Management Discussion and Analysis (Expressed in Canadian Dollars)

# KANE BIOTECH INC.

Three and six months ended June 30, 2022 and 2021



### **Management Discussion and Analysis**

The following management discussion and analysis ("MD&A") covers information up to August 24, 2022 and should be read in conjunction with the financial statements for the three and six months ended June 30, 2022 and 2021. Except as otherwise noted, the financial information contained in this MD&A and in the financial statements has been prepared in accordance with IFRS. All amounts are expressed in Canadian Dollars unless otherwise noted. Additional information regarding the Company is available on SEDAR at <a href="https://www.sedar.com">www.sedar.com</a> and on the Company's website at <a href="https://www.sedar.com">www.sedar.com</a> and on the Company's website at <a href="https://www.sedar.com">www.sedar.com</a>.

This MD&A has been prepared to help investors understand the financial performance of the Company in the broader context of the Company's strategic direction, the risks and opportunities as understood by management, and the key success factors that are relevant to the Company's performance. Management has prepared this document in conjunction with its broader responsibilities for the accuracy and reliability of the financial statements, as well as the development and maintenance of appropriate information systems and internal controls to ensure that the financial information is complete and reliable. The Audit Committee and the Board of Directors have reviewed this document and all other publicly reported financial information for integrity, usefulness, reliability, and consistency.

#### **COVID-19 PANDEMIC**

The outbreak of COVID-19, the disease caused by the novel SARS-CoV-2 strain of coronavirus was declared a global pandemic by the World Health Organization on March 11, 2020 and has resulted in a widespread health crisis that has affected economies and financial markets around the world, resulting in an economic downturn. The effects of this pandemic on the Company continue to evolve and currently include changing customer purchasing patterns, supply chain challenges, inflation and the determination of optimum product inventory levels. The duration and full impact of the COVID-19 pandemic is unknown at this time and it is not possible to reliably estimate the length and severity of these developments, nor the impact of these developments on the financial results and condition of the Company in future periods.

### FORWARD-LOOKING STATEMENTS

This Management's Discussion and Analysis contains certain forward-looking information and statements within the meaning of securities law which may not be based on historical fact, including without limitation statements containing the words "believes,", "should", "may," "plan," "will," "estimate," "predict," "continue," "anticipates," "potential", "intends," "expects," or other similar expressions. Such forward looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, events, or developments to be materially different from any future results, events or developments expressed or implied by such forward looking statements. Such factors include, among others, the Company's stage of development, lack of product revenues, additional capital requirements, risks associated with the completion of clinical trials and obtaining regulatory approval to market the Company's products, the ability to protect its intellectual property and dependence upon collaborative partners. These factors should be considered carefully, and readers are cautioned not to place undue reliance on such forward-looking statements. The forward-looking statements are made as of the date hereof, and the Company disclaims any obligation to update any such factors or to publicly announce the result of any revisions to any of the forward-looking statements contained herein to reflect future results, events, or developments.

Actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking statements contained in this MD&A. Such statements are based on a number of assumptions which may prove to be incorrect, including, but not limited to, assumptions about:

- general business and economic conditions;
- interest rates and foreign exchange rates;
- the timing of the receipt of regulatory and governmental approvals for the Company's research and development projects;
- the availability of financing for the Company's research and development projects, or the availability of financing on reasonable terms;
- the Company's costs of trials;
- the Company's ability to attract and retain skilled staff;
- market competition;
- tax benefits and tax rates;
- the Company's ongoing relations with its employees and with its business partners.

Management cautions you, the reader, that the foregoing list of important factors and assumptions is not exhaustive. Events or circumstances could cause actual results to differ materially from those estimated or projected and expressed in, or implied by,



### **Management Discussion and Analysis**

these forward-looking statements. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking statements or the foregoing list of factors, whether as a result of new information or future events or otherwise.

#### **BUSINESS OVERVIEW**

Kane Biotech Inc. ("Kane Biotech", "Kane" or the "Company") is a biotechnology company engaged in the research, development and commercialization of technologies and products that prevent and remove microbial biofilms. Biofilms are thin, slimy films that develop when bacteria and other microorganisms form a protective matrix that acts as a shield against attack. Biofilms attach to and grow on living and inert surfaces. When protected by a biofilm, bacteria become highly resistant to antibiotics, antimicrobials, biocides and host immune responses. This resiliency contributes to numerous Human and Animal Health-related problems. According to the United States National Institute of Health, biofilms are estimated to be responsible for 80% of all animal and human bacterial infections including tooth decay, wound infections, chronic inflammatory skin disorders and wounds, recurrent urinary tract infections, medical device-associated and hospital acquired infections (HAIs), and foodborne bacterial outbreaks. Biofilms cost society billions of dollars each year. As such, there is significant interest, and therefore significant opportunity, in safe and effective products that can combat the biofilm problem. Kane Biotech's mission is to capitalize on this large, addressable market by licensing its proprietary anti-biofilm technologies to global industry players.

Kane Biotech has a portfolio of biotechnologies, intellectual property (patents, patents pending and trademarks) and products developed by the Company's own biofilm research expertise and acquired from leading research institutions. StrixNB<sup>™</sup>, DispersinB<sup>®</sup>, Aledex<sup>™</sup>, bluestem<sup>™</sup>, bluestem<sup>™</sup>, coactiv+<sup>™</sup>, coactiv+<sup>®</sup>, goldstem<sup>™</sup>, silkstem<sup>™</sup>, DermaKB<sup>™</sup> and DermaKB Biofilm<sup>™</sup> are trademarks of Kane Biotech Inc.

The Company is listed on the TSX Venture Exchange under the symbol "KNE" and on the OTCQB Venture Market under the symbol "KNBIF".

Key Highlights of Kane Biotech include the following:

- A specialized focus on the development and continual improvement of anti-biofilm technologies, targeting large markets for biofilm prevention and dispersion solutions
- Robust patent portfolio of differentiated anti-biofilm technologies with 74 patents issued or pending
- Renewed licensing agreement for DispersinB® with Rutgers University
- First commercial licensing and distribution agreement signed in 2017, establishing a 10-year partnership with Dechra Veterinary Products (the "Dechra Agreement") wherein Kane Biotech receives an ongoing royalty from Dechra on net sales of the Company's Vetradent™ products in North America
  - o Extension of the Dechra Agreement in 2019 to include South America
- Expansion into multiple markets with mutually beneficial contractual agreements with North American and Asian distributors and retailers
- Entered into an agreement with UK-based veterinary products company, Animalcare Group PLC ("Animalcare") under which the parties formed STEM Animal Health Inc. ("STEM"), a company dedicated to treating biofilm-related ailments in animals
  - Animalcare is to invest \$5 million consisting of \$3 million to acquire a one-third equity stake in STEM and \$2 million for the rights to commercialize products in global veterinary markets outside of the Americas
  - Appointment of industry veteran Kevin Cole as President and CEO of STEM
- STEM achieved a key milestone by obtaining the internationally recognized Veterinarian Oral Health Council ("VOHC")
  efficacy certification which activated approximately \$1.3 million in milestone payments and minimum royalties pursuant
  to its Licensing and Royalty agreements.
- Continued product development of DispersinB<sup>®</sup> Hydrogel and coactiv+ Antimicrobial Hydrogel technology platforms for the Human Health market
  - Retained GR Consulting to develop and implement the regulatory and out-licensing strategy for DispersinB<sup>®</sup> Hydrogel and coactiv+<sup>™</sup> Antimicrobial Hydrogel
- Awarded \$3.8 million (\$2.5 million utilized) in non-dilutive funding for its DispersinB® Hydrogel product development and commercialization project from Prairies Economic Development Canada ("PrairiesCan") in the form of interest-free repayable contributions to be repaid over five years, starting in April 2023
- Received the U.S. Department of Defense's ("DoD") Medical Technology Enterprise Consortium Research Project Award ("MTEC Award") for continued clinical development of the Company's DispersinB® Hydrogel to treat biofilm-mediated antimicrobial resistance in non-healing chronic wounds in the amount of \$2.7 million USD
- Obtained the ISO 13485:2016 certification for its quality management system specific to its ongoing efforts to design and develop novel medical devices for the wound care market



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- Ongoing success in online sales of the Company's DermaKB™ line of scalp care products on both <u>amazon.ca</u> and <u>amazon.com</u>, as well as on its <u>dermakb.com</u> webstore while looking to secure distribution in the salon market
- Completed private placements of \$3.5 million in 2020 and \$1.0 million in 2022
- Entered into a one-year credit agreement with Pivot Financial Inc. ("Pivot") in 2020 for a non-revolving term loan in the amount of \$1.480.000
  - o In 2021, the term of this loan was extended and the credit facility was increased to \$2,500,000
  - o In 2022, the term of this loan was extended further and the credit facility was increased to \$4,000,000

### **BUSINESS UPDATE AND STRATEGY**

Kane Biotech is focused on licensing and co-commercializing its biofilm-related intellectual property with strategic partners that have established large-scale market access. Kane's two primary markets for its technologies are Animal Health and Human Health. On September 28, 2020, the Company announced the creation of STEM Animal Health Inc. (which is a joint venture with Animalcare Group PLC. STEM Animal Health aims to: (1) generate revenue and profit through the licensing of biofilm technologies in the veterinarian channels, and (2) expand distribution and growth of its premium companion animal products in the pet specialty and e-commerce channels. In Human Health, Kane intends to: (1) finalize product development of its DispersinB® Hydrogel for the human wound care market, (2) pursue the optimal regulatory and commercialization path for this technology including joint ventures, and (3) continue development of a product line for the human wound market based on our proprietary coactiv+<sup>TM</sup> Antimicrobial Hydrogel platform. As previously announced, the funding from PrairiesCan and the DoD has been critical to progressing the company's Human Health initiatives for which we are looking forward to moving into the commercialization phase.

Within the Animal Health division, STEM has successfully recruited Kevin Cole as President and CEO. As announced on October 13, 2020, Kevin is an experienced Consumer Packaged Goods and Animal Health business leader that is currently creating the foundation for STEM's growth in:

- Royalty revenue: Accelerating royalty revenue by supporting Dechra in North and South America via the sales of Dechra's premium veterinary oral care product range and supporting Animalcare's future veterinary oral care product range in Europe. In April, 2022, STEM achieved a key milestone by obtaining the internationally recognized Veterinarian Oral Health Council ("VOHC") efficacy certification which activated approximately \$1.3 million in milestone payments and minimum royalties pursuant to its Licensing and Royalty agreements.
- 2. Expanding distribution of the bluestem<sup>™</sup> product line in Specialty Pet Trade: The bluestem<sup>™</sup> product line, which includes water additives, chews, spray, and dental wipes, is currently in limited distribution. The opportunity and potential for growth as a result of expanded distribution and availability in the Specialty Pet Channel is significant. STEM will focus its efforts on expanding distribution and building awareness of bluestem<sup>™</sup> to accelerate sales.

In addition to leveraging its established products and sales strategies, STEM Animal Health will continue to actively explore growth opportunities through new applications for its intellectual property in other key growth areas within the Animal Health category.

In the Wound Care & Surgical division, Kane Biotech is focused on the continued product development of DispersinB® for Hydrogel applications in chronic wound care. The Company believes that its DispersinB® Hydrogel applications will enhance current wound care treatments by improving the efficacy of antimicrobial and antibiotic wound treatments.

On June 18, 2020, Kane Biotech's proposal entitled "DispersinB® the missing link in wound care — Clinical evaluation of DispersinB® to treat biofilm mediated antimicrobial resistance in non-healing chronic wound infections," received the U.S. Department of Defense's ("DoD") Medical Technology Enterprise Consortium Research Project Award ("MTEC Award"). The MTEC Award provides approximately \$2.7 million USD in non-dilutive funding for the continued clinical development of the Company's DispersinB® Hydrogel to treat biofilm-mediated antimicrobial resistance in non-healing chronic wounds. This is a significant award for Kane Biotech, because of both its value and validation of the Company's wound care technology. Kane Biotech believes this award underscores the importance of eliminating biofilms to address non-healing, chronic wounds.

The Company is collaborating with external consultants to pursue the optimal regulatory path for this technology that will mitigate the risk for future partners and increase the value of a licensing agreement. Although the Company had previously planned to seek regulatory approval for its DispersinB® Hydrogel as a medical device under the 510(k) pathway, the Company is currently reviewing other strategies including a PMA approach based on market analysis provided by its consultants as well as preliminary feedback received from the FDA. The Company is now evaluating a number of pathways in order to determine an appropriate regulatory route that will ultimately be more beneficial by allowing for expanded claims and indications and a more appropriate price point. Kane is also conducting this review to better leverage the remaining DoD non-dilutive funding that is available for this program.



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On May 16, 2022, the Company was awarded ISO 13485:2016 certification for its quality management system specific to its ongoing efforts to design and develop novel medical devices for the wound care market. ISO certification demonstrates Kane's compliance, and customers can be assured that the medical devices it is designing and developing are fit for their intended purpose. The process of achieving ISO certification included establishing a quality management system and independent audit to verify conformance through review of the records to the standards. It represents another big step for Kane on the path towards commercialization of its wound care portfolio.

Other products in investigational or development stages include the following:

- coactiv+TM Antimicrobial Hydrogel for use in chronic wounds
- coactiv+TM Antimicrobial Surgical Hydrogel for use in surgical and acute wounds
- DispersinB® Hydrogel for Prosthetic Joint Infection

Within the Human Health Dermatology Division, Kane's DermaKB™ brand of scalp care products continue to maintain strong sales in Q2 2022. The Company will continue to focus on expanding online retail locations, opening new channels of distribution, and solicitating licensing opportunities throughout the remainder of 2022.

In addition to the DermaKB™ line of products, other products in the pipeline include a hair conditioner to work in conjunction with the DermaKB™ products and a wound gel for minor cuts, scrapes and burns.

Building upon Kane Biotech's success in Animal and Human Health sectors, management will focus some resources towards developing solutions for the Industrial and Agricultural sectors. The Company believes that its patented technologies can be applied with minimal outlay to provide several solutions in these new markets. These new markets will allow Kane Biotech to reach new customers and address multiple unmet needs.

Targeted Kane Biotech milestones and objectives for the remainder of 2022 include the following:

- Continue to expand distribution of bluestem<sup>TM</sup>
- Support Dechra and Animalcare to increase royalty revenues
- Identify a commercialization partner for the Wound Care & Surgical division
- Initiate a pre-clinical study to support a 510(k) submission investigating the effectiveness of coactiv+™ Antimicrobial Hydrogel on full thickness wound healing
- Submit a 510(k) application to the FDA for coactiv+™ Antimicrobial Hydrogel to demonstrate the product is safe and effective and substantially equivalent to other products in the market
- Initiate a Phase 1 Clinical Trial for DispersinB® Hydrogel designed to evaluate safety
- Identify a commercialization partner for the DermaKB™ brand under the Kane Dermatology division
- Continue to grow online sales of DermaKB™ products through additional online retail locations and new sales channels by securing a distribution partner in the salon industry
- Identify commercialization/licensing partner(s) for products under development in the Kane Dermatology pipeline, which
  include a wound gel for minor cuts, scrapes and burns, and a hair conditioner to be used in conjunction with the
  DermaKB™ line of products
- Grow the Kane Biotech team with talented people in Human Health, Animal Health and R&D
- Continue to protect Kane Biotech's intellectual property and expand patent coverage
- Execute with cost-control and continue to optimize operating expenses

The Kane Biotech team is looking forward to fully executing the many exciting initiatives that are underway. The Company will continue to focus on product development, international market expansion and cost-effective execution. The entire team is dedicated to achieving the above-mentioned milestones and to building a foundation for long-term, sustainable growth.

### KANE BIOTECH TECHNOLOGIES

### coactiv+TM

coactiv+™ is a patented biofilm destabilizing formula with continuous activity.



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The global companion pet oral care market was estimated to be \$2.2 billion USD by 2022 with a 10% CAGR to 2027. This growth is largely driven by increasing pet ownership and premiumization as pet owners continue to be more aware of and willing to spend more on their pets' health. Rising disposable income and westernization in developing nations is further driving the global pet oral care market. According to the American Veterinary Medical Association (AVMA), oral health is one of the top three concerns for companion animal owners. Bacteria in the mouth cavity form plaque and, as the plaque grows, this causes tartar build-up, gum infection (gingivitis) and periodontitis. By the time they are three years old, it is estimated that approximately 80% of dogs and 70% of cats develop some sort of periodontal disease.

In 2015, following Health Canada approval, Kane Biotech introduced companion pet oral care products containing its coactiv+™ technology in Canada under the StrixNB™ and bluestem™ brands. The Company then pursued a strategy to license out its intellectual property on a broader scale which led to the Company's StrixNB™ technology and trademarks being part of the Dechra Agreement. Dechra introduced its Vetradent™ oral care brand into the U.S. and Canadian veterinary channel in 2017. Water additive powder and dental wipe products were added to the Vetradent™ product family in 2018. A dental rawhide chew was introduced in 2019 as well as an expansion of the Vetradent™ toothpaste line throughout the U.S. market. Also in 2019, the Dechra Agreement was extended to South America and sales of Vetradent™ products in South America commenced in Q1 2022. In Q2 2022, Animalcare introduced its Plaqtiv+® oral care brand or products incorporating the Company's coactiv+™ technology, into the European veterinary channel. Additional formulations are in development to expand the complete pet oral health products for veterinary clinics and for dog and cat parents.

In the Specialty Pet Trade, Kane's technology is now being commercialized by STEM as the bluestem™ brand and products transferred from Kane to STEM. The bluestem™ products are sold in approximately 2,000 pet specialty retail stores in the US and Canada as well as on Amazon.com (U.S.), Chewy.com and Amazon.ca (Canada). In addition, STEM will evaluate opportunities for global expansion and continue to focus on accelerating growth of the bluestem™ oral care portfolio according to its market and channel priorities.

In the Wound Care & Surgical division, Kane is in the developmental stage for a product with two applications:

- coactiv+™ Antimicrobial Hydrogel: A non-sterile product for chronic wounds that will be designed to maximize reimbursement and be competitive in physician office, hospital, PBD (outpatient hospital) and home care settings. The product can be applied by the patient or caregiver and sourced through a medical product supplier.
- coactiv+™ Antimicrobial Surgical Hydrogel: A sterile product for surgical and acute wounds and provided in a single use container for application in the hospital setting. The product can be applied to all types of surgical wounds and can be used prophylactically on post-surgical incisions as well. Although the initial target for this application are hospitals, physician offices and PBD settings are also potential markets.

The key ingredients of coactiv+™ Antimicrobial Hydrogel are Generally Recognized As Safe (GRAS) by the FDA and have been purposefully selected to provide support throughout the entire wound healing cascade.

The major advantages of these coactiv+™ Antimicrobial Hydrogel products are as follows:

- · Continuous bactericidal, biofilm destabilizing, and inhibition activity
- Buffering agent to lower and maintain favorable pH conducive for wound healing
- Helps reduce metalloprotease and elastase activity in chronic wounds
- Biocompatible and non-toxic
- · Prophylactic treatment for acute wounds at risk for infection, such as surgical incisions, pin sites and burns
- Patent protected

In the Human Health Dermatology Division, Kane continues to see significant growth in online sales of its DermaKB™ line of scalp care products. We continue to receive extremely compelling customer reviews and we have launched a blog series to leverage the impact of these statements on sales. Kane will continue to focus on growing sales throughout 2022 as it seeks commercialization/licensing opportunities for the product line. After a recent successful showing in Las Vegas at Cosmoprof North America, the leading business-to-business beauty exhibition in the Americas, Kane is actively following up on meetings held at the show for the purpose of securing a distribution partner in the salon industry. Kane will also look to extend the DermaKB™ lineup with a hair conditioner to be used in conjunction with the existing products.

With a growing interest from potential licensing partners, Kane Dermatology is looking to expand its development of coactiv+™ technology-based products in 2022 and is close to reaching that inflection point.





### DispersinB®

Kane Biotech's trademark for the wound care market is DispersinB<sup>®</sup> for both animal and human wound care applications. The Company has started to pursue its strategy to license out its wound care intellectual property on a broader scale.

For animal health applications, the development of products using DispersinB® technology is planned for use in canine otic (ear) infections. Additional DispersinB® products are in planning and development.

With respect to human applications, in 2019, the Company renewed its exclusive worldwide license agreement with the University of Medicine and Dentistry of New Jersey, now part of Rutgers University, for all human, animal, and industrial applications of the DispersinB® enzyme. In 2022, efforts will continue to be focused on the development of a human wound care hydrogel containing DispersinB® and on securing a commercialization partner and pursuing the optimal regulatory/reimbursement path that will ultimately lead to the commercialization of this technology.

Kane is currently investigating the opportunity of using DispersinB<sup>®</sup> Hydrogel for Prosthetic Joint Infection (PJI). PJI's have been identified as one of the most serious complications of joint replacement surgery with bacterial biofilm on the prostheses being identified as one of the key problems in treatment.

PJI's are one of the most serious complications of joint replacement surgery. Conservative estimates are that approximately 1–2% of all hip and knee prostheses will become infected over the life of the implant. It is predicted that there will be approximately 4 million cases per year just in the US. The financial burden of treating these infections is staggering. It was estimated that PJIs cost the US healthcare system \$1.62 billion in 2020. In addition, patients have significant morbidity and mortality as a direct result of our current medical and surgical management to treat these infections.

PJIs are hard to treat because of bacterial biofilms on the prostheses. Unfortunately, conventional antibiotics have limited ability to resolve biofilm infections. This is in part due to the almost dormant metabolic activity of bacteria in biofilms and the architecture of biofilms. The concentrations of conventional antibiotics needed to have activity to bacteria in biofilms can be up to 1000 times higher than the same bacteria in a planktonic state. Therefore, new antimicrobial therapies are needed to treat PJI's that focus on disrupting biofilms.

### **INTELLECTUAL PROPERTY**

The Company's current intellectual property is summarized below:

Patent #	Title	Jurisdiction
7,144,992	Synergistic Antimicrobial Compositions and Methods for Reducing Biofilm Formation	United States
CA2511103	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	Canada
7,294,497	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	United States
8,580,551	Dispersin B Polypeptides and uses thereof	United States
7,989,604	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	United States
540731	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	New Zealand
555378	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	New Zealand
2,003,284,385	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	Australia
7,833,523	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	United States
5,073,169	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms	Japan
8,821,862	Soluble β-N-Acetylgucosaminidase Based Antibiofilm Compositions and Uses Thereof	United States
8,617,542	Dispersin B, 5-Fluorouracil, Deoxyribonuclease I and ProteinaseK-Based Antibiofilm	
	Compositions and uses thereof	United States
2,720,301	Dispersin B, 5-Fluorouracil, Deoxyribonuclease I and ProteinaseK-Based Antibiofilm	
	Compositions and uses thereof	Canada
EP2283130	Dispersin B, 5-Fluorouracil, Deoxyribonuclease I and ProteinaseK-Based Antibiofilm	
	Compositions and uses thereof	Europe
EP2283130	Dispersin B, 5-Fluorouracil, Deoxyribonuclease I and ProteinaseK-Based Antibiofilm	
	Compositions and uses thereof	United Kingdom
EP2283130	Dispersin B, 5-Fluorouracil, Deoxyribonuclease I and ProteinaseK-Based Antibiofilm	
	Compositions and uses thereof	Germany



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EP2283130	Dispersin B, 5-Fluorouracil, Deoxyribonuclease I and ProteinaseK-Based Antibiofilm	
21 2200100	Compositions and uses thereof	France
9,622,481	Biofilm-Removing Antimicrobial Compositions and uses thereof	United States
2012332014	Compositions and Methods for Treatment and Prevention of Oral Diseases	Australia
CN104010653	Compositions and Methods for Treatment and Prevention of Oral Diseases	China
2,773,369	Compositions and Methods for Treatment and Prevention of Oral Diseases	Europe
2,773,369	Compositions and Methods for Treatment and Prevention of Oral Diseases	Ireland
2,773,369	Compositions and Methods for Treatment and Prevention of Oral Diseases	United Kingdom
2,773,369	Compositions and Methods for Treatment and Prevention of Oral Diseases	Germany
2,773,369	Compositions and Methods for Treatment and Prevention of Oral Diseases	France
6,038,167	Compositions and Methods for Treatment and Prevention of Oral Diseases	Japan
624,850	Compositions and Methods for Treatment and Prevention of Oral Diseases	New Zealand
14/355,308	Compositions and Methods for Treatment and Prevention of Oral Diseases	United States
HK120416	Compositions and Methods for Treatment and Prevention of Oral Diseases	Hong Kong
2903266	Compositions and Methods for Treatment and Prevention of Wound Infections	Canada
9,980,497	Compositions and Methods for Treatment and Prevention of Wound Infections	United States
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Europe
2964235	·	Austria
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Belgium
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Denmark
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Finland
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	France
	Compositions and Methods for Treatment and Prevention of Wound Infections	
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Germany
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Italy Notherlands
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Netherlands
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Norway
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Poland
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Romania
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Spain
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Sweden
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	Switzerland
2964235	Compositions and Methods for Treatment and Prevention of Wound Infections	United Kingdom
6,401,720	Compositions and Methods for Treatment and Prevention of Wound Infections	Japan
10,357,470	Compositions and Methods for Treatment and Prevention of Wound Infections	United States
11,103,433	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	United States
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Europe
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Austria
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Belgium
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Denmark
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Finland
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	France
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Germany
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Italy
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Netherlands
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Norway
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Poland
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Romania
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Spain
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Sweden
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	Switzerland
3160234	Antimicrobial Compositions and Methods of Use There of for Personal Care Products	United Kingdom

The Company has 67 issued patents and 7 pending patents. Successful development of products to prevent and remove microbial biofilms may be dependent upon the ability to obtain approval for patents that are currently in pending status as well as successfully file new patents; however, there is no guarantee that new patents will be obtained, and, if obtained, it may not be possible to successfully defend against any subsequent infringements to these patents. Currently, the Company is unaware that it has infringed upon any existing patents issued to third parties. The Company's success may, in part, depend on operating without such infringement.



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<u>Trademarks</u>	<u>Jurisdiction</u>
DispersinB <sup>®</sup>	Canada United States
	Europe
TM.	United Kingdom
bluestem™	United States
bluestem®	Europe
and the last of th	Canada
coactiv+® coactiv+™	Canada United States
coactiv+®	Europe
goldstem™	Canada
goldstein	United States
silkstem™	Canada
	United States
DermaKB™	Canada
	United States
DermaKB Biofilm <sup>™</sup>	Canada
	United States
Aledex™	United States
StrixNB <sup>™</sup>	United States

### SUMMARY OF KANE BIOTECH PRESS RELEASES SINCE JANUARY 1, 2022

On June 30, 2022, Kane Biotech announced that, following the approval of the shareholders of the Company (the "Shareholders") at the annual general and special meeting of Shareholders held on May 26, 2022, the Company adopted the second amended and restated stock option plan of the Company and the amended and restated performance and restricted share unit plan of the Company.

On June 15, 2022, the Company announced that it has further amended its credit agreement with Pivot extending the maturity to January 31, 2023 and increasing the credit facility to \$4 million with approximately \$1.8 million of new capital having been provided.

On May 18, 2022, Kane Biotech announced that it has obtained the ISO 13485:2016 certificate for its quality management system specific to its ongoing efforts to design and develop novel medical devices for the wound care market.

On May 16, 2022, Kane Biotech announced that it has closed its non-brokered private placement offering announced previously on March 15, 2022, and has issued 10,000,000 common shares of the Company at a price of \$0.10 per Common Share to raise gross proceeds of \$1,000,000.

On May 6, 2022, the Company announced that its private placement of up to 10,000,000 common shares at a price of \$0.10 per Share for aggregate gross proceeds of up to \$1,000,000, as previously announced on March 15, 2022, has been fully subscribed and is anticipated to close on May 16, 2022.

On April 29, 2022, Kane Biotech announced that it has extended the completion of its previously announced non-brokered private placement offering by 30 days until May 29, 2022. The terms of the Offering remain unchanged from those described in the press release dated March 15, 2022 and the Offering remains subject to receipt of all necessary approvals, including the approval of the TSX Venture Exchange.

On April 7, 2022, the Company announced today that STEM has been awarded the prestigious Veterinary Oral Health Council (VOHC) Seal of Acceptance in the Helps Control Tartar category for its pet oral care water additive. VOHC acceptance triggers approximately \$1.3 million in milestone payments from STEM's licensing partners. This certification is also expected to significantly increase royalty revenues from both licensing agreements as it triggers minimum royalty payments.



### **Management Discussion and Analysis**

On April 5, 2022, the Company announced the appointment of Gregory Schultz, PhD, a world-renowned expert on biofilms, as Chief Scientific Officer (CSO). Dr. Schultz is a Professor Emeritus of Obstetrics and Gynecology in the College of Medicine at the University of Florida where he established the interdisciplinary Institute for Wound Research (IWR), serving as Director for IWR for 32 years. Dr. Schultz is Past President of the Wound Healing Society, and past member of the National Pressure Injury Advisory Panel. He holds 36 patents and is the co-founder of two successful biotechnology companies.

On March 15, 2022, Kane Biotech announced its intention to undertake a non-brokered private placement offering (the "Offering") of up to 10,000,000 common shares ("Shares") at a price of \$0.10 per Share for gross proceeds of up to \$1,000,000. The net proceeds of the Offering will be used for general working capital.

On February 2, 2022, Kane Biotech announced that it had signed collaboration agreements with Dr. James Doub, MD, Assistant Professor of Medicine, University of Maryland School of Medicine's Institute of Human Virology, and the University of Texas Medical Branch (UTMB) to study the use of DispersinB® Hydrogel with Prosthetic Joint Infection (PJI) patients. The group is securing funding from the National Institutes of Health (NIH) for pre-clinical work to be done by Josh Wenke, a Professor in the Department of Orthopedic Surgery and Rehabilitation at UTMB.

On January 20, 2022, the Company announced that it was issuing a new video blog series for 2022 as part of its commitment to increase and broaden communication to investors and that it had released its first video of this series providing an update on progress made in its Wound Care business unit.

### **OUTLOOK**

The strategic direction of the Company remains centered on developing and commercializing solutions to biofilm-related problems in the Animal and Human Health markets. To advance these programs and fulfill its strategic objectives, management expects the Company to continue incurring operating losses for the foreseeable future. Given the nature of its business and the developmental phase that Kane Biotech is currently in, research expenditures are expected to be higher in 2022 than in 2021. Overall, general and administrative expenses in 2022 should be similar to what was incurred in 2021 in support of the Company's ongoing product development and commercialization strategy. Revenues are expected to continue to increase in 2022 as the company pursues revenue growth opportunities in both animal and human health. The Company is committed to increased commercialization and revenue growth in all three of its divisions and operating within strict cost controls while continuing to develop its new technologies and products.

The Company's funding of future operations is primarily dependent upon its ability to: a) negotiate collaboration or licence royalty agreements with upfront and subsequent milestone and/or equity payments, b) generate product, services and royalty revenue, and c) obtain research and development funding. While the Company is striving to achieve funding through all three of these alternatives, there is no assurance that such sources will be available or obtained on favourable terms. If that is the case, the Company will consider financing alternatives, including those used in the past such as private placements and debt financing, to raise the necessary capital it requires to fund ongoing operations.

The ability of the Company to continue as a going concern and to realize the carrying value of its assets and discharge its liabilities and commitments when due is dependent on the successful completion of the actions taken or planned, some of which are described above, which management believes will mitigate the adverse conditions and events which raise doubt about the validity of the going concern assumption used in preparing its financial statements. There is no certainty that these and other strategies will be sufficient to permit the Company to continue as a going concern.

The Company may decide to accelerate, terminate, or reduce its focus in certain research areas, or commence research in new areas as a result of the Company's research progress and the availability of financial resources. These decisions are made with the goals of tightly managing the Company's cash resources and optimizing the Company's opportunities. Management is not presently aware of any factors that would change its strategy over the next year. See also "Note 2(c) Going concern" to the accompanying financial statements.

### SELECTED QUARTERLY FINANCIAL INFORMATION

The selected financial information provided below is derived from Kane Biotech's unaudited quarterly financial statements for each of the last eight quarters:



#### **Management Discussion and Analysis**

	Q2-2022	Q1-2022	Q4-2021	Q3-2021	Q2-2021	Q1-2021	Q4-2020	Q3-2020
	\$	\$	\$	\$	\$	\$	\$	\$
License	500,225	35,872	35,872	35,872	35,872	29,268	29,268	16,768
Royalty	51,770	47,477	44,279	35,146	29,258	37,495	31,829	34,062
Sales of goods and services	287,584	482,084	331,542	470,284	213,611	309,276	196,241	309,773
Total Revenue	839,579	565,433	411,693	541,302	278,741	376,039	257,339	360,603
Cost of Sales	200,364	381,812	224,377	409,637	195,157	210,163	154,622	231,447
Gross Profit	639,215	183,621	187,315	131,665	83,584	165,876	102,717	129,156
Operating Expenses	1,361,306	1,420,097	1,490,686	1,721,305	1,090,396	1,149,611	1,168,493	1,247,140
Net loss	(794,595)	(1,152,164)	(1,257,172)	(1,582,959)	(998,889)	(1,010,892)	(945,795)	(1,030,948)
Net loss attributable to shareholders	(899,991)	(1,108,591)	(1,268,817)	(1,522,796)	(904,487)	(908,467)	(816,505)	(1,030,948)
Loss per share	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Loss per share attributable to shareholders	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

It is important to note that historical patterns of expenditures cannot be taken as an indication of future expenditures. The amount and timing of expenditures, and therefore liquidity and capital resources, may vary substantially from period to period depending on the business and research activities being undertaken at any one time and the availability of funding from investors and prospective commercial partners.

The Company's ongoing operating expenses relate primarily to the execution of research programs, the commercialization of its intellectual property and general and administrative expenses. The operations of the Company are not subject to any material seasonality or cyclical factors.

License revenue relates to the recognition of revenue associated with the initial payment of \$500,000 USD the Company received upon signing its exclusive license and distribution agreement with Dechra in March 2017 and starting in Q4 2020, the recognition of revenue associated with the initial payment of \$500,000 CAD which was due to STEM one year after the signing of STEM's exclusive license and distribution agreement with Animalcare in September 2020. The initial license payment from Dechra has been recorded in the financial statements as deferred license revenue and is being recognized as license revenue on a straight-line basis over the 10-year life of the Dechra agreement. The initial license payment from Animalcare is being recognized as license revenue over the 10-year life of the Animalcare agreement. In addition, in April 2021, the Company received a \$125,000 USD milestone payment from Dechra related to the successful production of a pilot batch of product manufactured in South America. This milestone payment has been recorded in the financial statements as deferred license revenue and is being recognized as license revenue on a straight-line basis over the duration of the license agreement. In April 2022, STEM achieved the key milestone of obtaining the VOHC efficacy certification which triggered approximately \$1.3 million in milestone payments from its licensing partners pursuant to its license and distribution agreements. Revenue associated with the milestone payments is being recognized in the same manner as the initial license payments which includes revenue recognition in Q2 2022 that is based on how long the license and distribution agreements have been in effect compared to the entire term of those agreements.

Quarterly royalty revenues were impacted earlier in the pandemic by lower product demand in the veterinary channel but have since recovered to pre-pandemic levels and have increased in each of the four most recent quarters. Sales of Dechra's existing product line launched in South America earlier in 2022. Animalcare launched their own product line in Q2 2022 immediately upon STEM achieving the VOHC certification This certification triggers minimum royalties from both the Dechra and Animalcare license agreements which will contribute to lower fluctuations in recorded royalties in future quarters.

Sales of goods and services were impacted in 2020, 2021 and 2022 by a number of COVID-19 related factors including limited consumer access to pet retail and veterinary facilities, the permanent store closures of one of the Company's major US pet retail customers and raw material and packaging supply chain irregularities which resulted in finished good product shortages.

The overarching strategy within STEM is to grow revenues by expanding distribution of bluestem products within the pet specialty trade and by supporting Dechra's and Animalcare's premium veterinary oral care product range. In human health, the 2020 launch of the Company's first line of hair care products within its Dermatology Division will also contribute to increasing product sales in future quarters.

Overall, aside from provisions recorded for inventory obsolescence, gross profit as a percentage of revenues has increased in recent quarters primarily due to increased license and royalty income. The Company continues to actively pursue cost reduction opportunities throughout its supply chain while at the same time coping with the effect of inflationary cost increases.



### **Management Discussion and Analysis**

Operating expenses can vary significantly from quarter to quarter primarily due to fluctuations in research expenditures related to the Company's work on its DispersinB® Hydrogel project, sales and marketing spending incurred within its STEM and Dermatology Divisions and legal expenses associated with private placements and commercialization activities. Q3 2021 includes significant non-cash expenditures related to the Company's new Restricted Share Unit ("RSU") long-term compensation plan which was implemented in the quarter.

#### **RESULTS OF OPERATIONS**

#### Revenue

Revenue consists of License and Royalty revenue from its licensing agreements with Dechra and Animalcare, product sales from the Company's bluestem<sup>TM</sup> and DermaKB<sup>TM</sup> brands and contract manufacturing and quality control services revenue related to the Company's relationship with Dechra.

The Company's revenue by category for the three months ended June 30, 2022 and 2021 is summarized in the table below:

Three Months ended June 30,	2022	2021	Change	% Change
License	\$ 500,225 \$	35,872 \$	464,353	1294.5%
Royalty	51,770	29,258	22,512	76.9%
Products	254,941	197,257	57,684	29.2%
Services	32,643	16,354	16,289	99.6%
Total Revenue	\$ 839,579 \$	278,741 \$	560,838	201.2%

License revenue consists of: (1) the recognition over 10 years of the upfront payment of \$500,000 USD received from Dechra upon signing the License Agreement in March 2017, (2) the recognition over 10 years of the \$500,000 CND initial payment due in received on November 5, 2021 related to the Licence Agreement with Animalcare, (3) the recognition over the remaining Dechra licensing agreement term of the \$125,000 USD milestone payment received from Dechra in April 2021 related to the successful production of a pilot batch of a product by a manufacturer in South America and (4) the recognition over 10 years of approximately \$1.3 million in milestone payments from STEM's licensing partners related to VOHC certification achieved in April, 2022.

In the three months ended June 30, 2022, license revenue recognized from these sources increased by 1,295% to \$500,225 compared to \$35,872 in the three months ended June 30, 2021 due to revenue recognition in the current quarter associated with the VOHC milestone payments that is based on how long the license and distribution agreements have been in effect compared to the entire term of those agreements.

Royalty revenue consists of royalties received from Dechra on their sales of Vetradent<sup>TM</sup> products in the North American veterinary market and from Animalcare on their sales of Plactiv+® products in the European veterinary market. In the three months ended June 30, 2022, royalty revenue increased by 77% to \$51,770 compared to \$29,258 in the three months ended June 30, 2021. Obtaining VOHC certification in the current period immediately triggered minimum royalties as per the Dechra and Animalcare license agreements. In addition, the underlying product sales by Dechra in the veterinary channel were less impacted by the COVID-19 pandemic in the current period than the comparative period.

Product sales in the three months ended June 30, 2022 were \$254,941, an increase of 29% compared to \$197,257 in the three months ended June 30, 2021. The increase is due mainly to the reclassification of certain sales discounts to cost of sales and sales expenses and higher DermaKB<sup>TM</sup> sales in the current period partially offset by lower STEM pet retail sales in the current period.

Services revenue consists of contract manufacturing and quality control services related to the Company's relationship with Dechra. In the three months ended June 30, 2022, services revenue was \$32,643, an increase of 100% compared to \$16,354 for the three months ended June 30, 2021. This increase is due mainly to higher demand from Dechra for contract manufacturing services during the current period.

The Company's revenue by category for the six months ended June 30, 2022 and 2021 is summarized in the table below:



**Management Discussion and Analysis** 

Six months ended June 30,	2022	2021	Change	% Change
License	\$ 536,097 \$	65,140 \$	470,957	723.0%
Royalty	99,248	66,753	32,495	48.7%
Products	686,616	451,705	234,911	52.0%
Services	83,052	71,182	11,870	16.7%
Total Revenue	\$ 1,405,013 \$	654,780 \$	750,233	114.6%

License revenue consists of: (1) the recognition over 10 years of the upfront payment of \$500,000 USD received from Dechra upon signing the License Agreement in March 2017, (2) the recognition over 10 years of the \$500,000 CND initial payment due in received on November 5, 2021 related to the Licence Agreement with Animalcare, (3) the recognition over the remaining Dechra licensing agreement term of the \$125,000 USD milestone payment received from Dechra in April 2021 related to the successful production of a pilot batch of a product by a manufacturer in South America and (4) the recognition over 10 years of approximately \$1.3 million in milestone payments from STEM's licensing partners related to VOHC certification achieved in April, 2022.

In the six months ended June 30, 2022, license revenue recognized from these sources increased by 723% to \$536,097 compared to \$65,140 in the six months ended June 30, 2021 due to revenue recognition in the current quarter associated with the VOHC milestone payments that is based on how long the license and distribution agreements have been in effect compared to the entire term of those agreements.

Royalty revenue consists of royalties received from Dechra on their sales of Vetradent<sup>TM</sup> products in the North American veterinary market and from Animalcare on their sales of Plactiv+® products in the European veterinary market. In the six months ended June 30, 2022, royalty revenue increased by 49% to \$99,248 compared to \$66,753 in the six months ended June 30, 2021. Obtaining VOHC certification in the current period immediately triggered minimum royalties as per the Dechra and Animalcare license agreements. In addition, the underlying product sales by Dechra in the veterinary channel were less impacted by the COVID-19 pandemic in the current period than the comparative period.

Revenue from product sales in the six months ended June 30, 2022 was \$686,616, an increase of 52% compared to \$451,705 in the six months ended June 30, 2021. The increase is due mainly to the reclassification of certain sales discounts to cost of sales and sales expenses and higher STEM pet retail and DermaKB<sup>TM</sup> sales in the current period.

Services revenue consists of contract manufacturing and quality control services related to the Company's relationship with Dechra. In the six months ended June 30, 2022, services revenue was \$83,052, an increase of 17% compared to \$71,182 for the six months ended June 30, 2021. The increase is due to higher demand for Dechra-related contract manufacturing and contract testing services during the current period.

#### **General and Administration Expenses**

General and administration expenses include those costs not directly related to research and development. These include expenses associated with management and administrative staff compensation, commercialization activities and professional fees such as consulting, legal, audit, and investor relations.

The changes in general and administration expenditures by category for the three months ended June 30, 2022 and 2021 are reflected in the following table:

Three Months ended June 30,	2022	2021	Change	% Change
Compensation related costs and consulting fees	\$ 693,888	\$ 642,708 \$	51,180	8.0%
Business development costs	151,951	112,002	39,949	35.7%
Legal costs	27,660	17,721	9,939	56.1%
Other administration costs	78,378	127,341	(48,963)	-38.5%
Government assistance	-	(10,680)	10,680	-100.0%
General and adminstration expenses	\$ 951,877	\$ 889,092 \$	62,785	7.1%



### **Management Discussion and Analysis**

Higher compensation related costs and consulting fees in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are primarily due to higher salaries and long-term incentive expense in the current period and financial assistance for salary costs received in the prior period from the Canadian government's COVID-19 CEWS program partially offset by lower short-term incentive expense and consulting fees in the current period.

Higher business development costs in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are primarily due primarily to a reclassification in the current period of sales commissions to general and administration expenses.

Higher legal costs in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are primarily due to legal costs associated with the Company's private placement and amended credit agreement in the current period.

Lower other administration costs in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are due primarily to lower recorded audit fees and a larger proportion of facility costs recorded as research expenses in the current period.

Government assistance recorded in the comparative period is due to funding received from NRC IRAP related to certain supply chain, quality control and quality assurance expenditures.

The changes in general and administration expenditures by category for the six months ended June 30, 2022 and 2021 are reflected in the following table:

Six months ended June 30,	2022	2021	Change	% Change
Compensation related costs and consulting fees	\$ 1,454,127	\$ 1,328,388	\$ 125,739	9.5%
Business development costs	344,016	273,791	70,225	25.6%
Legal costs	41,708	25,708	16,000	62.2%
Other administration costs	180,274	186,799	(6,525)	-3.5%
Government assistance	-	(96,328)	96,328	-100.0%
General and adminstration expenses	\$ 2,020,125	\$ 1,718,358	\$ 301,767	17.6%

Higher compensation related costs and consulting fees in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due primarily to higher salaries and long-term incentive expense in the current period and financial assistance for salary costs received in the prior period from the Canadian government's COVID-19 CEWS program partially offset by lower short-term incentive expense and consulting fees in the current period.

Higher business development costs in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due primarily to a reclassification in the current period of sales commissions to general and administration expenses.

Higher legal costs in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are primarily due to legal costs associated with the Company's private placement and amended credit agreement in the current period.

Lower other administration costs in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due primarily to a larger proportion of facility costs recorded as research expenses in the current period partially offset by higher audit fees recorded in the current period.

Government assistance recorded in the comparative period is due to funding received from NRC IRAP related to certain supply chain, quality control and quality assurance expenditures.

### **Research and Development Expenses**

Research and development expenses are associated with the Company's research and development programs. The Company is in the development and commercialization stage and devotes a significant portion of its financial resources to research and market-ready product development activities.

The changes in research and development expenses by category for the three months ended June 30, 2022 and 2021 are reflected in the following table:



**Management Discussion and Analysis** 

Three Months ended June 30,	2022	2021	Change	% Change
Compensation related costs and consulting fees	\$ 211,819 \$	203,254 \$	8,565	4.2%
Contract research and scientific consulting	165,237	136,710	28,527	20.9%
Patent related costs and other intangibles expensed	39,814	26,389	13,425	50.9%
Other research costs	69,348	42,228	27,120	64.2%
Government assistance	(76,789)	(207,277)	130,488	-63.0%
Research expenses	\$ 409,429 \$	201,304 \$	208,125	103.4%

Higher compensation related costs in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are due primarily to financial assistance for salary costs received in the prior period from the Canadian government's COVID-19 CEWS program partially offset by lower short term and long-term compensation expense recorded in the current period.

Higher contract research and scientific consulting costs in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are due primarily to higher research expenditures related to the Company's coactiv+™ Antimicrobial Hydrogel program in the current period.

Higher patent related costs and other intangibles expensed in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 is due mainly to higher patent amortization expense in the current period.

Higher other research costs in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 are due primarily to a larger proportion of facility costs recorded as research expenses in the current period partially offset by higher science consumable costs in the comparative period.

Lower government assistance in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 is primarily due to lower government assistance related to the DoD MTEC Award recorded in the current period.

The changes in research and development expenses by category for the six months ended June 30, 2021 and 2020 are reflected in the following table:

Six months ended June 30,	2022	2021	Change	% Change
Compensation related costs and consulting fees	\$ 413,443 \$	401,559 \$	11,884	3.0%
Contract research and scientific consulting	484,601	338,343	146,258	43.2%
Patent related costs and other intangibles expensed	76,242	61,307	14,935	24.4%
Other research costs	153,181	119,504	33,677	28.2%
Government assistance	(366,189)	(399,064)	32,875	8.2%
Research expenses	\$ 761,278 \$	521,649 \$	239,629	45.9%

Higher compensation related costs in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due primarily to financial assistance for salary costs received in the prior period from the Canadian government's COVID-19 CEWS program partially offset by lower long term compensation expense recorded in the current period.

Higher contract research and scientific consulting costs in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due primarily to higher research expenditures related to the Company's DispersinB<sup>®</sup> Hydrogel and coactiv+™ Antimicrobial Hydrogel programs in the current period.

Higher patent related costs and other intangibles expensed in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due mainly to higher patent maintenance expenditures in the current period.

Higher other research costs in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 are due primarily to a larger proportion of facility costs recorded as research expenses in the current period partially offset by higher science consumable costs in the comparative period.



### **Management Discussion and Analysis**

Lower government assistance in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 is due to lower government assistance recorded for the DoD MTEC Award in the current period.

### Other expenses (income)

The change in other expenses (income) for the three months ended June 30, 2022 and 2021 are reflected in the following table:

Three Months ended June 30,	2022	2021	Change
Finance income	\$ (25,858) \$	(32,148) \$	6,290
Finance expense	155,946	73,744	82,202
Fair value adjustment - government loans	(60,502)	(54,876)	(5,626)
Foreign exchange gain, net	2,918	5,357	(2,439)
Net other expenses (income)	\$ 72,504 \$	(7,923) \$	80,427

Lower finance income in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 is due primarily to lower accretion income recorded in the current period on the capital contributions receivable from Animalcare.

Higher finance expense in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 is due primarily to higher interest expense recorded on the Pivot loan and higher accretion expense recognized on the PrairiesCan loan in the current period.

Higher fair value adjustment – government loan income in the three months ended June 30, 2022 compared to the three months ended June 30, 2021 is due mainly to a higher amount of new PrairiesCan funding received in the current period than in the comparative period.

The change in other expenses (income) for the six months ended June 30, 2022 and 2021 are reflected in the following table:

Six months ended June 30,	2022	2021	Change
Finance income	\$ (51,375) \$	(63,677) \$	12,302
Finance expense	296,924	156,593	140,331
Fair value adjustment - government loans	(262,577)	(80,375)	(182,202)
Foreign exchange gain, net	5,221	6,693	(1,472)
Net other income	\$ (11,807) \$	19,234 \$	(31,041)

Lower finance income in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 is due primarily to lower accretion income recorded in the current period on the capital contributions receivable from Animalcare.

Higher finance expense in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 is due primarily to higher interest expense recorded on the Pivot loan and higher accretion expense recognized on the PrairiesCan loan in the current period.

Higher fair value adjustment – government loan income in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 is due mainly to a higher amount of new PrairiesCan funding received in the current period than in the comparative period.

### Loss and Comprehensive Loss

The loss and comprehensive loss for the three and six months ended June 30, 2022 and 2021 are reflected in the following tables:



### **Management Discussion and Analysis**

Three Months ended June 30,	2022	2021	Change
Loss and comprehensive loss	\$ (794,595)	\$ (998,889)	\$ 204,294
Loss and comprehensive loss attributable to shareholders	\$ (899,991)	\$ (904,487)	\$ 4,496
Basic and diluted loss per share	\$ (0.01)	\$ (0.01)	\$ (0.00)

Six months ended June 30,	2022	2021	Change
Loss and comprehensive loss	\$ (1,946,759)	\$ (2,009,781)	\$ 63,022
Loss and comprehensive loss attributable to shareholders	\$ (2,008,583)	\$ (1,812,953)	\$ (195,630)
Basic and diluted loss per share	\$ (0.02)	\$ (0.02)	\$ (0.00)

#### LIQUIDITY AND CAPITAL RESOURCES

Since inception, the Company has primarily financed its operations from revenues, public and private sales of equity, the exercise of warrants, loans and convertible notes, government grants and tax credits. As of June 30, 2022, the Company had cash of \$2,533,178 compared to \$1,153,090 as of December 31, 2021.

### Cash used in operating activities

Cash used in operating activities for the three months ended June 30, 2022 was \$733,006 compared to \$912,624 for the three months ended June 30, 2021. The decrease in cash used in operating activities is due mainly to the \$500,000 USD milestone payment received from Dechra in the current period partially offset by.a higher net increase in non-cash working capital in the current period than the comparative period.

Cash used in operating activities for the six months ended June 30, 2022 was \$1,552,086 compared to \$1,339,187 for the six months ended June 30, 2021. The increase in cash used in operating activities is due mainly to an increase in the fair value adjustment on government loans and a higher net increase in non-cash working capital in the current period than the comparative period partially offset by the \$500,000 USD milestone payment received from Dechra during the current period.

### Cash provided by financing activities

Cash provided by financing activities for the three months ended June 30, 2022 was \$2,359,623 compared to cash provided by financing activities of \$905,849 for the three months ended June 30, 2021. The increase in cash provided by financing activities is due mainly to loan proceeds received from Pivot and the remainder of proceeds received from the Company's private placement in the current period partially offset by proceeds received from the exercise of warrants in the comparative period.

Cash provided by financing activities for the six months ended June 30, 2022 was \$2,957,462 compared to cash provided by financing activities of \$982,722 for the six months ended June 30, 2021. The increase in cash provided by financing activities is due mainly to loan proceeds received from Pivot, proceeds received from the Company's private placement and higher proceeds from long-term government loans received in the current period partially offset by proceeds received from the exercise of warrants in the comparative period.

### Cash used in investing activities

Cash used in investing activities during the three months ended June 30, 2022 was \$9,375 compared to \$170,180 in the three months ended June 30, 2021. The decrease in cash used in investing activities is due mainly to a decrease in property and equipment expenditures in the current period.



### **Management Discussion and Analysis**

Cash used in investing activities during the six months ended June 30, 2022 was \$25,288 compared to \$195,633 in the six months ended June 30, 2021. The decrease in cash used in investing activities is due mainly to a decrease in property and equipment expenditures in the current period.

The Company continues to seek additional licensing and distribution partners for its various products and technologies currently in development. This in combination with ongoing royalties and potential milestone payments associated with its existing licensing agreements with Dechra and Animalcare will provide increasing liquidity in the future. The Company also intends to seek maximization of its use of government grant programs in order to offset some of its research costs.

However, it is possible that these sources of cash inflows will not be sufficient to entirely fund the Company's planned research activities and administration costs in 2022. If that is the case, the Company will consider financing alternatives including those used in the past such as private placements and debt financing to raise the necessary capital it requires to fund ongoing operations.

The Company manages its operational spending and determines its future financing requirements through a process of budgeting and ongoing cash flow forecasting.

Shares, options, and warrants

	August 24, 2022	June 30, 2022	December 31, 2021
Common shares issued and outstanding	124,830,202	124,830,202	114,813,535
Options outstanding	-	-	335,895
Restricted Share Units	10,722,821	10,722,821	10,739,488
Warrants outstanding	-	-	35,669,192

A summary of the Company's share capital may be found in Note 14 of the accompanying financial statements.

#### **CONTRACTUAL OBLIGATIONS**

The Company periodically enters into credit and funding agreements, long term contractual agreements for the licensing of technologies, facility and equipment lease agreements and consulting service agreements. The following table presents commitments arising from outstanding agreements in force over the next seven years:

	Payments due by Period									
	Within		2-3		4-5		6-7			
	1 year		years		yea	rs	years		Tota	al
Canadian Dollars :										
Leases	\$	174,269	\$	333,337	\$	333,337	\$	633,547	\$	1,474,490
Accounts payable and accrued liabilities		1,868,115		-		-		-		1,868,115
Due to related party		8,066		-		-		-		8,066
Loan payable		4,026,082		-		-		-		4,026,082
Long-term government loans		126,000		1,008,000		1,008,000		337,410		2,479,410
Consulting Services		7,500		966		-		-		8,466
Qaulity management platform fee		12,440		49,760		12,440				74,640
	\$	6,222,472	\$	1,392,063	\$	1,353,777	\$	970,957	\$	9,939,269
US Dollars :										
Licence maintenance fees (USD)				20,000		20,000		20,000		60,000

### **GUARANTEES**

The Company periodically enters into research and licence agreements with third parties that include indemnification provisions



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customary in the industry. These guarantees generally require the Company to compensate the other party for certain damages and costs incurred as a result of claims arising from research and development activities undertaken on behalf of the Company. In some cases, the maximum potential amount of future payments that could be required under these indemnification provisions could be unlimited. These indemnification provisions generally survive termination of the underlying agreement. The nature of the indemnification obligations prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay. Historically, the Company has not made any indemnification payments under such agreements and no amount has been accrued in the accompanying financial statements with respect to these indemnification obligations.

#### **OFF-STATEMENT OF FINANCIAL POSITION ARRANGEMENTS**

The Company does not have any off-Statement of Financial Position arrangements.

#### **CONTROLS**

As a result of the Company's limited administrative staffing levels, internal controls which rely on segregation of duties in many cases are not appropriate or possible. Due to resource constraints and the present stage of the Company's development, the Company does not have sufficient size and scale to warrant the hiring of additional staff to correct this potential weakness at this time. To help mitigate the impact of this potential weakness, the Company is highly reliant on the performance of compensating procedures and senior management's review and approval.

As a TSX-Venture Exchange issuer, the Company is not required to certify the design and evaluation of the Company's disclosure controls and procedures ("DC&P") and internal controls over financial reporting ("ICF), and as such has not completed such an evaluation.

Investors should be aware that inherent limitations on the ability of certifying officers of a venture issuer to design and implement on a cost-effective basis DC&P and ICFR as defined in NI 52-109 may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

### CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in conformity with International Financial Reporting Standards ("IFRS") requires the Company to select from possible alternative accounting principles and to make estimates and assumptions that determine the reported amounts of assets and liabilities at the statement of financial position date and reported costs and expenditures during the reporting period. Management believes that the estimates and assumptions upon which the Company relies are reasonable based upon information available at the time these estimates and assumptions are made. Estimates and assumptions may be revised as new information is acquired and are subject to change.

In addition to the going concern assumption described above, management believes that its most critical accounting policies and estimates relate to the following areas, with reference to notes contained in the accompanying financial statements:

#### Revenue recognition

The Company's accounting policy over revenue recognition may be found in Note 3(a) in the Company's financial statements.

The Company has consistently applied accounting policies in accordance with IFRS 15 Revenue from Contracts with Customers ("IFRS 15") to all periods presented in these financial statements. These policies are as follows:

The Company has entered into exclusive license and distribution agreements for specific territories for which there may be non-refundable upfront payments, milestone payments based on achievement of certain milestones and royalties on related sales. Under the terms of these agreements in addition to the exclusive license rights, the Company may provide support, transfer of knowhow, marketing materials and efforts to increase the value of the license through introduction of new products or industry certifications. As these additional activities are not distinct and separable from the exclusive license rights, the primary performance obligation under the agreements has been determined to be a right to access the exclusive license. As a result, where non-refundable upfront payments are received or receivable, they are recognized over time on a straight-line basis over the contractual life of the agreement. Where milestone payments represent variable consideration, they are recognized as an adjustment to the transaction price of the contract when it is highly probable that a significant reversal of cumulative revenue recognized will not occur.

Royalties not subject to guaranteed minimum royalties are recognized as the related sales occur. Where guaranteed minimum



#### **Management Discussion and Analysis**

annual royalties apply, the Company recognizes the minimum guaranteed royalty revenue over time and recognizes excess sales royalties as the related sales occur.

Sales based milestone payments are recognized as revenue only when the applicable sales target has been met.

Revenue from the sales of goods and services, net of discounts, is recognized when control of those goods has been transferred to the customer or the performance obligation on services is met.

### Research and development costs

The Company's accounting policy over research and development costs may be found in Note 3(f)(i) in the Company's financial statements. Research expenditures are expensed as incurred. Development expenditures are deferred when they meet the criteria for capitalization in accordance with IFRS and the future benefits could be regarded as being reasonably certain. No development expenditures have been capitalized to date and there are no plans to capitalize development expenditures in the foreseeable future. Related Scientific Research & Experimental Development (SR&ED) investment tax credits are accounted for as a reduction to research and development expenditures in the period that they are earned and only to the extent they are refundable. Non-refundable SR&ED investment tax credits are not recorded in the financial statements as there is not assurance at this time there will be sufficient taxable income in the future to utilize those tax credits.

#### Patents and trademarks

The Company's accounting policy over patents and trademarks may be found in Notes 3(f)(ii) in the Company's financial statements. Patents and trademarks are reviewed for impairment on an ongoing basis whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If any such indication exists, then the asset's recoverable amount is estimated. An impairment exists when the carrying value of an asset exceeds its recoverable amount, which is the higher of its fair value less costs to sell or its value in use. The fair value less costs to sell calculation is based on available data from observable market prices, less incremental costs. The value in use calculation is based on a discounted cash flow model. These calculations require the use of estimates and forecasts of future cash flows. Qualitative factors, including market size and market growth trends, strength of customer demand and degree of variability in cash flows, as well as other factors, are considered when making assumptions regarding future cash flows and the appropriate discount rate. A change in any of the significant assumptions of estimates used to evaluate the underlying assets could result in a material change to the results of operations.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed, to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of amortization, if no impairment had been recognized. Write-downs as a result of impairment are recognized in research expense in the statement of loss and comprehensive loss.

### Stock-based compensation

The Company's accounting policy over stock-based compensation may be found in Notes 3(h)(ii),14(c) and 14(d) in the Company's financial statements.

Where the Company issues restricted share units to its employees, directors, officers or consultants, the fair value of these units is derived from the Company's closing share price on the TSX Venture Exchange on the date of issuance.

Where the Company issues stock options to its employees, directors, officers or consultants, the fair value of the options is derived using the Black-Scholes pricing model. The application of this pricing model requires Management to make assumptions regarding several variables, including the expected life of the options and warrants, the price volatility of the Company's stock over a relevant timeframe, the determination of a relevant risk-free interest rate and an assumption regarding the Company's dividend policy in the future.

A summary of all the Company's significant accounting policies and estimates may be found in Note 3 to the financial statements.

#### **RISKS AND UNCERTAINTY**

Kane Biotech operates in a highly competitive environment that involves significant risks and uncertainties, some of which are outside of the Company's control. The Company is subject to risks both inherent and not inherent to the biotechnology industry, including:



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#### Risks Related to the Company's Financial Condition

- The Company has not derived sufficient revenues to date from the commercial sale of its antibiofilm technology and
  products to offset its costs. In light of the length of time and expense associated with bringing new products through
  commercialization, obtaining regulatory approval and bringing products to market, operating losses are expected to
  continue.
- The Company has relied upon equity financing to support operations and will continue to need significant amounts of additional capital that may not be available to the Company on favourable terms and may be dilutive.
- The Company has relied upon non-dilutive government funding to support some of its research and development
  programs and other operations. This funding is contingent upon certain deliverables being fulfilled as mandated by the
  government agencies.
- The Company may fail to obtain additional financing and be unable to fund operations and commercialize its product candidates.

The Company intends to raise additional financing, as required, through research, partnering and licensing arrangements, the exercise of warrants and options, equity financing and government funding. However, there can be no assurance that these financing efforts will be successful or that the Company will continue to be able to meet ongoing cash requirements. It is possible that financing will not be available or, if available, may not be on favourable terms. The availability of financing will be affected by the results of scientific and clinical research, the ability to obtain regulatory approvals, market acceptance of the Company's products, the state of the capital markets generally (with particular reference to pharmaceutical, biotechnology and medical companies), the status of strategic alliance agreements, available government funding and other relevant commercial considerations.

### Risks Related to the Company's Financial Management

The Company is subject to ongoing foreign exchange, interest rate, credit and liquidity risks. The management of these risks is described in Note 22 of the Company's audited financial statements for the year ended December 31, 2021.

### Risks Related to the Company's Business and Operations

- The Company is in various stages of development of its technologies and products and is dependent on the successful
  commercialization of its technologies and products to prevent and remove microbial biofilms. Delays may cause the
  Company to incur additional costs which could adversely affect the Company's liquidity and financial results.
- The Company's business is subject to significant government regulation and failure to achieve regulatory approval of its
  products would negatively affect the business.
- The Company can rely on contract manufacturers as part of its product development strategy, and it would be negatively affected if it is not able to maintain these relationships and/or the contract manufacturers failed to maintain appropriate quality levels.
- Even if product candidates receive all of the required regulatory approvals, there is no guarantee of market acceptance
  or commercialization of the resulting product candidates, which will be determined by the Company's sales, marketing
  and distribution capabilities and the positioning and competitiveness of its products compared with any alternatives.
- The Company's industry is characterized by rapid change and a failure by the Company to react to these changes could
  have a material adverse effect on its business.
- If the Company fails to hire or retain needed personnel, the implementation of its business plan could slow and future growth could suffer.

### **Risks Relating to the Intellectual Property**

- Failure to protect intellectual property, or infringement on the intellectual property rights of others, may impede the Company's ability to operate freely.
- The Company is dependent on strategic partners, including contract research organizations, as part of its product



#### **Management Discussion and Analysis**

development strategy, and it would be negatively affected if it is not able to initiate or maintain these relationships.

Kane Biotech views patents and other means of intellectual property protection as essential to the Company's core business by protecting the Company's proprietary technology from infringement by competitors. To that end, patents will continue to be filed by the Company to ensure the highest level of protection possible is obtained for its products and technologies. The Company requires all employees, consultants, and parties to collaborative research agreements to execute confidentiality agreements upon the commencement of employment, consulting relationships or a collaboration with the Company. These agreements require that all information developed or made known during the course of the engagement with the Company is to be kept confidential. The Company also maintains agreements with scientific staff and all parties contracted in a scientific capacity, providing that all inventions resulting from work performed for Kane Biotech, using its property, or relating to its business and conceived or completed during the period covered by the agreement are the exclusive property of the Company.

### Risks Relating to the Company's Common Shares

- The Company has not paid and does not intend to pay any cash dividends on its common shares and therefore, its shareholders may not be able to receive a return on their shares unless they sell them.
- The market price and trading volume of the Company's common shares may be volatile. In addition, variations in future
  earnings estimates by securities analysts and the market prices of the securities of the Company's competitors may also
  lead to fluctuations in the trading price of the common shares.
- The significant costs that the Company will incur as a result of being a public company in Canada could adversely affect its business.

To date, no dividends have been declared or paid on the common shares, and it is not expected that dividends will be declared or paid in the immediate or foreseeable future. The policy of the Board of Directors of the Company is to reinvest all available funds in operations. The Board of Directors may reassess this policy from time to time. Any decision to pay dividends on the common shares of Kane Biotech will be made by the Board of Directors based on the assessment of, among other factors, earnings, capital requirements and the operating and financial condition of the Company.