelve-month periods ended March 31, 2019 is based upon our estimates and subject to completion of our financial closing procedures. Moreover, these data have been prepared solely on the basis of currently available information by, and are the responsibility of, management. This preliminary financial information is not a comprehensive statement of our financial results for these periods, and our actual results may differ materially from these estimates due to the completion of our financial closing procedures, final adjustments, and other developments that may arise between now and the time the closing procedures for the quarter are completed. There can be no assurance that these estimates will be realized, and estimates are subject to risks and uncertainties, many of which are not within our control. In addition, product sales during the three-month and twelve-month periods ended March 31, 2018 were adversely affected by a $1,245,000 backlog in filling **First Defense®** orders that occurred in the first quarter of 2018, as compared to an estimated backlog of $185,000 as of March 31, 2019. Backlog for **Tri-Shield First Defense®** was $344,000 as of March 31, 2018, compared to $185,000 as of March 31, 2019. The estimated product sales data for the three-month and twelve-month periods ended March 31, 2019 includes a revised estimate of $668,000 of **Tri-Shield First Defense®** sales in the first quarter of 2019, as compared to our previous estimate of $795,000. Our operating results are subject to seasonal fluctuations and variations; therefore, these estimated results may not be representative of results in the ensuing quarters. Under our bank covenants, we are required to maintain a cash balance of at least $2 million as of the end of any calendar quarter, thus limiting our ability to utilize these funds.

Summary Historical and Pro Forma Balance Sheet Data

The table below presents audited summary balance sheet data as of December 31, 2018 on both a historical basis and on an as adjusted basis (assuming that the proceeds of this offering had been received as of December 31, 2018). The summary financial data has been derived from our audited financial statements, which are incorporated by reference in this prospectus supplement. The as adjusted summary financial data is not necessarily indicative of what our financial position or results of operations would have been if this offering had been completed as of the date indicated, nor is such data necessarily indicative of our financial position for any future date. The following summary and as adjusted financial data should be read in conjunction with, and are qualified in their entirety by reference to: “Use of Proceeds”, “Summary Financial Data” and our financial statements and the related notes included elsewhere in this prospectus supplement or incorporated by reference herein.

	As of December 31, 2018 (Actual)	As of December 31, 2018 (As Adjusted)
Assets		
Total current assets	$6,420,836	$14,712,836
Property, plant and equipment, net	26,027,549	26,027,549
Intangible Assets, net	133,728	133,728
Goodwill	95,557	95,557
Interest Rate Swaps	40,209	40,209
Other assets	12,953	12,953
Total Assets	$32,730,832	$41,022,832
Liabilities and Stockholders’ Equity		
Total current liabilities	$2,565,011	$2,565,011
Total long-term liabilities	8,421,487	8,421,487
Total Liabilities	10,986,498	10,986,498
Total Stockholders’ Equity	21,744,334	30,036,334
Total Liabilities and Stockholders’ Equity	$32,730,832	$41,022,832

Corporate Information

We are a growing animal health company that develops, manufactures and markets scientifically-proven products that improve the health and productivity of dairy and beef cattle. We were originally incorporated in Maine in 1982 and reincorporated in Delaware in 1987, in conjunction with our initial public offering of common stock. Our principal executive offices are located at 56 Evergreen Drive, Portland, Maine 04103. Our telephone number is (207) 878-2770.

We maintain an Internet website at *www.immucell.com*. The information contained in, or accessible from, our website is not a part of this prospectus supplement or the accompanying prospectus.

The Offering

The following summary contains basic information about this offering. The summary is not intended to be complete. You should read the full text and more specific details contained elsewhere in this prospectus supplement.

Common stock offered by us	1,636,364 shares of common stock, par value $0.10 per share.
Common stock outstanding immediately after this offering[(1)]	7,209,595 shares of common stock.
Use of proceeds	The net proceeds from this offering will be approximately $8,292,000, after deducting underwriting discounts and our estimated expenses related to the offering. We intend to use the net proceeds from this offering of common stock to fund certain critical investments and possibly to reduce indebtedness or increase working capital. See “Use of Proceeds.”
Risk Factors	See the information described under the heading “Risk Factors” beginning on page S-10 of this prospectus supplement and other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of factors you should consider carefully before investing in our common stock.
Nasdaq Capital Market symbol	ICCC

(1) The number of shares of common stock that will be outstanding immediately after this offering is based on 5,573,231 shares outstanding as of March 26, 2019, and excludes 377,000 shares of our common stock reserved for future issuance upon the exercise of outstanding options (of which options with respect to 45,000 shares are currently exercisable) at a weighted average exercise price of $6.51 per share.

SUMMARY FINANCIAL DATA

The following table sets forth, for the periods and dates indicated, our summary financial data. The summary financial data has been derived from our audited historical consolidated financial statements and accompanying notes for the year ended December 31, 2018 and the year ended December 31, 2017. The results included in this table are not necessarily indicative of future performance. The following table should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the audited historical financial statements and accompanying notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018, which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

(In thousands, except per share amounts)	Year Ended December 31, 2018	December 31, 2017
Product sales	$10,986	$10,431
Costs of goods sold	5,792	5,210
Gross margin	5,194	5,221
Selling and administrative expenses	3,824	3,418
Product development expenses	3,517	2,046
Gain on sale of assets	(700)	—
Operating Expenses	6,641	5,464
Net operating income (loss)	(1,447)	(243)
Other expenses, net	413	195
(Loss)before income taxes	(1,860)	(438)
Income tax expense (benefit)	462	(270)
Net (loss)	$(2,322)	$(168)
Weighted average common shares outstanding		
Basic	5,486	4,949
Diluted	5,486	4,949
Net (loss) per share		
Basic	$(0.42)	$(0.03)
Diluted	$(0.42)	$(0.03)

RISK FACTORS

An investment in our securities involves risk. You should consider carefully the risk factors described below and set forth in the "Risk Factors" section of the Annual Report on Form 10-K for the year ended December 31, 2018, together with the other information contained in our financial statements and the related notes, which is incorporated by reference herein, before deciding to invest in our common stock. We operate in a changing environment that involves numerous known and unknown risks and uncertainties that could materially adversely affect our operations. If any of such risks materialize, our business, financial condition, results of operations and the value of our common stock could be materially and adversely affected. In such case, you may lose all or part of your investment in our common stock. Please also refer to the section above entitled "Forward-Looking Statements" regarding forward-looking statements included or incorporated herein by reference.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. If you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of approximately $1.36 per share in the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

Our common stock has had limited trading.

Trading in our common stock has historically been thin. Because of the thinness of the market for our stock, the price of our common stock may be subject to manipulation and may be volatile. This limited trading may adversely affect the liquidity of our common stock, in terms of the number of shares that can be bought and sold at a given price. As a result, there could be a larger spread between the bid and the ask prices of our common stock and investors may not be able to sell shares of our common stock when or at prices they desire.

Fluctuations in the price of our common stock, including as a result of actual or anticipated sales of shares by stockholders, may make our common stock more difficult to resell.

The market price and trading volume of our common stock have been and may continue to be subject to significant fluctuations due not only to general stock market conditions, but also to a change in sentiment in the market regarding

the industry in which we operate, our operations, business prospects or liquidity or this offering. During the period from January 1, 2016 to March 26, 2019, our common stock has fluctuated from a low of $4.76 per share to a high of $9.30 per share. In addition to the risk factors discussed in our periodic reports and in this prospectus supplement, the price and volume volatility of our common stock may be affected by actual or anticipated sales of common stock by existing stockholders, including the shares purchased in this offering, whether in the market or in subsequent public offerings. Stock markets in general have experienced extreme volatility recently that has at times been unrelated to the operating performance of particular companies or industries. These broad market fluctuations may adversely affect the trading price of our common stock, regardless of our operating results. As a result, these fluctuations in the market price and trading volume of our common stock may make it difficult to predict the market price of our common stock in the future, cause the value of your investment to decline and make it more difficult to resell our common stock.

Our stockholders may experience further dilution if we issue additional shares of common stock in the future.

Any additional future issuances of common stock by us will reduce the percentage of our common stock owned by investors purchasing shares in this offering who do not participate in such future issuances. In most circumstances stockholders will not be entitled to vote on whether or not we issue additional common stock. In addition, depending on the terms and pricing of an additional offering of our common stock and the value of our assets, our stockholders may experience dilution in both the book value and the market value of their shares.

We are not restricted from issuing additional common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. We are offering shares of common stock. The issuance of additional shares of our common stock in this offering or other issuances of our common stock or convertible or other equity linked securities, including options and warrants, or otherwise, in connection with capital raising transactions or for employee compensation or other purposes will dilute the ownership interest of our common stockholders. As of March 26, 2019, we had 5,573,231 outstanding shares of common stock, which excludes 377,000 shares of common stock issuable upon the exercise of outstanding stock options.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public market could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our common stock or other equity-related securities would have on the market price of our common stock.

We are not currently paying dividends and will likely continue not paying dividends for the foreseeable future.

We have never paid or declared any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to repay indebtedness and to fund the development and expansion of our business, and we do not anticipate paying any cash dividends or repurchasing shares of our common stock in the foreseeable future. In addition, the terms of our existing credit agreements restrict the payment of cash dividends on our common stock and the repurchase by us of our common stock. Any future determination to pay dividends or to repurchase stock will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, contractual restrictions and other factors that our board of directors deems relevant.

Provisions in our rights plan and in Delaware law could make it more difficult for a third party to acquire us, discourage a takeover and adversely affect existing stockholders.

Our board of directors adopted in 1995 a common stock rights plan under which, if the rights issued thereunder are not redeemed by the board and the board has not approved the acquisition by a prospective acquirer of 20% or more of our outstanding common stock, the holders of such rights (other than such prospective acquirer) have the right, in effect, to purchase additional shares of our common stock for each right held at a substantial discount from the market price of such stock, immediately preceding the prospective acquirer’s acquisition of such ownership (or announcement of an offer to acquire such ownership).

We are also subject to the provisions of Section 203 of the Delaware General Corporation Law, which could prevent us from engaging in a “business combination” with a 15% or greater stockholder for a period of three years from the date such person acquired that status unless appropriate board or stockholder approvals are obtained.

These provisions could deter unsolicited takeovers or delay or prevent changes in our control or management, including transactions in which stockholders might otherwise receive a premium for their shares over the then current market price. These provisions may also limit the ability of stockholders to approve transactions that they may deem to be in their best interests.

We could experience higher than anticipated costs, cost over-runs, longer completion time frames or delays in completing our expanded manufacturing facilities, and we could fail to access necessary funding for the expansion projects.

As noted above, and in "Use of Proceeds", we presently intend to apply a portion of the net proceeds of this offering to fund at least a substantial portion of the costs of expanding our existing manufacturing facilities for our **First Defense®** product line, and we believe it is likely that we will construct and equip our own drug product manufacturing facility for **Re-Tain™**, our mastitis product, also using a portion of the net proceeds of this offering. The preliminary cost estimates set forth in this prospectus supplement for those projects have been prepared internally and are not based on any bids or quotes from contractors or equipment suppliers. Also, our estimated timelines for those projects, similarly, are preliminary, internally prepared and not based on quotes, proposals or other reliable third-party information. Actual bids and binding agreements could result in longer time frames for completion and in higher actual costs, which may outstrip our available resources, and even those actual bids could understate actual costs, such as due to change orders, delays or other unforeseen events, in any of which instances actual project costs could exceed our current estimates. In addition, completion of either project could be delayed due to factors outside our control, including equipment delivery delays or delays in obtaining FDA approvals for **Re-Tain™**. Also, our ability to fund the completion of those projects may depend on, in addition to the proceeds from this offering, cash flow from future operations, which may not materialize or be available at the needed levels.

USE OF PROCEEDS

The net proceeds of this offering to us will be approximately $8,292,000 after deducting our estimated offering expenses. We intend to use the net proceeds from this offering to fund certain critical investments, and possibly to pay down indebtedness and add to our working capital.

· As noted under "Prospectus Supplement Summary – **First Defense®** Facilities Expansion", our existing manufacturing capacity for our **First Defense®** product line supports an estimated annual sales volume of approximately $18 million. Due to increasing customer demand we have encountered backlogs for these products in recent months, and have had to delay and reduce the scope of our rollout of our **Tri-Shield First Defense®** product to avoid further backlogs. To alleviate these constraints and to enable us to expand **First Defense®** production to support annual sales of approximately $30 million, we plan to install or construct, during 2019 and 2020, a third freeze dryer and additional liquid processing equipment at a total preliminary estimated cost of $3 million, which estimate is based on internally-generated calculations using, among other things, actual costs incurred in previous equipment acquisitions and installations for our **First Defense®** manufacturing facilities.

· As described above under "Prospectus Supplement Summary –**Re-Tain™** Facilities Expansion", while we have Nisin manufacturing capacity in our own facilities sufficient to support annual sales of **Re-Tain™** of approximately $10 million, we will at least initially remain dependent on a third-party for drug product manufacturing services for that product. Due to the risks and uncertainties associated with that dependency, as well as the added cost of using third-party manufacturing services over the long-term, it is increasingly likely that we will construct and equip our own drug product manufacturing facilities in the hope of avoiding or reducing delays in commercial sales of **Re-Tain™** following receipt of FDA approval resulting from the loss or unavailability of those third-party services. Based on publicly available information and our recent experience in constructing and equipping our Nisin production facility, we preliminarily estimate the cost of this facility to be $4 million.

If we were to decide not to proceed with the drug product manufacturing facilities for **Re-Tain™** due to unanticipated circumstances (such as obtaining a favorable long-term manufacturing services contract with a suitable third-party, or encountering adverse developments in the pending FDA approval process), we would apply the unexpended portion of the net proceeds from this offering to reduction of indebtedness and/or additions to our working capital.

PRICE RANGE OF OUR COMMON STOCK

Our common stock is traded on The NASDAQ Capital Market under the symbol "ICCC". The last reported sales price of our common stock on The NASDAQ Capital Market on March 26, 2019 was $6.6737 per share.

The following table sets forth, for the periods indicated, the high and low sale prices for our common stock.

	HIGH	LOW
First Quarter of 2019 (through March 26, 2019)	$ 8.28	$ 6.60
Year ending December 31, 2018		
First Quarter	$ 8.79	$ 6.70
Second Quarter	8.65	6.74
Third Quarter	9.24	6.50
Fourth Quarter	9.30	6.38
Year ended December 31, 2017		
First Quarter	$ 6.14	$ 5.00
Second Quarter	7.60	5.24
Third Quarter	7.74	5.26
Fourth Quarter	9.25	6.50
Year ended December 31, 2016		
First Quarter	$ 8.29	$ 5.60
Second Quarter	7.38	5.62
Third Quarter	8.24	6.46
Fourth Quarter	7.99	4.76

As of March 26, 2019, there were approximately 750 holders of record of our common stock.

We have not paid any cash dividends on our common stock to date, and we do not expect to pay cash dividends in the foreseeable future. Future dividend policy will depend on our earnings, capital requirements, financial condition, contractual restrictions, and other factors considered relevant by our board of directors.

To provide a portion of the funding needed for the development of **Re-Tain™** and expansion of the **First Defense®** product line, we issued an aggregate of 2,401,497 shares of common stock, raising gross proceeds of approximately $13.46 million, in four separate transactions during 2017 and 2016. In order to minimize the dilutive effects of these transactions on our existing stockholders, we chose not to issue any form of convertible or preferred securities and issued these common shares without any warrants.

DILUTION

Our net tangible book value as of December 31, 2018 was approximately $21,515,000, or approximately $3.86 per share. Net tangible book value per share is determined by dividing our total tangible assets (total assets less goodwill and intangible assets) less total liabilities by the number of shares of our common stock outstanding as of December 31, 2018.

After giving effect to our sale of shares of our common stock in this offering at the public offering price of $5.50 per share, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us of $168,000, our as adjusted net tangible book value as of December 31, 2018 would have been approximately $29,807,000, or $4.14 per share. This represents an immediate increase in net tangible book value of $0.28 per share to existing stockholders and immediate dilution in net tangible book value of $1.36 per share to new investors participating in this offering at the public offering price. These calculations do not reflect the anticipated spending on expanding our production facilities. The following table illustrates this dilution on a per share basis:

Public offering price for one share of common stock		$ 5.50
Net tangible book value per share as of December 31, 2018	$3.86	
Increase per share attributable to new investors	$0.28	
As adjusted net tangible book value per share after this offering		$4.14
Dilution per share to new investors		$ 1.36

The information set forth above is based on 5,568,962 shares of common stock issued and outstanding as of December 31, 2018 and excludes 394,000 shares of common stock reserved for future issuance upon the exercise of outstanding options as of December 31, 2018 (of which options with respect to 60,000 shares were currently exercisable).

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock. The exercise of outstanding options having an exercise price less than the public offering price will increase dilution to new investors. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

UNDERWRITING

The underwriter named below has agreed to buy, subject to the terms of the underwriting agreement, the number of shares of common stock listed opposite its name below. The underwriter is committed to purchase and pay for all of the shares if any are purchased. Craig-Hallum Capital Group LLC is the sole underwriter.

Underwriter	Number of Shares
Craig-Hallum Capital Group LLC	1,636,364

The underwriter initially proposes to offer the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus supplement. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the underwriter.

The underwriter is offering the shares, subject to prior sale, when, as and if issued to and accepted by it, subject to approval of legal matters by its counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriter of officers' certificates and legal opinions. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

The shares sold in this offering are expected to be ready for delivery on or about March 29, 2019, against payment in immediately available funds. The underwriter may reject all or part of any order.

Underwriting Discounts, Commissions and Expenses

The table below summarizes the underwriting discount that we will pay to the underwriter. In addition to the underwriting discount, we have agreed to pay up to $100,000 of the fees and expenses of the underwriter, which may include the fees and expenses of counsel to the underwriter. The fees and expenses of the underwriter that we have agreed to reimburse are not included in the underwriting discount set forth in the table below. The underwriting discount and reimbursable expenses the underwriter will receive were determined through arms' length negotiations between us and the underwriter.

	Total

	Per Share	
Public offering price	$5.50	$9,000,002
Underwriting discount to be paid by us	$0.33	$540,000
Proceeds to us before expenses	$5.17	$8,460,002

We estimate that the total expenses of this offering, excluding the underwriting discount, will be approximately $168,000. This includes $100,000 of fees and expenses of the underwriter which are payable by us.

Lock-Up Agreements

We and each of our directors and officers have agreed not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of our common stock or any securities convertible into or exchangeable for shares of our common stock without the prior written consent of the underwriter for a period of 90 days after the date of this prospectus supplement. These lock-up agreements provide limited exceptions and their restrictions may be waived at any time by the underwriter.

Other Relationships

The underwriter and its respective affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The underwriter has received, or may in the future receive, customary fees and commissions for these transactions.

In the ordinary course of its various business activities, the underwriter and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The underwriter and its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Discretionary Accounts

The underwriter does not intend to confirm sales of the shares to any accounts over which it has discretionary authority.

Indemnification

We also have agreed to indemnify the underwriter against certain liabilities, including civil liabilities under the Securities Act of 1933, as amended, or to contribute to payments that the underwriter may be required to make in respect of those liabilities.

Passive Market Making

In connection with this offering, the underwriter may engage in passive market making transactions in our common stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker's bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Selling Restrictions

Canada. The offering of the common stock in Canada is being made on a private placement basis in reliance on exemptions from the prospectus requirements under the securities laws of each applicable Canadian province and territory where the common stock may be offered and sold, and therein may only be made with investors that are purchasing as principal and that qualify as both an "accredited investor" as such term is defined in National Instrument 45-106-Prospectus Exemptions and as a "permitted client" as such term is defined in National Instrument 31-103-Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any offer and sale of the common stock in any province or territory of Canada may only be made through a dealer that is properly registered under the securities legislation of the applicable province or territory wherein the common stock is offered and/or sold or, alternatively, by a dealer that qualifies under and is relying upon an exemption from the registration requirements therein.

Any resale of the common stock by an investor resident in Canada must be made in accordance with applicable Canadian securities laws, which may require resales to be made in accordance with prospectus and registration requirements, statutory exemptions from the prospectus and registration requirements or under a discretionary exemption from the prospectus and registration requirements granted by the applicable Canadian securities regulatory authority. These resale restrictions may under certain circumstances apply to resales of the common stock outside of Canada.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon for us by Pierce Atwood LLP of Portland, Maine. The underwriter is represented in this offering by Ellenoff Grossman & Schole LLP of New York, New York.

EXPERTS

The financial statements of ImmuCell Corporation as of December 31, 2018 and 2017 and for each of the years in the two-year period ended December 31, 2018, incorporated in this Prospectus and Registration Statement by reference from the ImmuCell Corporation Annual Report on Form 10-K for the year ended December 31, 2018 have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report thereon, incorporated herein by reference, and have been incorporated in this Prospectus and Registration Statement in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and other reports and information with the SEC under the Securities Exchange Act of 1934, as amended, or the Exchange Act. You may read and copy any of the reports, statements, or other information we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 at prescribed rates. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains a website at *http://www.sec.gov* that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC. Our SEC File Number for documents we filed under the Exchange Act is 001-12934. Our website address is *www.immucell.com*. We have included our website address in this document as an inactive textual reference only, and the information contained in, or that can be accessed through, our website does not constitute part of this prospectus supplement.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the documents we file with them. This means that we can disclose important information to you in this prospectus supplement by referring you to the documents that contain such information. These incorporated documents contain important business and financial information about us that is not included in or delivered with this prospectus supplement or the accompanying prospectus. The information incorporated by reference is considered to be part of this prospectus supplement and accompanying prospectus, and later information filed with the SEC will update and supersede this information.

We incorporate by reference the documents listed below as well as any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than information deemed to have been furnished or not filed in accordance with the SEC's rules) from the date of this prospectus supplement and prior to the termination of this offering:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 filed with the SEC on March 22, 2019;

Our Current Reports on Form 8-K filed with the SEC on February 13, 2019 and March 1, 2019.

You may request, and we will provide to you at no cost, a copy of these filings by writing or telephoning our Corporate Secretary at 56 Evergreen Drive, Portland, Maine, 04103, telephone number (207) 878-2770.

Prospectus

IMMUCELL CORPORATION

$20,000,000

Common Stock

Subscription Rights

From time to time, we may offer up to $20,000,000.00 of our common stock and subscription rights, in one or more transactions.

We will provide specific terms of these securities and offerings in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement, and any documents incorporated by reference, may also add, update or change information contained in this prospectus. You should read this prospectus, the applicable prospectus supplement, any documents incorporated by reference and any related free writing prospectus carefully before buying any of the securities being offered.

We may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis.

Our common stock is listed on the NASDAQ Capital Market under the symbol “ICCC.” The aggregate market value of our outstanding common stock held by non-affiliates was approximately $35,220,278 based on 5,484,728 shares of outstanding common stock, of which 1,584,365 shares are held by affiliates, and a price of $9.03 per share, which was the last reported sale price of our common stock as quoted on NASDAQ Capital Market on October 9, 2018. With the exception of the sale of common stock on December 21, 2017 for proceeds aggregating $3,049,991, we have not sold any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus. No subscription rights that we may offer under this prospectus are currently publicly traded.

INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES DESCRIBED UNDER THE HEADING "RISK FACTORS" CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT AND ANY RELATED FREE WRITING PROSPECTUS, AND UNDER SIMILAR HEADINGS IN THE OTHER DOCUMENTS THAT ARE INCORPORATED BY REFERENCE INTO THIS PROSPECTUS.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is November 29, 2018.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements in this prospectus and in any prospectus supplement we may file constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements relate to future events concerning our business and to our future revenues, operating results and financial condition. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “aim,” “intend,” “believe,” “estimate,” “targ “predict,” “project”, “propose,” “potential,” or “continue,” or the negative of those terms or other comparable terminology.

Any forward-looking statements contained in this prospectus or any prospectus supplement are only estimates or predictions of future events based on information currently available to our management and management’s current beliefs about the potential outcome of future events. Whether these future events will occur as management anticipates, whether we will achieve our business objectives, and whether our revenues, operating results or financial condition will be sustained or improve in future periods are subject to numerous risks. There are a number of important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements. These important factors include those that we discuss under the heading “Risk Factors” and in other sections of our Annual Report on Form 10-K for the year ended December 31, 2017 and our Form 10-Q for the quarterly period ended September 30, 2018, all filed with the Securities and Exchange Commission (“SEC”), as well as in our other reports filed from time to time with the SEC that are incorporated by reference into this prospectus. You should read these factors and the other cautionary statements made in this prospectus and in the documents we incorporate by reference into this prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus or the documents we incorporate by reference into this prospectus. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

ABOUT THIS PROSPECTUS

This document is called a prospectus and is part of a registration statement that we have filed with the SEC, using a “shelf” registration process. Under this shelf registration process, we may, from time to time, offer and sell any combination of the securities described in this prospectus in one or more transactions and in amounts we will determine from time to time, up to a total dollar amount of $20,000,000.00.

This prospectus provides you with a general description of ImmuCell Corporation and potential offerings of our securities described herein. Each time we offer securities we will provide a prospectus supplement or information that is incorporated by reference into this prospectus, containing more specific information about the offering. We may

also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. This prospectus, together with applicable prospectus supplements, any information incorporated by reference and any related free writing prospectuses, includes all material information relating to these offerings. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus, including, without limitation, a discussion of any risk factors or other special considerations that apply to these offerings or the specific plan of distribution. If there is any inconsistency between the information in this prospectus and a prospectus supplement or information incorporated by reference having a later date, you should rely on the information in that prospectus supplement or incorporated information having a later date. We urge you to read carefully this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the heading "Where You Can Find More Information," before buying any of our securities.

You should rely only on the information we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We have not authorized anyone to provide you with different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus.

Neither the delivery of this prospectus nor any sale made under it implies that there has been no change in our affairs or that the information in this prospectus is correct as of any date after the date of this prospectus. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of common stock.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “Where You Can Find More Information”. THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES, UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

In this prospectus, unless the context otherwise requires, references to “we”, “us”, “our” or similar terms, as well as references to “ImmuCell” or the “Company”, refer to ImmuCell Corporation.

ABOUT IMMUCELL CORPORATION

We are a growing animal health company whose purpose is to create scientifically-proven and practical products that result in a measurable economic impact on animal health and productivity in the dairy and beef industries. We were originally incorporated in Maine in 1982 and reincorporated in Delaware in 1987, in conjunction with our initial public offering of common stock. We have developed products that provide **Immediate Immunity**™ to newborn dairy and beef cattle and are in the late stages of developing a new product that addresses mastitis, the most significant cause of economic loss to the dairy industry.

Our total product sales during the year ended December 31, 2017 increased by 9%, or $887,000, to $10.4 million from $9.5 million in 2016, and gross margin as a percentage of product sales was 50% in 2017, as compared to 57% during

2016. Total product sales during the nine-month period ended September 30, 2018 increased by 10%, or $751,000, to $8 million from $7.3 million during the same period in 2017, and gross margin as a percentage of product sales was 47% during the 2018 period, as compared to 55% during 2017. Growth in sales of our lead product, the **First Defense**® product line, is driving the increase in our total product sales. Sales of the **First Defense**® product line aggregated 94% and 93% of our total product sales during the years ended December 31, 2017 and 2016, respectively. Sales of the **First Defense**® product line increased by 11% and 36% during the years ended December 31, 2017 and 2015 and decreased by 7% during the year ended December 31, 2016, respectively, in comparison to the prior years. Sales of the **First Defense**® product line aggregated 97% and 94% of our total product sales during the nine-month periods ended September 30, 2018 and 2017, respectively. Sales of the **First Defense**® product line increased by 14% during the nine-month period ended September 30, 2018 in comparison to the same period during 2017.

The **First Defense**® product line is manufactured from hyperimmune cows' colostrum (the milk that a cow produces immediately after giving birth) utilizing our proprietary vaccine and milk protein purification technologies. The target disease, bovine enteritis (calf scours), causes diarrhea and dehydration in newborn calves and often leads to serious sickness and even death. **First Defense**® provides bovine antibodies that newborn calves need but are unable to produce on their own immediately after birth. Our milk antibody products provide **Immediate Immunity**™ during the first few critical days of life when calves need this protection most. Studies have shown that calves that scour are more susceptible to other diseases later in life and under-perform calves that do not contract scours. The original **First Defense**® product in a bivalent capsule form was licensed by the U.S. Department of Agriculture (USDA) with claims against *E. coli* and coronavirus (two leading causes of scours) in 1991. In late 2017, the USDA approved a trivalent version of the product (known as **Tri-Shield First Defense**®) with claims against rotavirus as well as *E. coli* and coronavirus. We are rebranding the bivalent versions of our product as **Dual-Force**™ **First Defense**®, which we continue to market as options for customers who don't perceive rotavirus as a threat to their herds or prefer the bivalent capsule. **Tri-Shield**® has also been approved for sale in Canada. We do not plan to introduce **Tri-Shield**® to the Canadian market until we have met domestic demand.

Beginning early in 2015 and extending through the middle of 2016, we experienced order backlog affecting our ability to meet customer demand for **First Defense**®, which disrupted our normal product shipping patterns for the first time. In response, we completed investments necessary to increase our liquid processing capacity by 50% during the fourth quarter of 2015 and our freeze drying capacity by 100% during the first quarter of 2016. This expanded production capacity has the potential to produce product with an annual sales value of approximately $17 million. The actual value of the production output will vary subject to product yields, selling price and product format mix. Since the third quarter of 2016 and through most of 2017, we had sufficient available inventory and were shipping in accordance with the current demand of our distributors. However, during the first quarter of 2018, we incurred a backlog of orders for the second time, as sales demand for **Dual-Force**™ **First Defense**® exceeded available inventory. As of March 31, 2018, we had a backlog of orders for **Dual-Force**™ worth approximately $901,000, which we filled during the second quarter of 2018. In order to produce more doses quickly to clear the 2015/2016 order backlog, we had significantly increased the quantity of our supply of colostrum. The 2018 backlog problem was largely caused by a reduction in the biological yield from this new milk supply in addition to other factors. To address the inherent variability in our biological yields, among other process improvements, we are working to optimize the mix of early milk that is rich with antibodies and later milk that contains less antibodies. With the improved production methods to increase yields and the enhanced manufacturing redundancies that we have implemented, we are rebuilding target inventory levels of **Dual-Force**™ to again consistently supply product to the market.

Tri-Shield First Defense® is the first calf-level, passive antibody product on the market with USDA-approved disease claims providing **Immediate Immunity**™ against each of the three leading causes of calf scours (*E. coli*, coronavirus and rotavirus) and is sold in gel tube delivery format. This unique breadth of claims further differentiates our products from competitive products on the market. Of the products given to newborn calves to prevent scours, Calf-Guard® from Zoetis is the market leader in terms of doses sold. This product has claims against coronavirus and rotavirus (but not *E. coli*). With the addition of a rotavirus claim for **Tri-Shield**®, we now compete more effectively against Calf-Guard® and other scours preventatives given to newborn calves. Historically, the primary tool to help combat scours has been to vaccinate the cow with a dam-level scours vaccine to increase the antibody level against specific scours-causing pathogens in the colostrum that she produces for her newborn. With this expanded claim set, we can compete more effectively against these dam-level vaccine products that are given to the mother cow. It is generally believed that only 80% of animals respond to a vaccine, which could leave about 20% of calves unprotected. This variability in a cow's immune response to vaccines (that can impact our costs of goods sold when we immunize our source cows to produce the antibodies used in our production process) creates a sales opportunity for our product. Additionally, our research suggests that treatment protocols for dam-level scours vaccine programs are not always followed, leaving even more calves compromised. Our new marketing campaign, **Beyond Vaccination**®, suggests that by delivering immediate immunity directly to the calf via **Tri-Shield**®, producers can reduce stress-causing injections to the cow and save the associated labor for vaccines that are more critical to cow health. Reliance on a dam-level scours vaccine requires that money be spent before it is known whether the cow is carrying a viable, valued calf. With **Tri-Shield**®, every calf is equally protected and that investment can be targeted to the calves that are most critical to the operation. This, in turn, can free up space in the cow's vaccination schedule to optimize her immune response to vaccines that are critical to her health. We estimate that the total market for scours preventative products (including sales of our product) that are given to newborn calves (the calf-level market) is approximately $18 million annually. We estimate that the dam-level product category covers approximately twice as many calves as the calf-level product segment reaches.

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Soon after regulatory approval of **Tri-Shield First Defense**® was obtained during the fourth quarter of 2017, we quickly sold out of our initial launch quantities. During the first quarter of 2018, market demand for **Tri-Shield**® quickly exceeded our available inventory. Production has not kept pace with demand primarily because of the difficulty in producing enough of the new, complex rotavirus vaccine that is used to immunize our source cows at commercial scale. Simply put, the complex vaccine production process used to obtain regulatory approval required significant additional process development work and optimization to meet large-scale production needs. As of March 31, 2018, the backlog of orders for this new product increased to approximately $344,000. While the backlog of orders was worth approximately $327,000 as of June 30, 2018 and $301,000 as of September 30, 2018, we do not think these are meaningful figures because currently we are not actively soliciting all orders possible given the short supply situation and because we believe many distributors are holding off on placing orders until we have the supply situation under better control. While this backlog is a problem and could adversely impact customer relations and result in lost sales, it is also a positive indication that the market is accepting our new product offering. Given this shortage of supply, we have had to change our market launch strategy for **Tri-Shield**®. We have pivoted away from a mass-market launch and are working with distribution partners to allocate the limited supply to influential end-users and veterinarians capable of collecting field data that could help us re-launch **Tri-Shield**® both in the United States and Canada as soon as production issues are resolved and adequate inventory is on hand, which is anticipated to be during the middle of 2019. Sales of **Tri-Shield**® were approximately $250,000, $236,000, $216,000 and $252,000 during the fourth quarter of 2017, the first quarter of 2018, the second quarter of 2018 and the third quarter of 2018, respectively. We are satisfied that we are successfully addressing the vaccine production and biological yield issues pertaining to the production of this new product. During the fourth quarter of 2018, we expect to be able to produce product with a sales value of approximately $500,000.

The majority of our product development budget from 2000 through 2018 has been focused on the development of a Nisin-based intramammary treatment of subclinical mastitis in lactating dairy cows. During the 18.75-year period that began on January 1, 2000 (the year we began the development of our mastitis drug) and ended on September 30, 2018, we invested the aggregate of approximately $36.3 million in the development of this product. This figure includes approximately $15.1 million of product development expenses (not including depreciation expense related to the production facility and equipment), approximately $20.8 million of capital expenditures for the production facility and equipment and $329,000 for land. This estimated allocation of product development expenses reflects only direct expenditures and includes no allocation of product development or administrative overhead expenses. Approximately $2.9 million of this investment was offset by product licensing revenues and grant income.

It is difficult to estimate the potential size of the market for the treatment of subclinical mastitis because this disease is largely left untreated presently. We believe that approximately 20-30% of the U.S. dairy herd is affected by subclinical mastitis caused by Gram-positive organisms falling within the claim spectrum of our product. This compares to approximately 2% of the U.S. herd that is thought to be infected with clinical mastitis, where approximately $60 million per year is spent on drug treatments. We believe that similar market opportunities also exist outside of the United States and for the treatment of dry (non-lactating) cows. We estimate that the market potential for first year sales of our new mastitis product could be approximately $5.8 million and could grow to approximately $36.1 million during the fifth year after market launch.

During the fourth quarter of 2017, we completed construction of the building that houses our Nisin production facility, and during the third quarter of 2018 we completed equipping that facility, at an aggregate cost of approximately $20.8 million. This expansion was funded through a combination of net proceeds from common stock issuances totaling $12.2 million (2016-17), debt financing from TD Bank, N.A. totaling $6.8 million (2016-18) and cash generated from operations. The production capacity of our facility could meet annual sales demand of approximately $10 million. This facility was constructed with enough room to add a second fermentation and recovery portion of the product line to be purchased and installed at a cost of approximately $7 million to effectively double production output. We would consider this investment only after commercial acceptance of the product is demonstrated. If annual sales of our mastitis product exceed approximately $20 million, we would evaluate all Nisin supply options, factoring in efficiencies and yield improvements. Building an additional Nisin production facility to meet our needs at that time may be the most cost-effective solution.

Nisin is an antibacterial peptide that has been demonstrated in clinical studies to be an effective aid in the reduction of mastitis-causing organisms in dairy cows. Mastitis is a very common infection in dairy cows that results in inflammation of the mammary gland. Because dairy producers are required to discard milk for a period during and after treatment with all currently marketed mastitis treatment products due to concerns about antibiotic residue in milk, it is generally current practice to only treat mastitis when the disease has progressed to the clinical stage where the milk from an infected cow cannot be sold. We believe that our Nisin-based treatment could revolutionize the way that mastitis is treated by making earlier treatment of subclinically infected cows economically feasible by not requiring a milk discard during, or for a period of time after, treatment. No other FDA-approved mastitis treatment product on the market can offer this value proposition. Commercial introduction of our mastitis product in the United States is subject to approval of our New Animal Drug Application (NADA) by the U.S. Food and Drug Administration's Center for Veterinary Medicine (FDA), which approval cannot be assured. During the third quarter of 2018, the FDA issued to us a Technical Section Complete Letter for the Human Food Safety Technical Section of our NADA for the mastitis product (the fourth of five required Technical Section Complete Letters), leaving only the manufacturing Technical Section (known as the Chemistry, Manufacturing and Controls (CMC) Technical Section) remaining for product approval and launch. We anticipate making the first submission of the CMC Technical Section (Drug Substance only) during the fourth quarter of 2018; it will be subject to a six-month FDA review period. We plan to make a second submission of the CMC Technical Section (which would be responsive to the anticipated Incomplete Letter from the first submission and also include the Drug Product requirements) promptly after the first review by the FDA is complete. This second submission would also be subject to a six-month FDA review period. Adherence to this timeline could set us up for possible product approval during late 2019 or the first half of 2020. Foreign regulatory approvals would be required for sales in key markets outside of the United States, which would involve some similar and some different requirements. We have not yet initiated any such foreign approval efforts.

With a measured approach to expanding our customer-facing staff, it is our objective to double our current level of product sales to approximately $20 million through both continued growth in sales of the **First Defense**® product line (including **Tri-Shield**®) and a successful launch of our novel mastitis treatment as soon as possible. As market penetration for both new products is achieved and additional resources are dedicated to sales, marketing and technical services, our longer-term goal is to reach the $30 million level of product sales as soon as possible during the five-year period after the market launch of our new mastitis product.

Our principal executive offices are located at 56 Evergreen Drive, Portland, ME 04103. Our telephone number is (207) 878-2770. Our website is located at www.immucell.com. Information contained on, or that can be accessed through, our website is not part of this prospectus.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933, as amended ("Securities Act"), with respect to the securities covered by this prospectus. This prospectus, which is a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and

schedules filed therewith. For further information with respect to us and the securities covered by this prospectus, please see the registration statement and the exhibits filed with the registration statement. A copy of the registration statement and the exhibits filed with the registration statement may be inspected without charge at the Public Reference Room maintained by the SEC, located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the website is http://www.sec.gov.

We are subject to the information and periodic reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and, in accordance therewith, we file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available for inspection and copying at the Public Reference Room and website of the SEC referred to above. We maintain a website at www.immucell.com. You may access our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed pursuant to Sections 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and certain information that we will later file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below, as well as any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of the initial registration statement and prior to the effectiveness of this registration statement, and any filings made after the date of this prospectus until we sell all of the securities under this prospectus, except that we do not incorporate any document or portion of a document that was furnished and deemed by the rules of the SEC not to have been filed:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on March 29, 2018;

Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018, June 30, 2018 and September 30, 2018, filed with the SEC on May 14, 2018, August 13, 2018 and November 13, 2018, respectively;

Our Current Reports on Form 8-K filed with the SEC on February 1, 2018, February 8, 2018, May 14, 2018, June 18, 2018, July 10, 2018, July 25, 2018, August 13, 2018, September 26, 2018 and November 13, 2018;

Our definitive proxy statement on Schedule 14A filed on April 30, 2018 for our annual meeting of shareholders held on June 14, 2018;

Our Form 8-A filed with the SEC on March 18, 1987 with respect to our common stock; and

Our Form 8-A filed with the SEC on September 13, 1995, as amended by Form 8-A/A filed with the SEC on July 1, 2008, with respect to our common stock purchase rights.

Additionally, all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after (i) the date of the initial registration statement and prior to effectiveness of the registration statement; and (ii) the date of this prospectus and prior to the termination or completion of this offering, shall be deemed to be incorporated by reference in this prospectus and to be part hereof from the date of filing of such reports and other documents. Any information that we subsequently file with the SEC that is incorporated by reference as described above will automatically update and supersede any previous information that is part of this prospectus.

We hereby undertake to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of any such person, a copy of any and all of the information that has been or may be incorporated by reference in this prospectus, other than exhibits to such documents. Requests for such copies should be directed to our Corporate Secretary at 56 Evergreen Drive, Portland, ME 04103. Our telephone number is (207) 878-2770.

RISK FACTORS

Investing in our securities involves significant risks. You should review carefully the risks and uncertainties described under the heading "Risk Factors" contained in, or incorporated into, the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference herein or therein. Each of the referenced risks and uncertainties could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities. Additional risks not known to us or that we believe are immaterial may also adversely affect our business, operating results and financial condition and the value of an investment in our securities.

DESCRIPTION OF COMMON STOCK

We may offer, from time to time, shares of our common stock under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of our common stock. Each time we offer common stock, we will provide a prospectus supplement that will describe the specific amounts, and prices of the common stock. The prospectus supplement and any related free writing prospectus also may supplement or, as applicable, add, update or change information contained in this prospectus or in documents we have incorporated by reference. The terms of any particular offering, the initial offering price and the net proceeds to us will be contained in the prospectus supplement, information incorporated by reference or free writing prospectus relating to such offering.

The description below of our common stock and provisions of our certificate of incorporation and bylaws are summaries and are qualified by reference to the certificate of incorporation and the bylaws. These documents are filed as exhibits to the registration statement of which this prospectus is a part.

Our authorized capital stock consists of 11,000,000 shares of common stock. As of November 19, 2018 there were approximately 5,485,000 shares of common stock outstanding.

Common Stock

The holders of common stock are entitled to receive ratable dividends, if any, as may be declared from time to time by the Board of Directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, the holders of common stock are entitled to share ratably in all assets remaining after payment of or provision for liabilities. The common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable, and the shares of common stock to be issued upon the closing of this offering will be fully paid and nonassessable.

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the shareholders. There is no cumulative voting.

Effect of Certain Provisions of our Certificate of Incorporation, Bylaws and Common Stock Rights Plan

Provisions of our certificate of incorporation, our bylaws, our Common Stock Rights Plan or Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- limitations on the removal of directors; advance notice requirements for stockholder proposals and nominations;
- the ability of our Board of Directors to alter or repeal our bylaws;
- the ability of our Board of Directors to refuse to redeem rights issued under our Common Stock Rights Plan or otherwise to limit or suspend its operation that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our Board of Directors; and
- Section 203 of the Delaware General Corporation Law, which prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder (generally defined as a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder) unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could depress the trading price of our common stock or limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our Company, thereby reducing the likelihood of obtaining a premium for our common stock in an acquisition.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board of Directors.

Shareholder Meetings. Our bylaws provide that a special meeting of shareholders may be called only by the President or by the Board of Directors or by shareholders holding a majority of the outstanding shares of our common stock.

Requirements for Advance Notification of Shareholder Nominations and Proposals. Our bylaws establish advance notice procedures with respect to shareholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our Board of Directors or a committee of the Board of Directors.

Board of Directors Vacancies. Under our bylaws, any vacancy on the Board of Directors, including a vacancy resulting from an enlargement of the Board of Directors, may only be filled by vote of a majority of the remaining directors. Any director may be removed by vote of the holders of a majority of the outstanding shares of our common stock. The limitations on the removal of directors and filling of vacancies would have the effect of making it more difficult for a third party to acquire control of us, or of discouraging a third party from acquiring control of us.

Board of Directors Size. Within the range specified by our bylaws, our Board of Directors determines the size of our Board of Directors and may create new directorships and elect new directors, which may enable an incumbent Board of Directors to maintain control by adding directors.

Indemnification. Our certificate of incorporation and our bylaws, as amended, provide that we will indemnify officers and directors against losses as they incur in investigations and legal proceedings resulting from their services to us, which may include service in connection with takeover defense measures.

In September 1995, our Board of Directors adopted a Common Stock Rights Plan and declared a dividend of one common share purchase right (a “Right”) for each of the then outstanding shares of the common stock of the Company. Each Right entitles the registered holder to purchase from the Company one share of common stock at an initial purchase price of $70.00 per share, subject to adjustment. The description and terms of the Rights are set forth in a Rights Agreement between the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent.

The Rights (as amended) become exercisable and transferable apart from the common stock upon the earlier of i) 10 days following a public announcement that a person or group (Acquiring Person) has, without the prior consent of the Continuing Directors (as such term is defined in the Rights Agreement), acquired beneficial ownership of 20% or more of the outstanding common stock or ii) 10 days following commencement of a tender offer or exchange offer the consummation of which would result in ownership by a person or group of 20% or more of the outstanding common stock (the earlier of such dates being called the Distribution Date).

Upon the Distribution Date, the holder of each Right not owned by the Acquiring Person would be entitled to purchase common stock at a discount to the initial purchase price of $70.00 per share, effectively equal to one half of the market price of a share of common stock on the date the Acquiring Person becomes an Acquiring Person. If, after the Distribution Date, the Company should consolidate or merge with any other entity and the Company were not the surviving company, or, if the Company were the surviving company, all or part of the Company's common stock were changed or exchanged into the securities of any other entity, or if more than 50% of the Company's assets or earning power were sold, each Right would entitle its holder to purchase, at the Rights' then-current purchase price, a number of shares of the acquiring company's common stock having a market value at that time equal to twice the Right's exercise price.

At any time after a person or group becomes an Acquiring Person and prior to the acquisition by such person or group of 50% or more of the outstanding common stock, the Board of Directors of the Company may exchange the Rights (other than Rights owned by such person or group which have become void), in whole or in part, at an exchange ratio of one share of common stock per Right (subject to adjustment). At any time prior to 14 days following the date that any person or group becomes an Acquiring Person (subject to extension by the Board of Directors), the Board of Directors of the Company may redeem the then outstanding Rights in whole, but not in part, at a price of $0.005 per Right, subject to adjustment.

On June 8, 2005, our Board of Directors voted to authorize an amendment of the Rights Agreement to extend the Final Expiration Date by an additional three years, to September 19, 2008. As of June 30, 2005, we entered into an amendment to the Rights Agreement with the Rights Agent reflecting such extension. On June 6, 2008 our Board of Directors voted to authorize an amendment of the Rights Agreement to extend the Final Expiration Date by an additional three years, to September 19, 2011, and to increase the ownership threshold for determining “Acquiring Person” status from 15% to 18%. As of June 30, 2008, we entered into an amendment to the Rights Agreement with the Rights Agent reflecting such extension and threshold increase. On August 5, 2011, our Board of Directors voted to authorize amendments of the Rights Agreement to extend the Final Expiration Date by an additional three years to September 19, 2014 and to increase the ownership threshold for determining “Acquiring Person” status from 18% to 20%. As of August 9, 2011, we entered into an amendment to the Rights Agreement with the Rights Agent reflecting such extension and threshold increase. On June 10, 2014, our Board of Directors voted to authorize an amendment to the Rights Agreement to extend the final expiration date by an additional three years to September 19, 2017. As of June 16, 2014, we entered into an amendment to the Rights Agreement with the Rights Agent reflecting such extension. As of April 15, 2015, we entered into an amendment to the Rights Agreement with the Rights Agent deleting the provisions requiring that redemptions of the Rights, waivers or consents avoiding “Acquiring Person” status or certain amendments to the Rights Agreement be approved by “Continuing Directors”. On June 15, 2017, our Board of Directors voted to authorize an amendment to the Rights Agreement to extend the final expiration date by an additional five years to September 19, 2022. As of August 10, 2017, we entered into an amendment to the Rights Agreement with the Rights Agent reflecting such extension. No other changes have been made to the terms of the Rights or the Rights Agreement.

Our Board of Directors believes that there is some risk that the potential value of the mastitis product development initiative and the potential value of our broadened **First Defense®** product line offerings are not fairly reflected in the market price of our common stock, as it fluctuates from time to time, and that opportunistic buyers could take advantage of that disparity to the detriment of our stockholders. If this were to happen and result in a potential threat through an unsolicited acquisition effort or otherwise, our Board of Directors feels that the Common Stock Rights Plan could enhance stockholder value by providing management with negotiating leverage.

Listing

Our common stock is listed on the NASDAQ Capital Market under the symbol “ICCC”.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

DESCRIPTION OF SUBSCRIPTION RIGHTS

We may issue to our shareholders subscription rights to purchase our common stock. The following description sets fourth certain general terms and provisions of the subscription rights that we may offer pursuant to this prospectus. The particular terms of the subscription rights and the extent, if any, to which the general terms and provisions may apply to the subscription right so offered will be described in the applicable prospectus supplement.

Subscription rights may be issued independently or together with any other security offered by this prospectus and may or may not be transferable by the shareholder receiving the rights in the rights offering. In connection with any rights offering, we may enter into a standby underwriting agreement with one or more underwriters pursuant to which the underwriter will purchase any securities that remain unsubscribed for upon completion of the rights offering, or offer these securities to other parties who are not our shareholders. A copy of the form of subscription rights certificate will be filed with the SEC each time we issue subscription rights, and you should read that document for provisions that may be important to you. For more information on how you can obtain a copy of any subscription rights certificate, see “Where You Can Find More Information.”

The applicable prospectus supplement relating to any subscription rights will describe the terms of the offered subscription rights, including, where applicable, the following:

the exercise price for the subscription rights;

the number of subscription rights issued to each shareholder;

the extent to which the subscription rights are transferable;

any other terms of the subscription rights, including terms, procedures and limitations relating to the exchange and exercise of the subscription rights;

the date on which the right to exercise the subscription rights will commence and the date on which the right will expire;

the extent to which the subscription rights include an over-subscription privilege with respect to unsubscribed securities; and

the material terms of any standby underwriting arrangement entered into by us in connection with the subscription rights offering.

USE OF PROCEEDS

Unless otherwise indicated in the applicable prospectus supplement, information incorporated by reference or free writing prospectus, we intend to use the net proceeds from the sale of our securities to fund our growth plans, to possibly repay some of our indebtedness, for working capital, and for other general corporate purposes, including capital expenditures related to our growth.

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus from time to time in one or more transactions, including, without limitation:

through agents;

to or through underwriters;

through broker-dealers (acting as agent or principal);

directly by us to purchasers (including our affiliates and shareholders), through a specific bidding or auction process, a rights offering or otherwise;

through a combination of any such methods of sale; or

through any other methods described in a prospectus supplement.

The distribution of securities may be effected, from time to time, in one or more transactions, including:

block transactions (which may involve crosses) and transactions on the NASDAQ Capital Market or any other organized market where the common stock may be traded;

purchases by a broker-dealer as principal and resale by the broker-dealer for its own account pursuant to a prospectus supplement;

ordinary brokerage transactions and transactions in which a broker-dealer solicits purchasers;

sales “at the market” to or through a market maker or into an existing trading market, on an exchange or otherwise; and

sales in other ways not involving market makers or established trading markets, including direct sales to purchasers.

The securities may be sold at a fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices. The consideration may be cash or another form negotiated by the parties. Agents, underwriters or broker-dealers may be paid compensation for offering and selling the securities. That compensation may be in the form of discounts, concessions or commissions to be received from us or from the purchasers of the securities. Dealers and agents participating in the distribution of the securities may be deemed to be underwriters, and compensation received by them on resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act. If such dealers or agents were deemed to be underwriters, they may be subject to statutory liabilities under the Securities Act.

We may also make direct sales through subscription rights distributed to our existing shareholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to our shareholders, if all of the underlying common stock is not subscribed for, we may then sell the unsubscribed common stock directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed common stock to third parties. We may pay the standby underwriters a commitment fee for the common stock they commit to purchase on a standby basis.

Agents may, from time to time, solicit offers to purchase the securities. If required, we will name in the applicable prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, any agent involved in the offer or sale of the securities and set forth any compensation payable to the agent. Unless otherwise indicated, any agent will be acting on a best efforts basis for the period of its appointment. Any agent selling the securities covered by this prospectus may be deemed to be an underwriter of the securities.

If underwriters are used in an offering, securities will be acquired by the underwriters for their own account and may be resold, from time to time, in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale, or under delayed delivery contracts or other contractual commitments. Securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. If an underwriter or underwriters are used in the sale of securities, an underwriting agreement will be executed with the underwriter or underwriters at the time an agreement for the sale is reached. The applicable prospectus supplement will set forth the managing underwriter or underwriters, as well as any other underwriter or underwriters, with respect to a particular underwritten offering of securities, and will set forth the terms of the transactions, including compensation of the underwriters and dealers and the public offering price, if applicable. This prospectus, the applicable prospectus supplement and any applicable free writing prospectus will be used by the underwriters to resell the securities.

If a dealer is used in the sale of the securities, we, or an underwriter, will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. To the extent required, we will set forth in the prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, the name of the dealer and the terms of the transactions.

We may directly solicit offers to purchase the securities and may make sales of securities directly to institutional investors or others. These persons may be deemed to be underwriters with respect to any resale of the securities. To the extent required, the prospectus supplement, document incorporated by reference or free writing prospectus, as applicable, will describe the terms of any such sales, including the terms of any bidding or auction process, if used.

Agents, underwriters and dealers may be entitled under agreements which may be entered into with us to indemnification by us against specified liabilities, including liabilities incurred under the Securities Act, or to contribution by us to payments they may be required to make in respect of such liabilities. If required, the prospectus supplement, documents incorporated by reference or free writing prospectus, as applicable, will describe the terms and conditions of such indemnification or contribution. Some of the agents, underwriters or dealers, or their affiliates may be customers of, engage in transactions with or perform services for us or our subsidiaries or affiliates in the ordinary course of business.

Under the securities laws of some states, the securities offered by this prospectus may be sold in those states only through registered or licensed brokers or dealers.

Any person participating in the distribution of securities registered under the registration statement that includes this prospectus will be subject to applicable provisions of the Exchange Act, and the applicable SEC rules and regulations, including, among others, Regulation M, which may limit the timing of purchases and sales of any of our common stock by any such person. Furthermore, Regulation M may restrict the ability of any person engaged in the distribution of our securities to engage in market-making activities with respect to our securities. These restrictions may affect the marketability of our securities and the ability of any person or entity to engage in market-making activities with respect to our securities.

Certain persons participating in an offering may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act that stabilize, maintain or otherwise affect the price of the securities. If any such activities will occur, they will be described in the applicable prospectus supplement.

In compliance with the guidelines of the Financial Industry Regulatory Authority ("FINRA"), the aggregate maximum discount, commission or agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of any offering pursuant to this prospectus and any applicable prospectus supplement, as the case may be.

If more than 10% of the net proceeds of any offering of securities made under this prospectus will be received by FINRA members participating in the offering or affiliates or associated persons of such FINRA members, the offering will be conducted in accordance with FINRA Conduct Rule 5110(h).

So long as the aggregate market value of our common equity held by non-affiliates is less than $75,000,000.00 and so long as required by the rules of the SEC, the amount of common stock we may offer hereunder will be limited such that the aggregate market value of securities sold by us during a period of 12 calendar months cannot exceed one-third of the aggregate market value of the common equity held by non-affiliates.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution.

LEGAL MATTERS

Pierce Atwood LLP will pass upon legal matters in connection with the validity of the securities offered hereby for us.

EXPERTS

The financial statements of ImmuCell Corporation as of and for the years ended December 31, 2017 and 2016, incorporated in this Prospectus and Registration Statement by reference from the ImmuCell Corporation Annual Report on Form 10-K for the year ended December 31, 2017 have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report, incorporated herein by reference, and have been incorporated in this Prospectus and Registration Statement in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

INTERESTS OF NAMED EXPERTS AND COUNSEL

No expert or counsel named in this prospectus as having prepared or certified any part of this prospectus or having given an opinion upon the validity of the securities being registered or upon other legal matters in connection with the registration or offering of the securities was employed on a contingency basis, or had, or is to receive, in connection with the offering, a substantial interest, direct or indirect, in the registrant. Nor was any such person connected with the registrant as a promoter, managing or principal underwriter, voting trustee, director, officer, or employee.

$9,000,002 of Shares of Common Stock

ImmuCell Corporation

PROSPECTUS SUPPLEMENT

Craig-Hallum Capital Group

The date of this prospectus supplement is March 27, 2019