

ALGERNON PHARMACEUTICALS INC.

ANNUAL INFORMATION FORM

For The Financial Year Ended August 31, 2022

December 16, 2022

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TERMS OF REFERENCE

In this Annual Information Form (the “AIF”), unless the context otherwise dictates, references to the “Company”, “Algernon”, “we” and “our” refer to Algernon Pharmaceuticals, Inc.

The information contained in this AIF is current as of August 31, 2022 with subsequent events disclosed to December 16, 2022.

All references to dollars (\$) in this AIF are expressed in Canadian dollars, unless otherwise indicated. Defined terms used herein have the respective meanings given to such terms under the heading “Glossary of Terms”

MARKET DATA

Unless otherwise indicated, information contained in this AIF concerning the industry and markets in which the Company operates, including its general expectations and market position, market opportunity and market share is based on information from independent industry organizations, and other third-party sources (including industry publications, surveys and forecasts), and management estimates.

The management estimates in this AIF are derived from publicly available information released by independent industry analysts and third party sources, as well as data from the Company’s internal research, and are based on assumptions made by the Company based on such data and its knowledge of such industry and markets, which the Company believes to be reasonable. The Company’s internal research has not been verified by any independent source, and it has not independently verified any third-party information. While the Company is not aware of any misstatement regarding any industry or market data included in this AIF, such information is inherently imprecise. In addition, projections, assumptions and estimates of the Company’s future performance and the future performance of the industry in which the Company operates are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described under the “Risk Factors”.

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This AIF contains forward-looking statements that relate to the Company’s current expectations and views of future events. In some cases, these forward-looking statements can be identified by words or phrases such as “may”, “might”, “will”, “expect”, “anticipate”, “estimate”, “intend”, “plan”, “indicate”, “seek”, “believe”, “predict” or “likely”, or the negative of these terms, or other similar expressions intended to identify forward-looking statements. The Company has based these forward-looking statements on its current expectations and projections about future events and financial trends that it believes might affect its financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, among other things, statements relating to:

- uncertainties with respect to the effects of the novel coronavirus known as COVID-19 (“**COVID-19**”) will directly and indirectly have on the Company;
- the Company’s plans to develop, obtain regulatory approval for and commercialize its lead product candidates;
- the Company’s ability to conduct successful clinical trials for its product candidates;
- the perceived benefits of the Company’s product candidates over other treatments for NASH, IBS and CKD;

- the Company's expectations regarding its revenue, expenses and research and development operations;
- the Company's anticipated cash needs and its needs for additional financing;
- the Company's intention to grow the business and its operations;
- expectations with respect to future production costs and capacity;
- expectations regarding the Company's growth rates and growth plans and strategies;
- expectations with respect to the approval of the Company's license applications;
- the Company's ability to expand into international markets;
- the potential size of markets for the Company's product candidates;
- the Company's ability to partner with other pharmaceutical companies to develop, obtain regulatory approval and commercialize its products candidates;
- expectations regarding regulatory requirements and developments for its product candidates;
- the Company's competitive position and the regulatory environment in which the Company operates;
- the Company's expected business objectives for the next twelve months;
- the Company's plans with respect to the payment of dividends;
- the Company's ability to obtain additional funds through the sale of equity or debt commitments; and
- the ability of the Company's products to access markets.

Forward-looking statements are based on certain assumptions and analyses made by the Company in light of the Company's experience and perception of historical trends, current conditions and expected future developments and other factors it believes are appropriate and are subject to risks and uncertainties. In making the forward-looking statements included in this AIF, the Company has made various material assumptions, including but not limited to, the following: (i) the Company obtaining the necessary regulatory approvals; (ii) that regulatory requirements will be maintained; (iii) general business and economic conditions; (iv) the Company's ability to successfully execute its plans and intentions; (v) the availability of financing on reasonable terms; (vi) the Company's ability to attract and retain skilled staff; (vii) market competition; (viii) the products and technology offered by the Company's competitors; (ix) the maintenance of the Company's current good relationships with its suppliers, service providers and other third parties; (x) financial results, future financial position and expected growth of cash flows; (xi) business strategy, including budgets, projected costs, projected capital expenditures, taxes, plans, objectives, potential synergies and industry trends; (xii) research and development; (xiii) expectations concerning the size and growth of the global medical technology market; and (xiv) the effectiveness of the Company's products compared to its competitors' products. Although the Company believes that the assumptions underlying these statements are reasonable, they may prove to be incorrect, and the Company cannot assure that actual results will be consistent with these forward-looking statements. Given these risks, uncertainties and assumptions, investors should not place undue reliance on these forward-looking statements. Whether actual results, performance or achievements will conform to the Company's expectations and predictions is subject to a number of known and unknown risks, uncertainties, assumptions and other factors, including those listed under "*Risk Factors*", which include:

- the Company is subject to changes in Canadian laws regulations and guidelines which could adversely affect the Company's future business and financial performance;
- the Company may not be able to effectively manage its growth and operations, which could materially and adversely affect its business;
- the Company may be unable to obtain additional financing on acceptable terms or not at all;

- the effectiveness Company's technology and the Company's ability to bring its technology into commercial production cannot be assured;
- the effect of COVID-19 outbreak on the ability of the Company to carry on business, including the ability to conduct clinical trials;
- the Company's ability to obtain Health Canada, FDA or EMA (as defined below) approval, within the time frame or at all;
- changes in regulations and legislation regarding psychedelic therapy;
- changes in the psychedelic therapy market
- the continued growth of the global medical technology market cannot be assured;
- the Company may become subject to litigation, including for possible product liability claims, which may have a material adverse effect on the Company's reputation, business, results from operations and financial condition;
- the Company faces competition from other companies where it will conduct business and those companies may have a higher capitalization, more experienced management or may be more mature as a business;
- the Company is reliant on management and if the Company is unable to attract and retain key personnel, it may not be able to compete effectively;
- the Company's industry is experiencing rapid growth and consolidation that may cause the Company to lose key relationships and intensify competition;
- the Company expects to sell additional equity securities or secure debt facilities to fund operations, for capital expansion, and for mergers and acquisitions, which would have the effect of diluting the ownership positions of the Company's current shareholders;
- the Company's officers and directors may be engaged in a range of business activities resulting in conflicts of interest;
- regulatory scrutiny of the Company's industry may negatively impact its ability to raise additional capital;
- the Company cannot assure you that a market will continue to develop or exist for the Common Shares and, if such market continues to develop, what the market price of the Common Shares will be;
- the market price for Common Shares may be volatile and subject to wide fluctuations in response to numerous factors, many of which are beyond our control;
- the Company does not anticipate paying cash dividends;
- future sales of Common Shares by existing shareholders could reduce the market price of the Common Shares;
- the Company expects to have negative cash flow for the foreseeable future;
- whether the Company can continue as a going concern;
- the Company is a research and development stage company with little operating history, a history of losses and the Company cannot assure profitability;
- the Company may not be successful in its efforts to identify, license or discover additional product candidates;
- none of the Company's current product candidates has to date received regulatory approval for their intended commercial sale;
- failure to follow regulatory requirements;
- risk related to Intellectual property rights;
- pre-clinical and clinical trials, including reliance on third parties to conduct same;
- pre-clinical and clinical trials will be lengthy and expensive;

- the Company faces product liability exposure, which, if not covered by insurance, could result in significant financial liability;
- the Company may be required to suspend or discontinue clinical trials because of adverse side effects or other safety risks that could preclude approval of its drug candidates;
- in light of the Company's current resources and limited experience, it may need to establish successful third-party relationships to successfully commercialize its future product candidates;
- the Company's ability to protect and enforce intellectual property rights;
- the Company may become subject to litigation, including for possible product liability claims, which may have a material adverse effect on the Company's reputation, business, prospects results from operations and financial condition;
- there may be larger, better financed companies which may become competition for the Company;
- the Company's officers and directors may be engaged in a range of business activities resulting in conflicts of interest;
- the Company does not anticipate paying cash dividends;
- the ability of the Company to obtain any necessary permits and licenses;
- the Company may be unable to obtain insurance;
- the market price of the Company's common shares may be subject to wide price fluctuations;
- the lack of product for commercialization;
- the lack of experience of the Company/management in marketing, selling, and distribution products;
- risks associated with future acquisitions;
- difficulty to forecast product demand; and
- global economy risk.

If any of these risks or uncertainties materialize, or if assumptions underlying the forward-looking statements prove incorrect, actual results might vary materially from those anticipated in those forward-looking statements. The assumptions referred to above and described in greater detail under "*Risk Factors*" should be considered carefully by readers.

Certain of the forward-looking statements and forward-looking information and other information contained herein concerning the pharmaceutical industry and the general expectations of the Company concerning the pharmaceutical industry and concerning the Company are based on estimates prepared by the Company using data from publicly available governmental sources as well as from market research and industry analysis and on assumptions based on data and knowledge of this industry which the Company believes to be reasonable. While the Company is not aware of any misstatement regarding any industry or government data presented herein, the pharmaceutical industry involves risks and uncertainties that are subject to change based on various factors and the Company has not independently verified such third-party information.

The Company's forward-looking statements are based on the reasonable beliefs, expectations and opinions of management on the date of this AIF (or as of the date they are otherwise stated to be made). Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. There is no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

We do not undertake to update or revise any forward-looking statements, except as, and to the extent required by, applicable securities laws in Canada.

All of the forward-looking statements contained in this AIF are expressly qualified by the foregoing cautionary statements.

GLOSSARY OF TERMS

The following is a glossary of certain terms used in this AIF:

"**AGN Neuro**" means Algernon NeuroScience Inc.;

"**AGN Research**" means Algernon Research PTY Ltd.;

"**AIF**" or "**Annual Information Form**" means this annual information form of the Company in respect of the fiscal year ended August 31, 2022;

"**Algernon Parent**" means Petro Basin Energy Corp.;

"**API**" means active pharmaceutical ingredient;

"**August 2022 Offering**" has the meaning ascribed thereto on page 12 of this AIF;

"**Ausun**" means Zhejiang Ausun Pharmaceutical Co, Ltd.;

"**CAGR**" means compound annual growth rate;

"**BCBCA**" the *Business Corporations Act* (British Columbia);

"**BEBO**" has the meaning ascribed thereto on page 14 of this AIF;

"**Board**" or "**Directors**" means the directors of the Company as at the date of this document;

"**cGMP**" means current good manufacturing practice;

"**Charles River**" means Charles River Laboratories;

"**CKD**" means chronic kidney disease;

"**CHDR**" means the Centre for Human Drug Research;

"**CIMT**" means Constraint-induced Movement Therapy;

"**CMC**" means Chemistry, Manufacturing and Control;

"**Common Shares**" means the Class A common shares without par value in the capital of the Company;

"**Company**" or "**Algernon**" means Algernon Pharmaceuticals Inc.;

"**COVID-19**" means a disease caused by a new strain of coronavirus;

"**CRO**" means contract research organization;

"**CSE**" means the Canadian Securities Exchange;

"**CTIMP**" means Clinical Trials of Investigational Medicinal Products;

“Dalton” means Dalton Pharma Services;

“DEA” means the U.S. Drug Enforcement Agency;

“Dilutive Issuance” has the meaning ascribed thereto on page 12 of this AIF;

“DMT” means *N,N*-Dimethyltryptamine;

“EMA” means the European Medicines Agency;

“February 2020 Offering” has the meaning ascribed thereto on page 10 of this AIF;

“FDA” means the United States Food and Drug Administration;

“FVC” means forced vital capacity;

“Hammersmith” means Hammersmith Medicines Research;

“HPFB” means Health Product and Food Branch of Health Canada;

“IBD” means inflammatory bowel disease;

“IMP” means Investigational Medicinal Product;

“IMP D” means Investigational Medicinal Product document;

“INCB” means International Narcotics Control Board;

“IND” means an investigational new drug;

“IPF” means idiopathic pulmonary fibrosis;

“IVF” means intravenous formulation;

“July 2022 Offering” has the meaning ascribed thereto on page 12 of this AIF;

“March 2021 Offering” has the meaning ascribed thereto on page 11 of this AIF;

“MDR” means the U.K. Misuse of Drugs Regulations 2001;

“MHRA” means Medicines and Healthcare Products Regulatory Agency;

“Mitsubishi” means Mitsubishi Tanabe Pharma;

“MREC” means Medical Research and Ethics Committee

“NASH” means non-alcoholic steatohepatitis;

“Nash Pharma” means Nash Pharmaceuticals Inc.;

“**NCE**” means new chemical entity;

“**NMDA**” means N-methyl-D-aspartate;

“**November 2019 Offering**” has the meaning ascribed thereto on page 9 of this AIF;

“**NAPRA**” means National Association of Pharmaceutical Regulatory Authorities;

“**person**” means a company or individual;

“**PSA**” means the U.K. Psychoactive Substances Act 2016;

“**Qualification Date**” has the meaning ascribed thereto on page 9 of this AIF;

“**SCLC**” means small cell lung cancer;

“**SEDAR**” means the System for Electronic Document Analysis and Retrieval filing system, available on the Internet at <http://www.sedar.com>;

“**Special Warrants**” has the meaning ascribed thereto on page 10 of this AIF;

“**Special Warrant Financing**” has the meaning ascribed thereto on page 10 of this AIF;

“**Special Warrant Unit**” has the meaning ascribed thereto on page 10 of this AIF;

“**TPA**” means Tissue Plasminogen Activator;

“**TRC**” means Toronto Research Chemicals;

“**United States**” or “**U.S.**” means the United States of America;

“**UUO**” means unilateral urinary obstruction;

“**Yale**” means Yale University.

CORPORATE STRUCTURE

Name, Address And Incorporation

The Company was incorporated under the BCBCA on April 10, 2015 as “PBA Acquisitions Corp.”, a wholly-owned subsidiary of Petro Basin Energy Corp. (“**Algernon Parent**”). On July 23, 2015, the Company changed its name to “Breathtec Biomedical, Inc.”.

The Company entered into an arrangement agreement with Algernon Parent. The arrangement agreement and associated plan of arrangement were approved by Algernon Parent’s shareholders on July 30, 2015, and approved by the Ontario Superior Court of Justice (Commercial List) on August 5, 2015. The plan of arrangement was completed on September 23, 2015. On February 19, 2019, the Company changed its name to “Algernon Pharmaceuticals Inc.”

The Company’s registered and records office is located at Suite 1500 – 1055 West Georgia St., Vancouver, BC V6E 4N7.

The Class A common shares of the Company (the “**Common Shares**”) are listed on the Canadian Securities Exchange (the “**CSE**”) under the trading symbol “AGN”, on the QTCQB under the symbol “AGNPF” and on the Frankfurt Stock Exchange under the symbol “AGW”. The Company is a reporting issuer in Canada in the each of the provinces of Canada.

Inter-corporate Relationships

As at the date of this AIF, the Company has the following wholly-owned subsidiaries:

- Nash Pharmaceuticals Inc. (“**Nash Pharma**”), a British Columbia corporation;
- Algernon Research PTY Ltd (“**AGN Research**”), an Australian proprietary company established on January 6, 2020; and
- Algernon NeuroScience Inc. (“**AGN Neuro**”), a British Columbia corporation established on December 9, 2022.

GENERAL DEVELOPMENT OF THE BUSINESS

Summary

Algernon is a drug re-purposing company that investigates safe, already approved drugs, including naturally occurring compounds, for new disease applications, moving them efficiently and safely into new human trials, developing new formulations and seeking new regulatory approvals in global markets. Algernon specifically investigates compounds that have never been approved in the U.S. or Europe to avoid off label prescription writing, which can interfere with the normal economic pricing models of newly approved drug treatments.

Three Year History

November 2019 Offering of Units

On November 1, 2019, the Company completed a public offering of units by way of short form prospectus in Canada (the “**November 2019 Offering**”). Pursuant to the November 2019 Offering, the Company issued 244,013 units at the issue price of \$8.50 per unit for total gross proceeds of \$2,074,110. Each unit was comprised of one Common Share and one Common Share purchase warrant. Each Common Share purchase warrant entitles the holder to purchase one additional Common Share until May 1, 2022 at a purchase price of \$12.00 per Common Share. These Common Share purchase warrants were listed and posted for trading on the CSE under the symbol AGN.WT. On December 23, 2020, the Company accelerated the expiry date of the Common Share purchase warrants to January 21, 2021.

As compensation, the Company issued 18,011 compensation options to the agents under the November 2019 Offering. Each compensation option entitles the holder to purchase one unit of the Company at a price of \$8.50 per unit until May 1, 2022. Each unit consists of one Common Share and one Common Share purchase warrant entitling the holder to acquire an additional Common Share at a purchase price of \$12.00 per Common Share. The Company also paid a cash commission in the aggregate amount of \$153,092 to a syndicate of agents.

Algernon Research Pty Ltd

On January 6, 2020, Nash Pharma established AGN Research, its wholly-owned subsidiary, in Australia. AGN Research is a proprietary company formed with the aim to provide supporting scientific research activities to Nash Pharma.

February 2020 Offering of Units

On February 20, 2020, the Company completed a non-brokered private placement of 183,049 units at a price of \$8.50 per unit for gross proceeds of \$1,555,920 (the “**February 2020 Offering**”). Each unit was comprised of one Common Share and one unlisted Common Share purchase warrant. Each Common Share purchase warrant entitles the holder to purchase one additional Common Share until August 20, 2022 at a purchase price of \$12.00 per Common Share.

As compensation, the Company issued a total of 9,696 finder’s warrants, being 8% of the number of units sold under the February 2020 Offering to purchasers introduced by such finders. Each finder warrant entitles the holder to purchase one unit of the Company at a price of \$8.50 per unit until August 20, 2022. Each unit consists of one Common Share and one unlisted Common Share purchase warrant entitling the holder to acquire an additional Common Share at the price of \$12.00 per Common Share. The Company also paid a cash commission to certain finders in the aggregate amount of \$82,413, being 8% of the aggregate proceeds raised under the February 2020 Offering.

Private Placement of Special Warrants and Short Form Prospectus Qualification

On May 13, 2020, the Company completed a private placement of 196,053 special warrants of the Company (the “**Special Warrants**”) at a price of \$35.00 per Special Warrant for gross proceeds of \$6,861,849 (the “**Special Warrant Financing**”). Each Special Warrant is exercisable, for no additional consideration at the option of the holder, into one unit of the Company (a “**Special Warrant Unit**”). Each Special Warrant Unit is comprised of one Common Share and one Common Share purchase warrant. Each whole Common Share purchase warrant will entitle the holder to purchase one Common Share at an exercise price of \$55.00 per Common Share until May 13, 2022. If, at any time after the Qualification Date (as defined below) and prior to the expiry date of the Common Share purchase warrants, the volume weighted average trading price of the Common Shares on the CSE, or other principal exchange on which

the Common Shares are listed, is greater than \$100.00 for 10 consecutive trading days, the Company may, within 15 days of the occurrence of such event, deliver a notice to the holders of Common Share purchase warrants accelerating the Expiry Date to the date that is 30 days following the date of such notice.

All unexercised Special Warrants will be automatically exercised, without payment of additional consideration, on the date (the “**Qualification Date**”) that is the earlier of: (i) four months and a day following May 13, 2020; and (ii) three business days following the date on which receipt is issued by the British Columbia Securities Commission for a final short form prospectus qualifying the distribution of the underlying the Special Warrants Units. In the event the Qualification Date has not occurred prior to 5:00 p.m. on the date that is 35 days from May 13, 2020, each unexercised Special Warrant will thereafter entitle holders thereof to receive upon the exercise or deemed exercise thereof, for no additional consideration, 1.10 Units in lieu of one (1) Unit and thereafter at the end of each additional 30 day period prior to the Qualification Date, each Special Warrant will be exercisable for an additional 0.0002 of a Unit.

In connection with the Special Warrant Financing, the Company paid Mackie Research Capital Corporation, the sole agent and bookrunner, and a syndicate of sub-agents, a cash fee of \$526,853, equal to 8% of the gross proceeds from the sale of the Special Warrants, subject to a reduced fee of 4% for Special Warrants issued to President’s list purchasers. As additional compensation, the Company also issued an aggregate of 15,053 non-transferable compensation options, entitling the holder to acquire one Special Warrant Unit at an exercise price of \$35.00 per Special Warrant Unit until May 13, 2022.

On June 11, 2020, the Company filed a short form prospectus to qualify the distribution of the Special Warrants. The Special Warrants were deemed converted into Special Warrant Units on June 17, 2020.

March 2021 Private Placement

On March 5, 2021, the Company closed a private placement of 112,600 units, each unit consisting of one Common Share and Common Share purchase warrant, at the price of \$25.00 per unit for gross proceeds of \$2,815,010 (the “**March 2021 Offering**”). Each Common Share purchase warrant is exercisable for one Common Share at the price of \$40.00 per Common Share until March 5, 2023, subject to acceleration.

As compensation, the Company paid finder’s fees of \$161,400 being 8% of the aggregate gross proceeds raised by eligible finders and issued 6,456 finder’s warrants. Each finder’s warrant is exercisable for one unit at the exercise price of \$40.00 until March 5, 2023.

Base Shelf Prospectus

On May 5, 2021, the Company filed and received a receipt for a short form base shelf prospectus qualifying up to \$50,000,000 of Common Shares, warrants, subscription receipts and units.

Share Consolidation

Effective November 24, 2021, the Company completed a consolidation of its Common Shares on a one hundred to one basis. On the date of consolidation, the total issued and outstanding Common Shares outstanding on a post-consolidation basis was 1,678,851 Common Shares.

July 2022 Offering of Units

On July 4, 2022, the Company closed a marketed public offering of 309,117 units, each unit consisting of one Common Share and Common Share purchase warrant, at the price of \$3.75 per unit for gross proceeds of \$1,159,189 (the “**July 2022 Offering**”). Each Common Share purchase warrant is exercisable for one Common Share at the price of \$4.70 per Common Share until July 4, 2027, subject to acceleration.

In the event of a down-round financing during the period of five years following closing of the Offering (a “**Dilutive Issuance**”), the Warrants contain an anti-dilution protection feature, to adjust the Warrant Exercise Price and increase the number of Warrant Shares issuable thereunder if Common Shares are sold or issued for a consideration per share less than the Warrant Exercise Price (subject to certain exemptions), provided, that the exercise price will not be less than \$1.875.

As compensation, the Company paid finder’s fees in the aggregate amount of \$65,068 from the sale of units to purchaser introduced by the broker and issued 10,845 broker warrants. Each broker warrant is exercisable for one Common Share at the exercise price of \$4.125 until July 4, 2027.

August 2022 Private Placement

On August 22, 2022, the Company closed a private placement of 373,900 units, each unit consisting of one Common Share and Common Share purchase warrant, at the price of \$3.75 per unit for gross proceeds of \$1,402,125 (the “**August 2022 Offering**”). Each Common Share purchase warrant is exercisable for one Common Share at the price of \$4.25 per Common Share until August 22, 2027.

As compensation, the Company paid finder’s fees in the aggregate amount of \$122,850 from the sale of units to purchasers introduced by the eligible finders and issued 20,480 finder’s warrants. Each finder’s warrant is exercisable for one Common Share at the exercise price of \$4.125 until August 22, 2027.

Repricing of Warrants from the July 2022 Offering

The closing of the August 2022 Offering resulted in a Dilutive Issuance pursuant to the July 2022 Offering and the exercise price of the Warrants issued in the July 2022 Offering was reduced from \$4.25 to \$3.75 per share and the number of shares issuable under each Warrant was increased such that the aggregate exercise price payable after taking into account the decrease in the exercise price shall be equal to the aggregate exercise price prior to the adjustment.

Algernon NeuroScience Inc.

On December 9, 2022, the Company established AGN Neuro, its wholly-owned subsidiary, in British Columbia. AGN Neuro was created to advance the Company’s DMT stroke research program.

OVERVIEW OF BUSINESS

General

Algernon is a drug clinical stage re-purposing company that investigates safe, already approved drugs, including naturally occurring compounds, for new disease applications, moving them efficiently and safely into new human trials, developing new formulations and seeking new regulatory approvals in global markets. Algernon specifically investigates compounds that have never been approved in the U.S. or

Europe to avoid off label prescription writing, which can interfere with the normal economic pricing models of newly approved drug treatments.

The Company's early research identified a number of drug candidates that had already been approved for other diseases outside of the U.S and E.U. Only drugs that have not been approved in the U.S or Europe were chosen to avoid off-label prescription writing. The Company is actively investigating new disease areas including: CKD, IPF and chronic cough, stroke, and pancreatic and small cell lung cancer. In addition to these indications, the Company has additional drug candidates it is considering advancing where the Company has performed preclinical studies and filed intellectual property.

The Company's lead candidate is Ifenprodil, which is being investigated by the Company in multiple disease indications. Ifenprodil is an N-methyl-D-aspartate ("**NMDA**") receptor antagonist specifically targeting the NMDA-type subunit 2B (GluN2B). Ifenprodil prevents glutamate signalling. The NMDA receptor is found on many tissues including lung cells and T-cells, neutrophils. Ifenprodil (brand name Cerocral) was initially developed by Sanofi in the 1990s in the French and Japanese markets for the treatment of circulatory disorders. Although no longer available in France, the drug is highly genericized and sold in Japan and South Korea.

NMDA receptors also regulate the signalling of mTOR a serine/threonine kinase, which has been identified as a therapeutic target for many types of cancers. Their expression on several human cancer cell lines represents a potential therapeutic avenue to control dysregulated growth, division, and invasiveness.

The Company is investigating Ifenprodil for IPF and chronic cough and is conducting a Phase 2 study in Australia and New Zealand. The purpose of this proof-of-concept trial is to determine the efficacy of Ifenprodil in the preservation of lung function in IPF patients (including biomarkers of fibrosis) and its associated cough. On May 6, 2020, the Company received ethics approval from the Royal Brisbane & Women's Hospital, Human Research Ethics Committee. The Phase 2 IPF and Chronic Cough trial began on August 5, 2020, and the Company announced top-line data indicating that the study's IPF co-primary endpoint, preservation of lung function determined by no worsening of FVC over 12 weeks, had been met. The Company further reported on July 28, 2022 significant reductions in geometric mean cough counts after both 4 and 12 weeks of treatment. The full data set including additional secondary measures of efficacy, including both objective measurement of lung function and patient-reported outcomes of both IPF and cough was announced on September 1, 2022. All of the data showed positive results, including statistically significant improvements in measures of cough.

The Company has also retained Organic Consultants, Inc. (dba Cascade Chemistry) to produce the active pharmaceutical ingredient ("**API**") of Ifenprodil. Algernon made the decision to scale-up 'current good manufacturing practice' ("**cGMP**") manufacturing of Ifenprodil to support its IPF and Chronic Cough clinical program. The Company has manufactured its first multi-kilogram batch of cGMP material produced. Stability testing of the API is on-going. The Company filed a pre-IND application with the FDA to seek guidance on the use of Algernon's planned new propriety injectable and slow-release formulation. The FDA advised that for the toxicology program of a new intravenous formulation, a single animal 30-day study would be acceptable. The Company's estimated cost of manufacturing of finished product is approximately \$500,000.

DMT

On February 1, 2021, the Company announced it had established a clinical research program for the treatment of stroke focused on DMT. The Company believes that repurposing DMT from its psychedelic

effects to a new potential treatment for stroke could have a positive impact on the millions of people that suffer the debilitating consequences of a stroke each year.

On September 12, 2022, the Company announced it received approval to conduct a Phase 1 clinical study of an IVF of DMT for the treatment of stroke in the Netherlands from the Stichting Beoordeling Ethiek Biomedisch Onderzoek (“**BEBO**”), an independent MREC. The trial will be conducted at the CHDR in Leiden. DMT is a known psychedelic compound that is part of the tryptamine family. The Company commenced screening subjects on November 16, 2022. The Company plans to begin screening shortly and dose the first subject of the study in by the end of 2022.

The Company’s decision to investigate DMT and move it into human trials for ischemic stroke is based on multiple independent, positive preclinical studies demonstrating that DMT helps mitigate tissue damage and promote neurogenesis as well as structural and functional neuroplasticity.^{1,2} These are key factors involved in the brain’s ability to form and reorganize synaptic connections, which are needed for healing following a brain injury. The Company also confirmed in its own murine cortical neuron outgrowth preclinical study, that DMT, in sub-psychedelic doses, increased the growth of cortical neurons by up to 40% compared to control.

Since there have already been several Phase 1 studies successfully conducted on DMT,^{3,4} the Company is not anticipating any serious adverse events or safety issues arising from its study. The reason that the Company is planning to conduct a Phase 1 study and not directly advance DMT into a Phase 2 study is that it is investigating prolonged intravenous infusion of DMT, for durations which have never been clinically studied. The resulting data generated will help the Company to plan both its Phase 2 acute stroke and rehabilitation studies more effectively.

CKD

On February 23, 2022, the Company announced that it awarded a contract to Ausun to begin the manufacturing of a cGMP supply of its repurposed drug Repirinast and has initiated a new CKD research program.

Repirinast was originally developed by Mitsubishi Tanabe Pharma (“Mitsubishi”) and was sold and marketed in Japan under the brand name Romet™ for the treatment of asthma. Romet™ was marketed for over 25 years in Japan. Mitsubishi discontinued manufacturing and sales of the drug in 2013.

Since all of Algernon’s lead compounds are genericized, there is historical data available on each compound’s mechanism of action as it relates to the disease it was originally developed to treat. The Company has decided not to pursue independent confirmation as to whether these known pathways are involved in the specific biochemical interaction that produced the pharmacological effect seen in the Company’s animal model research.

¹ Ly et al. Cell Reports (2018) 23:3170-82.

² Cameron et al. ACS Chem Neurosci (2019) 10:3261-70.

³ a) Strassman et al. Arch Gen Psychiatry (1994) 51:85-97; b) Strassman et al. Arch Gen Psychiatry (1994) 51:98-108.

⁴ D’Souza et al. Neuropsychopharmacology (2022) Sep;47(10):1854-1862.

Business Strategy

The Company is engaged in advancing a number of repurposed genericized drugs into Phase I and Phase II clinical trials for the global disease areas of CKD, IPF, chronic cough, stroke, and pancreatic and small cell lung cancer.

The compounds being advanced by the Company have all performed equal to or better than the positive controls used in the Company's widely accepted pre-clinical *in vivo* animal research studies.

Algernon's business strategy is to fast track a number of its lead compounds into phase II clinical trials as quickly and as inexpensively as possible by leveraging the currently existing regulatory approval and finished product supply in the country of origin where the drugs were originally approved. Conducting off label phase II trials in the drugs' currently approved market would save the company from having to synthesize the compounds and conduct all of the preclinical toxicology work. This additional work would in comparison, add significant time and costs to the Company's development timeline and budget.

Based on the results of some of the feasibility studies in progress, the Company believes that conditions exist that could allow the Company to conduct up to four off-label phase II trials without having to do any compound manufacturing or additional pre-clinical work. This would include conducting multiple trials for different diseases with the same lead compound. A final decision will be made on which compounds, diseases and locations will be included in the phase II trials once all of the feasibility studies are completed.

The Company is planning to conduct a minimum of two phase II clinical trials simultaneously in order to improve the Company's potential of success. Ensuring the Company is not conducting and relying on a single phase II clinical trial is key part of the current strategy.

Subject to the success of the phase II trials, the Company plans to engage in licensing, partnership and or acquisition (as the target) discussions with a number of larger pharmaceutical partners. If for whatever reason, a partnership, license or acquisition opportunities do not materialize, the Company will explore moving all successful phase II compounds forward into phase III clinical trials.

At present, the Company does not plan to develop a sales team to advance the marketing sales and distribution of any of its lead compounds if such compounds achieve regulatory approval in any given market. The Company's strategy is to look for moments of inflection where the potential exists to be able to consummate the best possible licensing, partnership or acquisition transaction.

Phase I and Phase II Clinical Trials

The Company has initiated a number of feasibility studies in order to determine the best geographical location to run its planned Phase I or Phase II trials based on a number of factors including availability of finished product and the suitability of the country where the drug is registered. Some of the compounds have been approved in multiple jurisdictions.

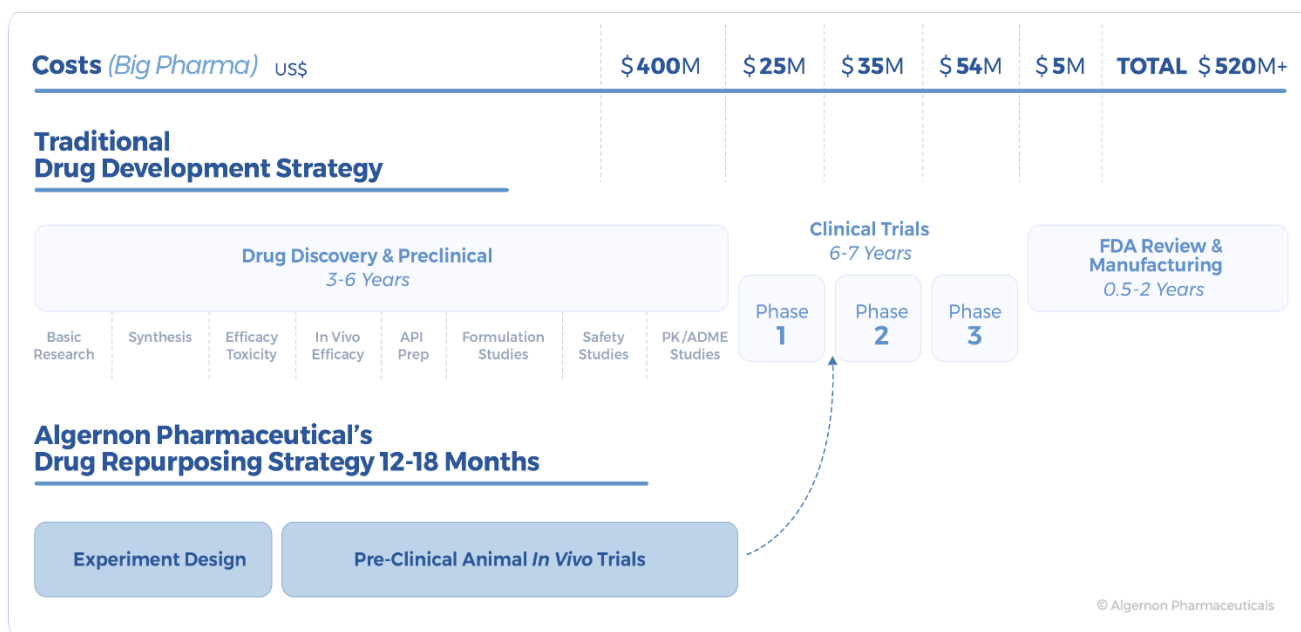
As part of its feasibility study process the Company has developed an investigational brochure for three of its lead compounds. These investigational brochures include a protocol synopsis of the planned study as well as the historical safety data for the compounds.

Since the size of the planned phase II trial (i.e. number of patients) is dependent on the strength of the data achieved from the pre-clinical research, the Company has received initial cost estimates for two phase II trials as part of the feasibility process.

Regulatory – Drug Development

The regulatory pathway for drug development is well established in most major world markets. The most familiar in terms of stages and timing is the FDA pathway which has been estimated for discussion purposes and illustrated in the below diagram.

Drug discovery and pre-clinical describes all of the work and stages prior to testing the compound in human beings. A phase I study is the first point in which the compound begins testing in human beings. All new chemical entities must successfully follow the below pathway in order to achieve regulatory approval and to begin sales to the public.



Algernon’s drug discovery program is based on repurposing drugs that have already been approved. Successful drug repurposing is based on finding new uses for known and safe drugs in order to treat and manage new diseases. Since Algernon’s lead compounds already have a well-established safety history and have already undergone pre-clinical testing when they were originally developed, the compounds are eligible in the market(s) where they were first approved, to be moved directly into off label phase II clinical studies.

Typically, in order for the Company to be able to move its lead compounds into phase II clinical trials, the finished drug product needs to be available for purchase and the drug needs have an active registration in a market where clinical testing can be successfully executed. The next step is for the Company to conduct what is known as an off-label phase II clinical study confirming that the drug shows efficacy in human beings for the new disease.

Since Algernon only screened compounds that were from Russia, Korea, Ukraine and Japan, none of the currently identified finished product manufacturers meet the cGMP standard of production for entry into an FDA study. As a result it is unlikely that the data from the phase II study would be able to be used in a future phase III trial application. However, if any of the Company's lead compounds are successful in their respective phase II studies, the Company would then begin the process of synthesizing and conducting all of the toxicology and safety studies under cGMP and 'good laboratory practice' conditions in order to move forward to phase III study in the U.S.

Prior to a decision to begin synthesizing any compounds, the Company intends to seek out a favourable licensing, partnership or acquisition transaction (as the target) after the completion of a phase II clinical trial that met its primary and/or secondary endpoints.

Development of A Therapy for Chronic Kidney Disease (CKD)

Algernon has a number of potential compounds that are orally administered small molecules, that can be advanced for the treatment and management of CKD. CKD involves the gradual loss of kidney function leading to kidney failure. Advanced stage CKD leads to dangerous accumulation of fluid, electrolytes and waste in the body. CKD can progress to end-stage kidney failure, which is fatal without artificial filtering (dialysis) or a kidney transplant. Treatment for chronic kidney disease focuses on slowing the progression of the kidney damage, usually by controlling the underlying cause.

The Company believes that the global market for CKD drugs will continue to proliferate at a significant pace, driven by the increasing number of CKD patients and the growing need of novel treatments to improve patients' quality of life. According to Research and Markets, the global CKD drugs market was valued at US\$12.4 billion in 2016, and is expected to reach US\$17.4 billion by 2025, expanding at a compound annual growth rate of 3.9% from 2017 to 2025.⁵

On February 23, 2022, the Company announced that it awarded a contract to Ausun to begin the manufacturing of a cGMP supply of its repurposed drug Repirinast and has initiated a new CKD research program. Ausun has now developed and optimized a new synthetic route to Repirinast. The last major step on a full-scale engineering batch has been completed, and final material for toxicology studies and formulation development has been delivered. Ausun has also developed and validated all analytical methods for testing.

Repirinast was originally developed by Mitsubishi and was sold and marketed in Japan under the brand name Romet™ for the treatment of asthma. Romet™ was marketed for over 25 years in Japan. Mitsubishi discontinued manufacturing and sales of the drug in 2013.

Repirinast was approved in Japan for patients with bronchial asthma in 1987, to prevent attacks when administered regularly. A pediatric formulation was also approved in 1990. Unlike most allergy medications, Repirinast does not have a direct antihistaminic effect. The drug acts on mast cells and inhibits the release of chemical mediators by IgE-related antigen antibody interactions.

Repirinast is one of several repurposed drug candidates that were part of Algernon's acquisition of NASH on October 22, 2018.

⁵ <https://www.transparencymarketresearch.com/chronic-kidney-disease.html>

On April 26, 2022, the Company announced that Repirinast reduced fibrosis by 56% with statistical significance in a preclinical study investigating NASH in the STAM™ model from SMC Laboratories (Japan).

In a pre-clinical animal model of kidney fibrosis, Repirinast reduced fibrosis by 50% with statistical significance. It also showed an additive improvement when given in combination with Telmisartan, the latter of which is a blood pressure lowering medication and is considered a front line, standard of care treatment for CKD. As part of the new CKD research program, the Company intends to also investigate the use of Repirinast in acute interstitial nephritis, which causes inflammation of parts of the kidney.

The Company intends to conduct a bridging sub-acute toxicology study when the Repirinast cGMP synthesis is completed. The sub-acute toxicology study is expected to take approximately 90 days. Once completed, the Company plans to begin a small Phase 1 study in calendar Q2, 2023, to determine the bioavailability of its Repirinast finished product.

The Company conducted two separate animal *in vivo* mouse studies using a UUO mouse model of kidney fibrosis conducted by Murigenics.

CKD In Vivo Study # 1, January 2019

In this study, mice were randomly assigned to receive either vehicle or one of the Company's test articles (N = 8 per arm). Animals were subjected to surgical ligation of the left ureter; a negative control group instead underwent a sham procedure. The animals were treated for 14 days, then sacrificed and subjected to histopathological examination. Animals were also observed daily for their general condition. Data were analyzed using two-way ANOVA with a Bonferroni correction for multiple comparisons. Key results from the study were as follows:

- In animals treated with NP-251 (30 mg/kg), there was a 33% reduction in fibrosis as measured by Sirius red staining (p = NS) and a reduction of blood urea nitrogen, a marker of kidney function (p < 0.05) compared to vehicle;
- Telmisartan (5 mg/kg), a positive control in the study and a current standard of care for CKD, reduced fibrosis by 42.2% (p = 0.004); telmisartan also reduced blood urea nitrogen but the reduction was not statistically significant; and
- No adverse effects were observed in any of the treatment groups.

CKD In Vivo Study # 2, March 2019

A second CKD study was performed using the same experimental conditions as the first. Group size was increased (N = 10/arm) and the number of candidates was reduced to increase statistical power. Two doses of NP-251 were tested (30 mg/kg and 90 mg/kg). Telmisartan (3 mg/kg) was again used as a positive control. Cenicriviroc (40 mg/kg), a CCR2/5 chemokine receptor antagonist with reported anti-fibrotic activity, was used as a second positive control. Key results from the study were as follows:

- Telmisartan (3mg/kg), reduced fibrosis by 32.6% (p < 0.001);
- Cenicriviroc (40 mg/kg) reduced fibrosis by 31.9% (p = 0.00032);
- NP-251 (30 mg/kg) reduced fibrosis by 21% (p = NS);
- NP-251 (90 mg/kg) reduced fibrosis by 50.6% (p < 0.000001);
- NP-251 (30 mg/kg) in combination with telmisartan (3 mg/kg) reduced fibrosis by 54.2% (p < 0.000001);

- In the group treated with NP-251 (30 mg/kg) in combination with telmisartan (3 mg/kg) the mass of the fibrotic kidney was lower than the negative control ($p < 0.001$);
- Both doses of NP-251 led to significant reduction in blood urea nitrogen compared to vehicle ($p < 0.05$); and
- No adverse effects were observed in any of the treatment groups.

The Development of a Therapy for IPF and Chronic Cough

IPF is a type of chronic lung disease characterized by a progressive and irreversible decline in lung function and scarring (fibrosis) of the lungs. There is no cure for IPF and there are currently no procedures or medications that can remove the scarring from the lungs.

According to a report from research and consulting firm, GlobalData's, the IPF market is projected to rise from just over US \$900 million in 2015 to US \$3.2 billion by 2025, assuming a CAGR of 13.6%. Such growth is expected to occur across the seven major markets of the USA, France, Germany, Italy, Spain, the UK and Japan, and primarily be driven by the increased use of expensive therapies, the anticipated launches of two novel therapies, FibroGen's FG-3019 and Promedior's PRM-151, and a rise in diagnosed prevalent cases of the disease.

According to a research report from IndustryARC, the cough remedies market size was estimated to be US \$11.40 billion in 2018, and is projected to grow at a CAGR of 6.64% during 2019-2024. Pleasant taste and easy intake of oral syrups are among the key factors driving the global cough remedies market. Some traditional cough remedies include drinking honey, bromelain and bacterial microbes. Further, some new generation cough remedies include corticosteroids, bronchodilators and antibiotics. Currently there is no approved treatment for this condition.

A chronic (persistent) cough is a cough lasting eight weeks or longer in adults, or four weeks in children. Chronic cough can interrupt sleep, cause exhaustion and in severe cases can cause serious vomiting, light-headedness and rib fractures.

A dry, non-productive cough is a very common symptom of IPF. At least 70%-85% of patients with IPF have a dry cough, which can often get worse on exertion.

The company conducted two preclinical studies in a 21-day bleomycin mouse model with established fibrosis in (treatment began on Day 7) conducted by Murigenics.

IPF In Vivo Study #1

Healthy young mice were randomly assigned to receive either vehicle or one of the Company's test articles (N = 10 per arm). Animals were first challenged intratracheally with bleomycin, and fibrosis was allowed to establish for 7 days; a control group received no bleomycin challenge. Then, the animals were treated for 14 days, at which point they were sacrificed, and lung fibrosis measured by trichrome staining and modified Ashcroft scoring. Significance was determined by two-way ANOVA followed by a Bonferroni multiple comparisons test. Throughout the study, animals were also observed for their general condition. Key results were as follows:

- The group treated with the positive control dexamethasone (0.25 mg/kg) experienced a 60% compared to vehicle control ($p < 0.05$).
- Treatment with ifenprodil (30 mg/kg) reduced fibrosis by 34% compared to vehicle, ($p = NS$);

- Radiprodil, which shares the same target and similar pharmacology as Ifenprodil, also reduced fibrosis to a similar level as Ifenprodil at the same dose, suggesting a class effect of the pharmacophore (p = NS);
- Treatment with Pirfenidone (300 mg/kg) reduced fibrosis by 14% compared to vehicle (p = NS). Pirfenidone is a marketed treatment for IPF;
- All groups lost bodyweight in the first seven days; over the next 14 days the animals treated with ifenprodil, radiprodil and dexamethasone recovered to their initial weight, whereas the group treated with pirfenidone did not increase (p = not determined); and
- No other adverse effects were observed in any of the treatment groups.

IPF In Vivo Study #2

A second study under the same experimental conditions was performed with a narrower range of candidates in order to improve statistical power, and included the approved treatments pirfenidone (100 mg/kg twice daily) and nintedanib (40 mg/kg once daily) as positive controls. Lung fibrosis was measured by trichrome staining and modified Ashcroft scoring.

- Pirfenidone (100 mg/kg, twice daily), showed a 44% reduction in fibrosis versus untreated controls (p = NS);
- Nintedanib (40 mg/kg, once daily), showed a 51% reduction in fibrosis versus untreated controls (p < 0.05);
- Ifenprodil (4 mg/kg, thrice daily) showed a 56% reduction in fibrosis versus untreated controls (p = 0.015);
- As in the first experiment, all animals gained weight during the treatment period with the exception of pirfenidone; and
- No other adverse effects were seen in any of the treatment groups.

Acute Cough In Vivo Study

In this study, guinea pigs were pre-treated with the test article or vehicle, then exposed to a citric acid challenge to induce a cough response. The number of coughs and the delay of onset of the first cough were used as measured of efficacy. Gefapixant, a P2X3 inhibitor developed by Merck and in Phase 3 clinical trials for chronic cough was used as a positive control. Statistical significance was determined using one-way ANOVA, with comparisons controlled used a Dunnett's test. The study was performed at Pharmidex.

Data from this study demonstrated that at clinically relevant doses

- Ifenprodil (1.5 mg/kg) showed a reduction of 42% in mean cough frequency versus untreated control (p < 0.01);
- Gefapixant (3.5 mg/kg) showed a 20% reduction in mean cough frequency versus untreated control (p < 0.05); and
- Ifenprodil (59.8 seconds) showed a statistically significant delay in the onset of the first cough when compared to control (34.2 seconds, p < 0.05);
- Gefapixant (49.7 seconds) showed a non-statistically significant delay in the onset of the first cough when compared to control (34.2 seconds, p = NS).

The Company is investigating Ifenprodil for IPF and chronic cough and is conducting a Phase 2 study in Australia and New Zealand. The purpose of this proof-of-concept trial is to determine the efficacy of Ifenprodil in the preservation of lung function in IPF patients (including biomarkers of fibrosis) and its

associated cough. On May 6, 2020, the Company received ethics approval from the Royal Brisbane & Women's Hospital, Human Research Ethics Committee. The Phase 2 IPF and Chronic Cough trial began on August 5, 2020, and it announced top-line data indicating that the study's IPF co-primary endpoint, preservation of lung function determined by no worsening of FVC over 12 weeks, had been met. The Company further reported on July 28, 2022 significant reductions in geometric mean cough counts after both 4 and 12 weeks of treatment. The full data set including additional secondary measures of efficacy, including both objective measurement of lung function and patient-reported outcomes of both IPF and cough was announced on September 1, 2022. All of the data showed positive results, including statistically significant improvements in measures of cough.

Ifenprodil Manufacturing

The Company retained Organic Consultants, Inc. (dba Cascade Chemistry) to produce the API of Ifenprodil. The Company has now completed the process of having the first multi-kilogram batch of cGMP material produced, at which point toxicology studies can begin. The Company filed a pre-IND application with the U.S. FDA to seek guidance on the use of Algernon's planned new propriety injectable and slow-release formulation. The FDA advised that for the toxicology program of the new intravenous Ifenprodil formulation, a single animal 30-day study would be acceptable.

The Development of a Therapy for Stroke

Launch of Clinical Research Program on Dimethyltryptamine

On February 1, 2020, the Company announced the launch a clinical research program for stroke focused on *N,N*-Dimethyltryptamine, a known psychedelic compound that is part of the tryptamine family (other drugs in the tryptamine family include psilocybin and psilocin.) Algernon plans to be the first company globally to pursue DMT for ischemic stroke in humans.

On May 17, 2021, the Company received positive feedback from the FDA regarding its plans to investigate DMT as an adjunct to physical therapy in the rehabilitation of stroke.

On June 17, 2021 the Company announced that all of the required permits and licenses for the manufacture of its cGMP supply of DMT have been received and as a result, was targeting its Phase 1 human study to be conducted at Hammersmith in Q1, 2022.

On September 7, 2021, the Company confirmed in its own preclinical study, that DMT increased the growth of cortical neurons by 40% with statistical significance in one arm of the study, when compared to control. Algernon also reported that the increased growth was achieved with a sub hallucinogenic dose.

On November 1, 2021, the Company announced that it had established the optimum peak stimulation period of 6 hours for neuron outgrowth by DMT in its pre-clinical in vitro study conducted by Charles River Laboratories. Algernon also confirmed that the increased growth was achieved with a sub-hallucinogenic dose.

On November 19, 2021, the Company that it has received positive feedback at a scientific advice meeting from the MHRA. The scientific advice meeting was related to the Company's planned Phase 1/2a stroke study with DMT.

On December 8, 2021, the Company announced that it has completed the manufacturing of its cGMP of DMT at Canadian manufacturer Dalton. The Company believes it has produced a sufficient supply of cGMP DMT to complete its planned Phase 1 and Phase 2 clinical trials.

The Company previously announced that it had filed for a CTIMP application with the MHRA via the combined review service, which provides for a single application route for both clinical trial authorization and ethics approval. The key feedback provided by the MHRA focussed on the IVF of DMT for administration.

The original plan was to complete the IVF in the onsite pharmacy at Hammersmith prior to the Phase 1 DMT study beginning. However, to meet the specifications requested by the MHRA, it was determined that a new vendor would be needed that had additional technical cGMP-suite capabilities.

After working to identify qualified vendors that could perform the needed work in the required time period, the Company selected CHDR to formulate the IVF which work has now been completed. In addition to its fill finish cGMP-suite services, CHDR is also a clinical trial center, performing approximately 60 early-phase clinical studies per year. Based on this, the Company decided to retain CHDR to conduct its Phase 1 study.

The primary focus of Algernon's planned Phase 1 DMT study is to investigate prolonged intravenous infusion of DMT, for durations which have never been clinically studied. The resulting data generated will help the Company to plan both its Phase 2 acute stroke and rehabilitation studies more effectively.

On September 12, 2022, the Company announced it received approval to conduct a Phase 1 clinical study of an IVF of DMT for the treatment of stroke in the Netherlands from the BEBO, an independent MREC. The trial will be conducted at the CHDR in Leiden. DMT is a known psychedelic compound that is part of the tryptamine family. The Company commenced screening subjects on November 16, 2022 and expects to dose the first subject of the study during January 2023.

The Company's decision to investigate DMT and move it into human trials for stroke is based on multiple independent, positive pre-clinical studies demonstrating that DMT helps promote neurogenesis as well as structural and functional neural plasticity. These are key factors involved in the brain's ability to form and reorganize synaptic connections, which are needed following a brain injury.

A recently published pre-clinical study in an animal model for stroke, showed that rats treated with DMT recovered motor function more quickly and to a greater extent and also exhibited lower lesion volumes when compared to control group animals that did not receive DMT. Key data from the study achieved statistical significance.

Unlike other companies recently researching psychedelic drugs, Algernon will be focusing on a sub-hallucinogenic, or microdose of DMT provided by continuous intravenous administration. By pursuing a continuous active microdose, the goal will be to provide patients with the therapeutic benefits of DMT, without having a psychedelic experience. This is an important element when considering treating a patient who has just suffered a stroke, wherein medications that cause a hallucinogenic response would not be preferred.

The Company also believes that a microdosing approach to developing a DMT treatment may enable a much wider review and acceptance of its data, including garnering the early interest of research investigators, the interest of clinical trial patients and ultimately clinical acceptance.

Global Stroke Treatment Market: Overview

According to a 2019 report from Transparency Market Research:

- the global stroke treatment market was valued at approximately US\$8 billion in 2018;
- projected to grow at a CAGR of approximately 7% over the forecast period, the global stroke treatment market is expected to reach a value of approximately US\$15 billion by the year 2027;
- rise in the prevalence of stroke across the world, surge in the elderly patient pool, and rapid rise in comorbidities such as atrial fibrillation, diabetes, and hypertension leading to high risk of developing stroke are anticipated to drive the global stroke treatment market during the forecast period; and
- North America is the leading regional market in the global stroke treatment market, and will continue to have a major share throughout the forecast period of 2019 to 2027.

DMT, or *N,N*-Dimethyltryptamine is a hallucinogenic tryptamine drug producing effects similar to those of other psychedelics like LSD, ketamine, psilocybin and psilocin. DMT occurs naturally in many plant species and animals and has been used in religious ceremonies as a traditional spiritual medicine by indigenous people in the Amazonian basin. DMT can also be synthesized in a laboratory.

At higher doses, DMT has a rapid onset, intense psychedelic effects, and a relatively short duration of action with an estimated half-life of less than fifteen minutes. Like other hallucinogens in the tryptamine family, DMT binds to serotonin receptors to produce euphoria and psychedelic effects. Because the effects of DMT do not last very long, it has been referred to as the “businessman’s trip”.

Named the “Spirit Molecule” by Dr. Rick Strassman, an American clinical associate professor of psychiatry and DMT research pioneer, DMT has been shown to induce neuroplasticity in a number of key pre-clinical studies. DMT is believed to activate pathways involved with forming neuron connections and has been shown in studies to increase the number of dendritic spines on cortical neurons. Dendritic spines form synapses (connections) with other neurons and are a major site of molecular activity in the brain.

While Dr. Strassman’s Phase 1 bolus intravenous human study identified the sub-hallucinogenic dose of DMT in man, another pre-clinical animal study demonstrated this same dose level still retains the neuroplastic effect seen in higher hallucinogenic doses.

Algernon will be investigating an intravenous sub-hallucinogenic dose of DMT in its research and clinical studies.

DMT – Building the Case for Stroke

Data from a study published in *Experimental Neurology*, in May 2020 showed that in a rat model of cerebral ischemia-reperfusion injury, DMT reduced the infarct (dead cells) volume and improved functional recovery.

Key Findings:

- Animals treated with DMT displayed lower lesion volumes than control animals measured by MRI 24 hours following the occlusion ($p = 0.0373$);
- Animals in the DMT group improved motor function more quickly and to a greater extent than the control group; The differences became significant on the 4th day ($p = 0.0325$) and persisted throughout a 30-day follow-up; and
- mRNA expression of brain-derived neurotrophic factor (BDNF) was upregulated in both the peri-infarct cortex ($p = 0.0273$) and contralateral cortex ($p = 0.0048$) as well as in serum ($p < 0.0001$). BDNF is a key facilitator of neuroplasticity.

Algernon's Preclinical Research Plan

The Company intends to conduct a number of pre-clinical research experiments to guide the Company as it advances towards its planned clinical trials. Studies will include:

1. Potency of multiple new forms of DMT;
2. Toxicology;
3. Treatment timing and duration; and
4. DMT in combination with constraint induced movement therapy.

The Company hired Charles River, whose center in Kuopio, Finland is a world leading site for neurologic research, to perform its preclinical studies. Charles River has the necessary controlled-substance permits to carry out research with DMT.

Algernon's DMT Clinical Research Plan

Ischemic Stroke

Each year there are approximately 15 million strokes that occur globally with 700,000 strokes occurring in the U.S. alone. Approximately 85% of all strokes are ischemic strokes, which occur when a blood clot blocks blood flow to the brain.

Currently, medication treatments for ischemic stroke are primarily limited to TPA or blood thinners. However, these treatments are stroke type specific and cannot be given until the patient has received a CT scan to determine if the stroke is ischemic or haemorrhagic. Patients being treated with TPA must receive the drug within 3 hours of the injury. As a result, only 5% of stroke patients receive TPA.

Additional treatment options involve surgical intervention such as catheter embolectomy and decompressive craniotomy.

Based on its pre-clinical data research conducted by others, Algernon plans to test DMT in the clinic in patients as soon as possible after the stroke injury occurs. If it is established in the Company's pre-clinical research phase that DMT can be used to treat both haemorrhagic and ischemic stroke, the patient will not have to wait for a CT scan and treatment can begin immediately, possibly while being transported to the hospital.

Algernon's pre-clinical research is designed to help establish the optimal treatment period duration for DMT as well as the clinically effective sub-hallucinogenic dose.

Post-Stroke Rehabilitation

Sixty-five percent of stroke survivors will end up with from some form of disability after having suffered a stroke. Intensive physical rehabilitation has been shown by researchers to improve function and reduce long-term disability.

While Algernon will investigate DMT to treat a patient as quickly as possible after the stroke occurs, it will also investigate the potential of the drug as a treatment during the rehabilitative process. Rehabilitation therapy, which includes motor-skill exercises, mobility training and range-of-motion therapy, and can begin as soon as 24 to 48 hours after the stroke has occurred.

One specific type of rehabilitation therapy is called Constraint-induced Movement Therapy (“**CIMT**”). It is focused on improving upper extremity function in stroke patients and involves intensive training of the weaker arm while restricting the use of the stronger arm.

Algernon will investigate DMT in pre-clinical animal models of CIMT for the promotion of neurogenesis and structural and functional neural plasticity during various time periods after the stroke has occurred.

If the final data is positive, the Company will move DMT into a separate clinical trial to test for its efficacy as a post stroke rehabilitation adjunctive treatment.

Pathway to Clinic

Pre-IND U.S. FDA & Scientific Advice Meeting UK MHRA

Based on historical data showing that several DMT Phase 1 studies have already been conducted, the Company believes that it will be able to use this data to seek approval to begin its own Phase 1 study without having to complete certain toxicology work, but can give no assurance either the FDA or Health Canada will agree.

In a Pre-IND request submitted March 16, 2021, Algernon sought direction from the FDA regarding the design and scope of the Company’s preclinical and early phase stroke clinical programs. The FDA response showed they are in agreement with the Company’s planned preclinical efficacy experiments and offered guidance with regards to supportive preclinical safety studies. In addition, the FDA provided valuable input into the design of the Company’s planned Phase 1 clinical trial, which will be conducted through CHDR in the Netherlands, beginning in January 2023.

The Company filed a Scientific Advice Meeting Request with the UK MHRA in order to obtain additional insight and options for the Company’s planned clinical research program. The meeting was held on November 18, 2021. The Agency was supportive of the Company’s proposed clinical plans, and confirmed that no additional preclinical studies were necessary in order to begin human trials in the United Kingdom.

U.S. FDA

At present, the Company’s business activities surrounding DMT are strictly based on either pre-clinical research or clinical trials being conducted by third parties. The regulatory steps required to gain approval for DMT are the same as any other drug or compound being studied. While each global jurisdiction has their own approval process (which often defaults to FDA approval) the FDA rules and guidelines are considered the gold standard. The drug approval process includes successfully navigating through Phase 1, 2 and 3 clinical studies and based on the strength of the data, applying for marketing approval. Since

DMT is currently a Schedule 1 drug, for DMT to be approved in the U.S. for sale, there will need to be some communication and agreement between the FDA and the DEA to allow for its sale for a clinical purpose in the U.S.

The Company also believes that a microdosing approach to developing a DMT treatment may enable a much wider review and acceptance of its data, including garnering the early interest of research investigators, the interest of clinical trial patients and ultimately clinical acceptance.

Regardless of where the Company's clinical trial will be conducted, only the various parties that manufacture, ship, receive and handle DMT will be required to have all required licenses and permits and the Company will be undertaking to ensure that these are all in order. DMT is a controlled substance in most countries globally and the import and export of it is closely scrutinized and monitored.

Pre-Clinical Research

The Company retained Charles River to conduct its preclinical research. Research grade DMT was secured from TRC in order to conduct this research which has now been concluded.

Phase 1 DMT Study

The purpose of the study is to identify the safety, tolerability, and pharmacokinetics of DMT when administered as an intravenous bolus followed by prolonged infusion, for durations which the Company believes have never been studied clinically. In addition, several pharmacodynamic measures believed to be associated with neuroplasticity, including both measurements of biochemical markers and electroencephalographic readings, will be recorded.

The Company will need to engage a contract research organization in order to conduct Phase 2 clinical trial.

Research-Grade DMT Manufacturing

The Company retained Charles River to conduct its preclinical research. Research grade DMT was secured from TRC in order to conduct this research which has now been concluded.

Clinical-Grade DMT Manufacturing

The Company awarded the contract to manufacture its cGMP (clinical grade (for human use) material) DMT to Dalton. The DMT produced by Dalton is intended for use in the Company's Phase 1 clinical trials. Dalton is a Health Canada approved GMP contract provider of integrated chemistry, drug development and manufacturing services to the pharmaceutical and biotechnology industries. Dalton holds a dealer's license with Health Canada under the CDSA that allows Dalton to possess, produce, assemble, sell, send, transport and deliver controlled substances.

On July 17, 2021 the Company announced that all of the required permits and licenses for the manufacture and export of its cGMP supply of DMT had been received by Dalton and that they have commenced synthesis of DMT for the Company.

On December 8, 2021, the Company announced that it has completed the manufacturing of its cGMP of DMT at Canadian manufacturer Dalton. The Company believes it has produced a sufficient supply of cGMP DMT to complete its planned Phase 1 and Phase 2 clinical trials.

CRO's

Algernon has retained CRO Clinical Development Solutions, to support all aspects of the investigational brochure, study protocol and Pre-IND and IND application with the FDA as well as the CTA with Health Canada. Clinical Development Solutions will provide high-level oversight and management of all clinical trials.

The Company has also retained Novotech to conduct a feasibility study for Algernon to conduct all or part of its DMT stroke clinical research program in Australia. The Company has currently engaged Novotech for its Phase 2 clinical study for idiopathic pulmonary fibrosis and Chronic Cough. Australia is a favoured country for clinical research because of its government supported 43.5% refundable tax credit program.

Intellectual Property

Algernon has filed new provisional patent applications for new forms of DMT, in addition to formulation, dosage and method of use claims for ischemic stroke. The Company has also filed claims for combination therapy of DMT and CIMT.

On January 24, 2022, the Company disclosed that as part of its intellectual property patent applications filed in early 2021 for DMT, the Company included novel salt forms of DMT. A novel salt form of a drug is a new and separate structure from the original compound and is considered a new composition of matter.

Many drug compounds' core structures can often be paired with a salt. Different salts can improve the core drug in several ways, including improved efficacy, safety/tolerability, and stability.

The Company believes that it has maximized its intellectual property position around DMT, which includes filing patent applications for new novel salt forms, as outlined herein, as well as dosing, formulation, and method of use patent applications for stroke rehabilitation.

On July 5, 2022, the Company disclosed that as part of its intellectual property patent applications filed in early calendar 2021 for DMT, the Company included nicotinate and pamoate as novel salt forms of DMT. The Company also announces that in its own binding study of nicotinate and pamoate, the salts showed, when compared to fumarate, the most studied form of DMT, that they had similar binding to the 5-HT_{2A} and sigma-1 receptors; key receptors in the brain that are activated by DMT.

The Development of a Therapy for Pancreatic Cancer

The Company has initiated a new clinical research program for pancreatic cancer ("PC") and Ifenprodil. PC is an orphan disease and has a five-year survival rate of 7.9%. This means that only approximately 8 in 100 people will have survived for five years and beyond. The 10-year survival rate of the disease is 1%, meaning only approximately 1 in 100 people survive 10 years and beyond. PC has the lowest 5-year survival rate of any of the 22 common cancers.

The global pancreatic cancer treatment market is expected to reach US\$4.2 billion in 2025, according to a new report by Grand View Research, Inc. Increasing tobacco consumption, smoking, obesity, and

growing awareness pertaining to various treatment options available are propelling the market growth at a global level. The peak incidence of pancreatic cancer is seen in the age group of 65 to 75 years. This expanding geriatric population is also expected to drive the growth during the forecast period.

Ifenprodil demonstrated a significant anti-tumour effect in a PC animal model which was reported in a paper published in the Dove Press Journal, Clinical Pharmacology: Advances and Applications. The research paper concluded that Ifenprodil significantly and rapidly reduced the average solid tumour size by approximately 50% by day three and remained stable while on treatment in a murine model of PC. The average tumour size in the untreated group doubled during the same period.

The Company signed a license agreement with Dartmouth College for the rights to a patent that covers, Methods for diagnosing and treating neuroendocrine cancer, specific to NMDA receptors.

The Company is in the process of determining the next steps for the research program.

The Development of a Therapy for Small Cell Lung Cancer

The Company has initiated a new clinical research program for small cell lung cancer (“SCLC”). SCLC is a high-grade neuroendocrine carcinoma arising predominantly in current or former smokers and has an exceptionally poor prognosis. SCLC makes up about 15% of lung cancer cases.

According to Fortune Business Insights, the global lung cancer therapeutics market size was valued at US\$18,327.6 million in 2018 and is projected to reach US\$48,725.9 million by 2026, exhibiting a CAGR of 13.0% in the forecast period (2019-2026).

The Company signed a license agreement with Dartmouth College for the rights to a patent that covers, Methods for diagnosing and treating neuroendocrine cancer, specific to NMDA receptors.

The Company is in the process of determining the next steps for the research program.

The Development of a Therapy for COVID-19

On July 6, 2021, Algernon announced that it would not be advancing Ifenprodil into a Phase 3 clinical study for COVID-19. The Company’s decision was based on several factors including the overall finding of the Phase 2b study final data set, the global rate of vaccinations to date, other COVID-19 drug treatment programs under development, the projected trial size, costs and timelines needed to successfully complete a Phase 3 trial. Feedback recently received from the U.S. FDA regarding the end of Phase 2 meeting request was also informative.

Agreement with Yale for the Investigation of Multiple Intravenous Doses of DMT for the Treatment of Depression

On October 24, 2022, the Company entered an Investigator-Initiated CTA with Yale for the investigation of multiple intravenous doses of DMT for the treatment of depression. The trial’s principal investigator is Professor Deepak Cyril D’Souza, an experienced researcher with DMT and other controlled substances.

As part of the CTA, Algernon will provide cGMP DMT for the study. In return, Algernon will jointly own IP around the clinical use of DMT arising from the study developed jointly by Algernon and Yale, and the option to negotiate licenses to both IP developed jointly and IP developed solely by Yale, subject to rights

reserved by the United States Government in conjunction with publicly funded research. In addition, the Company will receive data from the study, which may assist in its DMT stroke research program.

Safety History of Lead Compounds

Ifenprodil

Ifenprodil was developed in France and introduced into the Japanese market in 1982 by a global pharmaceutical company. It was withdrawn from the French market in 2014 owing to a lack of risk/benefit analysis but is still available in Japan as a generic drug. Since its origin, there have been a number of clinical trials investigating its use in other diseases, as summarized below:

1. Circulatory System Related Disorders (4,821 Patients over one 1 Year);
2. Circulatory Issues (94 Patients over six months);
3. Alcohol Dependence (46 Patients over three months); and
4. COVID – 19 (150 patients over 8 months).

The Company who marketed 26fenprodil in Japan published a safety report summarizing adverse event data from clinical trials (983 patients) as well as post-marketing surveillance (14,035 patients). The incidence of adverse drug reactions was 2.26% (340/15,018). The most commonly observed reactions were dry mouth, 0.25% (37 cases), nausea/29fenprod, 0.23% (35 cases), and rash, 0.23% (34 cases). None of the reported effects were described as serious. In addition, there were no clinically significant cases with abnormal laboratory values

Note: No significant adverse side effects were reported from third party studies 1-3 above. In addition, the Company conducted its own 150 patient Phase 2b/3 human study of Ifenprodil for the treatment of COVID-19. The external Data and Safety Monitoring Board completed its review at the conclusion of the Phase 2b part of the study and provided approval for the Company to continue with the Phase 3 part of the study further confirming the drug's safety, and no differences in adverse event rates were observed between groups treated with Ifenprodil and group receiving standard of care treatment with no Ifenprodil.

Ifenprodil is contraindicated in patients who are believed to have incomplete hemostasis following an intracranial hemorrhagic attack, and is not recommended for use in pregnant women, in patients with low blood pressure, increased heart rate, or immediately after cerebral infarction. Concomittant use with droxidopa or with drug which cause bleeding is prohibited.

DMT

DMT has a long history of use but has not been approved of in any jurisdiction of note. DMT was first found to be psychedelic by the Hungarian chemist Stephen Szára in the 1950s. In the 60s it was discovered in the human body, with research suggesting it is synthesised in lungs and the pineal gland in the brain. It is now believed to be widespread throughout the natural kingdom, in thousands of plants, and in every mammal that has been investigated so far. DMT is typically consumed as part of South American psychoactive brew known as ayahuasca which has been in use for over 500 years. Due to abuse, in the 70s, DMT was placed into a restrictive legal category, and research was halted.

In the 90's Strassman conducted a dose response study to IV infusion of DMT (hallucinogenic and sub-hallucinogenic) into experienced hallucinogen users. Findings were that peak blood levels were seen after 2 minutes and were negligible after 30 minutes. DMT dose dependently elevated blood pressure, heart

rate pupil diameter, rectal temperature, as well as blood levels of beta-endorphin, corticotropin, cortisol and prolactin. Growth hormone rose equally in response to all administered doses. All thresholds for effects to be deemed significant occurred at doses classified as hallucinogenic. Although one subject had to withdraw due to a marked diastolic blood pressure response, the study concluded that the drug could be administered with no safety concerns even at hallucinogenic doses.

A resurging interest in psychoactive compounds with data indicating neuroplastic effects has spurred numerous studies for efficacy in neurodegenerative conditions ranging from depression to stroke with regulators approving of DMT for clinical trials at doses high enough to trigger a psychedelic experience. Timmermann et al. also treated healthy volunteers with DMT through IV infusion, and found similar results to Strassman in that peak blood levels were found 2-3 minutes after infusion and remained significantly higher than placebo for 17 minutes. Timmermann also did not note any safety concerns about DMT infusion as the only subject to be excluded from the study was due excessive movement artifacts during EEG.

Clinical information on the safety of DMT, outside of use as an ingredient within ayahuasca, is limited but Algernon is unaware of any expressing significant safety concerns. Several studies regarding consumption of ayahuasca have been conducted finding significant adverse effects to be rare, with nausea, vomiting, diarrhoea, and hypertension being most commonly reported. Nausea, vomiting and diarrhea are known side effects of the harmala alkaloids which are also components of ayahuasca.

Repirinast

Repirinast was developed in Japan and approved in 1987. Repirinast is no longer available in Japan where it was initially approved as an anti-allergy medication. It was withdrawn from the market in 2014 for sales reasons.

Note: The company who marketed Repirinast in Japan published a safety report summarizing adverse event data from clinical trials (837 patients) as well as post-marketing surveillance (20,050 patients). The incidence of adverse drug reactions was 0.97% (197/20,887). The most commonly observed reactions were nausea, 0.14% (30 cases), rash, 0.10% (23 cases), and gastric discomfort, 0.06% (13 cases). None of the reported effects were described as serious, and the drug was approved for both adult and pediatric use.

Competitive Conditions

CKD

Currently, there is no known cure for CKD; however, according to the Mayo clinic, depending on the underlying cause, some types of kidney disease can be treated.

Treatment usually consists of measures to help control symptoms, reduce complications, and slow progression of the disease. If the kidneys become too severely damaged through fibrosis and progress to end-stage kidney disease, dialysis or a kidney transplant are the only interventions available.

The majority of drugs are used to treat the often associated high blood pressure (e.g. angiotensin converting enzyme inhibitors, ACE inhibitors: angiotensin receptor blockers, ARBs) in patients at risk of, or are developing CKD. The CKD market is growing, owing to an increasingly older population who are more susceptible to age related diseases such as diabetes and cardiovascular disorders. With respect to

the latter complication, patients with chronic CKD often experience high levels of bad cholesterol, which can increase the risk of heart disease, thus cholesterol lowering agents are often prescribed to patients. Anemia is also a common complication of CKD and therapies such as erythropoietin is often prescribed.

Algernon believes that its compound Repirinast, which demonstrated anti-fibrotic activity in a commonly used model of CKD, is an attractive candidate for development. The compound does not appear to possess anti-hypertensive activity which is important to nephrologists who already have many effective, genericized blood pressure lowering agents available to them.

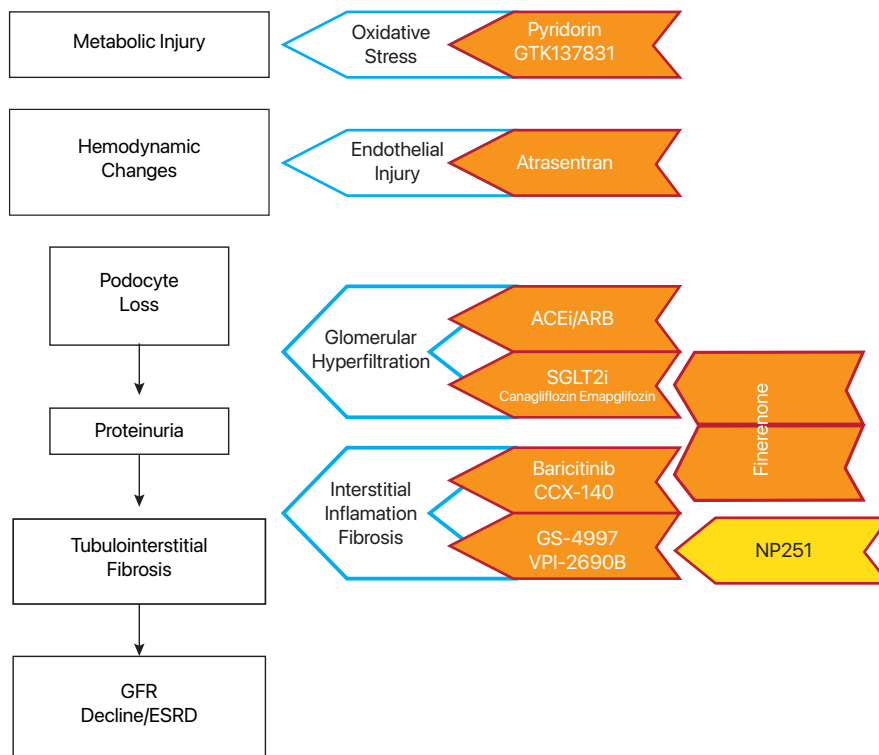
CKD Phase 2/3 Compounds in Development (not Targeting CKD Complications, e.g. anemia)

T	Pyridorin	Nephrogenyx	AGE inhibitor (bankruptcy)
2	GTK831	Genkyotex	NOX1/4 inhibitor
T	Atrasentan	Abbvie	ET-1 inhibitor
3	Canagliflozine	J&J	SGLT1 inhibitor
3	Finerenone	Bayer	non-steroidal selective mineral corticoid receptor
2	Baricitinib	Incyte	JAK1/2 inhibitor (approved for RA)
2	CCX140	Chemocentryx	CCR2 inhibitor (on hold)
2	CTP-499	Concert	PDE inhibitor (out-licensed unknown status)
2	Seloncertib	Gilead	ASK-1 inhibitor (note Phase 3 NASH failure)
2	VPI-2690B	Janssen	alpha-5-beta-3 integrin-IGF-1 mAb
2	SER150	Serodus	TXA2-synthase and TX receptor antagonist

Legend: 2 = Phase 2 Trial 3 = Phase 3 Trial T = Trial Terminated

Product Positioning

Based on the data from the pre-clinical animal research models, the Company believes the product placement of its compounds are likely to be used in the later stages of the disease (post development of glomerulonephritis) where there are currently no approved therapies.



Semin Nephrol. 2016 Nov; 36(6):436-447

IPF & Chronic Cough

IPF

IPF is a fatal disease involving scarring of the lungs. When diagnosed, patients typically have a 3-5 year life expectancy. The condition is rare and is considered an orphan disease. There are two approved treatments for IPF, Nintedanib and Pirfenidone, although there are multiple drugs in clinical trials for IPF.

IPF is a type of interstitial lung disease in which the lung tissues are damaged, thereby reducing its oxygen delivering capacity. Increase in incidence of fibrotic diseases poses a high risk factor for IPF.

In addition, the Company believes that a rise in the geriatric population or a surge in the cigarette smoking population could boost the market growth.

One of the clinical problems with a subset of IPF patients is a persistent cough. To the Company's knowledge, no reliable data on the prevalence of cough in IPF exist. Some studies report that up to 80% of patients experience Chronic Cough; however, lower numbers are also reported. The Company believed this may be attributed to the method of reporting and the definition of cough used (any cough *versus* disabling cough). When cough is present in IPF, it is severe and difficult to treat.

IPF Phase 2/3 Compounds in Development

Phase	Compound
3	Antimicrobial Therapy
2	Autoantibody Reductive therapy
2	BLD-2660
2	CC-90001
2	Danazol
2	GB0139
2	GKT137831
3	GLPG1690
2	HEC 68498
2	IDL-2965
2	iNO
2	KD025
2	MN-001
2	ND-L02-s0201
3	Pamrevlumab
2	PLN-74809
2	PRM-151
2	Rituximab
2	RVT-1601
2	VAY736

Chronic Cough

Chronic cough is defined as a cough lasting for at least eight weeks. In the general population it has a prevalence of 9% to 33% in the United States and Europe. It is a frequent reason for seeking medical advice, with a high number of medical consultations.

Although at present, to the Company's knowledge, there are no approved treatments, Gefapixant recently reported positive Phase 3 data, but the drug causes issues of taste disturbance with a large fraction of patients.

Chronic Cough Phase 2/3 Compounds in Development

There are several drugs in development for Chronic Cough including TRP modulators, NK1 Antagonists, and P2X3 antagonists ranging from early pre-clinical to phase 3.

Product Positioning

Algeron believes Ifenprodil has an attractive profile in the treatment paradigm of IPF owing its ability to reduce fibrosis and cough frequency. The compound also has minimal known issues with respect to taste disturbance and diarrhea which affects up to 60% of patients taking Nintedanib. Owing to the multi-year regulatory exclusivity afforded to orphan diseases, the preferred indication is IPF.

Stroke

Worldwide, 16.9 million people suffer a first stroke each year, resulting in about 33 million stroke survivors and 5.9 million stroke-related death making stroke the second or third most common cause of death and one of the main causes of acquired adult disability. Approximately 80% of these survivors have motor impairments of the upper limb that gravely affect their ability to perform activities of daily living (ADL), as well as social participation.

Previous studies showed that the severity of upper limb paresis is an independent determinant of the outcome of basic activities of daily living (ADL) post stroke. CIMT or modified versions of CIMT (mCIMT) are currently considered the most effective treatment regimens in physical therapy to improve the outcome of the upper paretic limb. CIMT is a treatment technique to improve the arm motor ability and functional use of a paretic arm-hand. CIMT forces the use of the affected side by restraining the unaffected side. Clinical practice guidelines recommend at least 45 minutes of each relevant stroke rehabilitation therapy for a minimum of 5 days per week (NICE 2013). In practice, CIMT therapy is typically initiated as soon as possible after occurrence of the stroke and is done in a repetitive manner in sessions from 30 minutes to six hours, 2-7 times a week for as short as two weeks up to 12 weeks of treatment.

Stroke Phase 1/2/3 Recent Approvals and Compounds in Development

2	OSU61621	Carlson Research	Monoamine stabilizer
3	nerinetide	NoNo	PSD-95 Inhibitor
2	3K3A-APC	ZZ Biotech	Blood clotting and inflammation modulator
M	tPA	Roche	thrombolytic
2	BIIB093	Biogen	SUR1-TRPM4 inhibitor
1	LT-3001	Lumosa Therapeutics	Antioxidant/free radical scavenger

Product Positioning

Algeron believes its protections filed for DMT will allow Algeron to capitalize on the compound for uses in stroke as a therapeutic and help fill the gap in approved treatments for acute ischemic stroke. Currently the only approved treatment is tPA which has the side effects of bleeding (gastrointestinal, genitourinary, nose, gums), bruising, and a plethora of other less severe side effects.

DMT, through its action on the sigma-1 and 5HT2a receptors, impacts many physiological processes including inflammation, neuronal plasticity, and cell survival. In vivo models of stroke showed a significantly lower ischemic lesion volume and better functional recovery when rats were treated with DMT.

This preclinical data and the fact that DMT has a proven safety history, clinical approvals (Small Pharma), garnered from long term use and successful clinical trial approvals, gives Algeron the belief that DMT will prove an effective therapeutic for acute ischemic stroke when used in conjunction with established therapies such as CIMT. Algeron is moving quickly towards approval of their phase 1 study design for use of DMT in a human patient population.

Algernon announced preliminary results from the Company's preclinical *in vitro* study performed at Charles River's neurological research site in Kuopio, Finland. In this study, rat cortical neurons were exposed for one hour to DMT, then allowed to grow for three days. Sub-psychedelic doses of DMT led to an increase of up to 40% in the number of processes compared to vehicle, and statistically significant growth was achieved with doses as low as 10 picomolar.

Pancreatic Cancer

Pancreatic cancer has a 5-year survival rate of 10.8%, with an estimated ~60,000 new cases, and ~48,000 new deaths projected for 2021 (Surveillance, Epidemiology, and End Results Program). Rates of pancreatic cancer have been increasing over the last two decades, from 11.6/100,000 to 13.7/100,000. Surgical resection is preferred for first line treatment if possible (NCCN guidelines). This can include neoadjuvant therapy, adjuvant therapy, and first line chemotherapy regimens. Most regimens recommend FOLFIRINOX, gemcitabine or some combination with these therapeutics. If caught very early there is small chance (10%) of becoming disease free, otherwise median survival times for newly diagnosed localized disease range from 3-3.5 years. Survival time for advanced disease drops to 2-6 months. The addition of new treatment options that could extend these survival times would be beneficial to these population of patients.

Pancreatic Cancer Phase 1/2 Recent Approvals and Compounds in Development

M	Lynparza	Astrazeneca	PARP inhibitor
M	Keytruda	Merck	PD-1 checkpoint inhibitor
2	APX005M	Apexigen	CD40 immunomodulator
2	Niraparib	GSK	PARP inhibitor
2	BPM31510	Berg	Metabolic modulator
1	BYL719	Novartis	PI3K α inhibitor
1	Z650	Sunshine Lake Pharma Co	EGFr antagonist

Product Positioning

Ifenprodil was shown to decrease tumor size in nu/nu mice xenografts utilizing the PanC-1 cell line. Based on the results of preclinical studies as well as Ifenprodil's established safety record, Algernon believes the compound is a clinically attractive candidate for pancreatic cancer with additional cell lines with more specific staging to be investigated. Intellectual property positioning has been established with licensing of the use of Ifenprodil like compounds for treatment of pancreatic cancer. Owing to the multi-year regulatory exclusivity afforded to orphan diseases, this would be another preferred route of protections.

Small Cell Lung Cancer

Small cell lung cancer has a 5-year survival rate of 7% overall (localized 27%, regional 16%, distant 3%) and comprises 14% all lung cancers present in the United States (Surveillance, Epidemiology, and End Results Program). The incidence of SCLC is dropping in countries such as the US, likely due to decrease tobacco consumption, although this may not be same in other countries. Tumours in patients initially diagnoses with SCLC often respond well to initial chemotherapy, however relapse rates are high and median survival is 18-24 months (NCCN guidelines). No major treatment advances have occurred over the past 30 years for SCLC. The last major approval was for topotecan for second line treatment in 1996, by the FDA. Small cell lung cancer was declared a “recalcitrant” cancer in the United States, indicating the strong unmet need for further therapies in this indication.

Small Cell Lung Cancer Phase 1/2 Recent Approvals and Compounds in Development

M	Zepzeca	Jazz Pharmaceuticals	Transcription inhibitor
M	Imfinzi	Astrazeneca	PD-Li immunomodulator
2	Anlotinib	Chia Tai Tianqing Pharamceutical Group	Tyrosine kinase inhibitor
2	Prexasertib	Eli Lilly	Checkpoint kinase inhibitor
2	Adavosertib	Astrazeneca	WEE1 inhibitor
1	olaparib	Astrazeneca	PARP inhibitor
1	IBI318	Innovent Biologics	PD-1/PD-L1 antibody
2	Veliparib	Abbvie	PARP inhibitor

Product Positioning

Ifenprodil was shown to largely prevent tumor growth in nu/nu mice xenografts utilizing the NCI H82 cell line. The effect was improved when Ifenprodil was combined with standard of care treatment, topotecan. Based on the results of preclinical studies as well as Ifenprodil established safety record, Algernon believes the compound is well positioned to be used in treatment of metastatic small cell lung cancer with additional stage derived cell lines to be investigated.

Intellectual Property – Drug Program

Filing	Compounds	Jurisdiction	Filing Number	Protections	Owned/ Licensed	Expiration Date	Status
Compositions and Methods for Treating Kidney Disorders (PCT/CA2019/0508 81)	Iguritimod, Repirinast, Lobenzarit, Actarit, Ifenprodil, Bemithyl, Bromantane, Emoxypine, Udenafil, Istradefyllne	Japan	2021522114	Use of compounds for treating kidney disorders	Owned	25-Jun-2039	Pending
		Canada	3105127		Owned		Pending
		Europe	19827430.0		Owned		Pending
		United States	17/255,364		Owned		Pending

		Europe	22165288.2		Owned		Pending
		China	201980043698.6		Owned		Pending
Compositions and Methods for Treating NASH	Cepharanthine, Repirinast, Ifenoprodil Hemitartrate, Bromantane, Suplatast Hemitartrate, Actarit, Lobenzarit, Irsogladine, Istradefylline, Trapadil, Bemithyl, Cencriviroc	Japan	2051-512244	Use of compounds for treating non-alcoholic fatty liver disease, and in particular, the use of particular test compounds for treating non-alcoholic fatty liver disease, non-alcoholic fatty liver, and non-alcoholic steatohepatitis	Owned	03-Jul-2039	Pending
		Canada	3105850		Owned		Pending
		Europe	19829889.5		Owned		Pending
		United States	17/258,402		Owned		Pending
		China	112654357		Owned		Pending
Compositions and Methods for Treating Cough	Ifenprodil, Radiprodil, Glutamate 2b receptor antagonists, Traxoprodil, Rislenmdaz, Eliprodil, Ro-25-6981, BMT-108908, EVT-101, CP101-606, MK-0657, EVT-103, AZD 6765, SSRIs, Fluoxetine, Excitalpram, donepezil	United States	17/771,664	Use of compounds for treating a cough, and in particular, the use of glutamate 2b receptor antagonists such as Ifenprodil and Radiprodil for treating a cough	Owned	06-Mar-2040	Pending
		Europe	20882816.0		Owned		Pending
		China	202050073092		Owned		Pending
		Japan	2022-525062		Owned		Pending
		Canada	3155464		Owned		Pending
	Bromantane, Ifenprodil,	China	202080014848	Use of compounds	Owned		Pending

Compositions and Methods for Treating IPF	Radiprodil, Bemithyl, Repirinast, Glutamate 2b receptor antagonists, Traxoprodil, Rislenmdaz, Eliprodil, Ro-25-6981, BMT-108908, EVT-101, CP101-606, MK-0657, EVT-103, AZD 6765, SSRIs, Fluvoxamine, Fluoxetine, Excitalpram, donepezil	United States	17/424,070	for treating fibrosis in the lungs, and in particular, the use of Bromantane, Ifenprodil, Radiprodil, Bemithyl, and/or Repirinast for treating chronic lung disease, including idiopathic pulmonary fibrosis	Owned	14-Feb-2040	Pending
		Europe	20754897.5		Owned		Pending
		Canada	3101853		Owned		Issued
		Canada	3154792		Owned		Pending
		Japan	2021-547495		Owned		Pending

Compounds for Treatment of IBD and Methods Thereof	Emoxypine, Glut2B antagonists, Ifenprodil, Radiprodil, Traxoprodil, Rislenmdaz, Eliprodil, Ro-25-6981, BMT-108908	United States	17/258,393	The use of compounds for treating inflammatory bowel disease, and in particular, the use of glutamate 2b receptor antagonists, and/or emoxypine, for treating inflammatory bowel disease, ulcerative colitis (UC), and Crohn's Disease	Owned	03-Jul-2039	Pending
		Canada	3105834		Owned		Pending
		Europe	19830563.3		Owned		Abandoned
Methods for diagnosing and treating neuroendocrine cancer	GluN2 receptor antagonists	United States	13/895,682	Method for treating cancer	Licensed	19-Apr-2026	Granted
Ifenprodil salts and therapeutic uses thereof	ifenprodil oleate, ifenprodil nicotinate, ifenprodil pamoate,	PCT	PCT/CA2022/051566	Compounds and methods for treating NR2B	Owned	25-Oct-41 (assuming)	PCT

	ifenprodil fumarate, and ifenprodil benzoate			related diseases		national entry)	
DMT salts and their use to treat brain injury	pamoate DMT and nicotinate DMT	PCT	PCT/CA2022/050121	Compounds and treat brain injury such as stroke, multiple sclerosis, Parkinson's disease, and traumatic brain injury, including haemorrhagic stroke	Owned	29-Jan-41 (assuming national entry)	PCT

The Company's major assets revolve around a number of method of use, dosing, and formulation patents that have been filed protecting its key scientific discoveries. All of Algernon's lead compounds' original composition of matter patents have expired, or in the case of DMT which is naturally occurring, a composition of matter patent was not possible and had never been issued. Prior to the selection of the initial 11 drug compounds that were selected for screening, an initial intellectual property search was conducted in order to gain insight on the intellectual property landscape for these compounds. Once the initial *in vivo* animal research studies were concluded for each disease, searches were conducted by two independent leading Canadian intellectual property law firms confirming the suitability for filing new method of use, dosing, and formulation patents. Once the searches were completed, provisional patents were filed for all of the active compounds from each of the research studies.

Where Algernon deemed it necessary, and based on intellectual property searches for uses of the Company's lead compounds, the Company has also taken certain lead compounds and has additionally filed patents for modifications and derivatives of said compounds. This approach will minimize the risk of a third party trying to make small structural changes to Algernon's lead compounds and filing new composition of matter patents. This strategy was designed to help convince potential competitors that exploring a partnership or licensing agreement with the Company would be more productive than trying to compete by developing a new NCE program for derivatives developed around the core structure of the Company's lead compounds.

The Company signed a license agreement with Dartmouth College for the rights to a patent that covers, Methods for diagnosing and treating neuroendocrine cancer, specific to NMDA receptors. This patent will provide some freedom to operate of the ifenprodil pancreatic and small cell lung cancer research program should the drug show efficacy and reach regulatory approval.

Two of the diseases that the Company is pursuing, are orphan indications including IPF and pancreatic cancer. Orphan Indication means a disease that affects less than two hundred thousand (200,000) people in the United States as defined by the Food and Drug Administration or five (5) in ten thousand (10,000)

people in the European Union as defined by the European Medicines Agency. Orphan Drug Designation confers numerous benefits to the development of new products, including clinical protocol assistance and, upon marketing authorization, assures marketing exclusivity for a period of up to seven years in the U.S. and up to ten years in the EU once the medicine is on the market.

Risk Assessment and Contingency Plan

Circumstances may occur where the Company is not able to access currently available and approved finished product for any of its lead compounds, and or may not able to gain approval to conduct any phase II trials in markets where the current drug is approved. Should this occur, the Company will proceed to synthesize its lead compounds through a global cGMP contract manufacturer. The Company will conduct all of the pre-clinical toxicological testing required of a new NCE program, which could take up to 18 months. In addition, before a phase II study can begin with the new material, a phase I dosing study will need to be completed, which could take approximately six months to complete.

While this contingency approach is expected to add an additional 24 months to the product development timeline before a phase I trial can be conducted, the Company will have considerable flexibility to conduct a phase I trial in a number of geographical regulatory jurisdictions including in the U.S.

Regulatory Regimes (Canada, the EU and the U.S)

Drug Scheduling Regulations

Canada

Certain psychoactive compounds, such as DMT, are considered controlled substances under the CDSA. DMT and any salt thereof, is listed under Schedule III of the CDSA. The possession, sale or distribution of controlled substances is prohibited unless specifically permitted by the government. Penalties for contravention of the CDSA related to Schedule I substances are the most punitive, with Schedule II being less punitive than Schedule I, Schedule III being less punitive than Schedule I and II and so forth. A party may seek government approval for a Section 56 Exemption to allow for the possession, transport or production of a controlled substance for medical or scientific purposes, as discussed in further detail below under the heading “*Regulatory Approvals Required for Studies (Canada, the EU and the U.S.) – Canada*”.

Health Canada regulates all health products in Canada, and a health product may only be sold in Canada with the permission of Health Canada. During its evaluation of the safety, efficacy and quality of each health product, Health Canada determines whether a drug should be a controlled substance, a prescription drug or a non-prescription drug. A substance may be deemed a controlled substance but also a prescription drug. As discussed above, scheduling the substance in the CDSA means that there are criminal consequences to possessing the drug unlawfully. If Health Canada determines that a drug requires a prescription, it is placed on the Health Canada Prescription Drug List. DMT is not currently on the Prescription Drug List .

After Health Canada determines if a drug may be sold in Canada and if it requires a prescription, the individual provinces, territories and the National Association of Pharmaceutical Regulatory Authorities (“**NAPRA**”) decide where it may be sold, under advisement from the National Drug Scheduling Advisory Committee. NAPRA maintains a harmonized list referred to as the National Drug Schedules. NAPRA may

decide to be more restrictive in scheduling drugs, but never less restrictive than has already been determined at the federal level.

United States

As explained in further detail below, DMT is currently a restricted drug under the CSA. In the United States, clinical trials involving restricted drugs must adhere to the CSA and its implementing regulations, which are enforced by DEA under a legislative, regulatory, and enforcement structure and process. State regulations of controlled substances frequently change, so it is important to be aware of the regulatory nuances of each state in which a trial is conducted. There are three agencies –the FDA, the National Institute on Drug Abuse, and the DEA –involved in the scheduling of controlled substances, including both narcotic drugs and psychotropic substances. Controlled substances are categorized by the DEA according to five schedules, based upon eight factors, including: 1) actual or relative potential for abuse; 2) scientific evidence of pharmacological effect, if known; 3) state of current scientific knowledge about the drug; 4) history and current pattern of abuse; 5) scope/duration/significance of abuse; 6) what, if any, risk to public health; 7) psychic or physiological dependence liability; and 8) whether the substance is an immediate precursor of an already controlled substance.

DMT is listed as a Schedule I substance under the United States Code of Federal Regulations Title 21 – Food and Drugs 21 Part 1308.11 and assigned DEA Controlled Substances Code Number 7435. Schedule I substances are described as those that have the following findings:

- the drug or other substance has a high potential for abuse;
- the drug or other substance has no currently accepted medical use in treatment in the United States; and
- there is a lack of accepted safety for use of the drug or other substance under medical supervision.

No prescriptions may be written for Schedule I substances, and such substances are subject to production quotas which the DEA imposes. All principal investigators or sub-investigators (typically a member of a university or CRO) involved in a clinical trial using a controlled substance must obtain both federal and state authorizations. DEA registration and state licensure are required at the general physical location where the controlled substances for the clinical trial will be dispensed and/or stored overnight. In some cases, it may be possible to dispense the study drug at a satellite location with a separate license and registration if there is no overnight storage at that satellite location.

Federal registration is granted by the DEA. DEA “Practitioner” registration is valid for three years although Schedule I substances such as DMT require a DEA “Researcher” registration, valid for one year only, and in this situation, the research protocol must be formally approved by the FDA prior to registration with the DEA. All practitioners who participate in a clinical trial as a principal investigator or sub-investigator must also be authorized by the state in which they practice to prescribe, dispense, administer, and conduct research with controlled substances. In most cases, these activities are authorized when a license is granted to the practitioner by the local Institutional Review Board. However, some states require a separate, state-issued controlled substance license and other states have a separate state-controlled substances authority that requires practitioners to obtain a separate registration, in addition to their board license.

Europe

The International Narcotics Control Board (“**INCB**”), a United Nations (“**UN**”) entity, monitors enforcement of restrictions on controlled substances. The INCB’s authority is defined by three international UN treaties –the UN Single Convention on Narcotic Drugs of 1961, the UN Psychotropic Convention of 1971 (referred to herein as the UN71), and the UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, which contains provisions related to the control of controlled substance precursors. EU Member States, including Finland, that have agreed to abide by the provisions of these treaties, each create responsible agencies and enact laws or regulations to implement the requirements of these conventions. Specific EU legislation establishing different classes of controlled substances is limited to EU regulations that define classes of precursors, or substances used in the illicit manufacture of controlled substances, including Regulation (EC) No. 273/2004 of the European Parliament and the Council of February 11, 2004, and the Council Regulation (EC) No. 111/2005 of December 22, 2004. While EU legislation does not establish different classes of narcotic drugs or psychotropic substances, the Council Decision 2005/387/JHA of May 10, 2005 can provoke a Council Decision requiring EU member states to put a drug under national controls equivalent to those of the INCB. DMT is currently classified as a Schedule I substance under the UN71; the EU member states, including Finland, have agreed to the following in respect of Schedule I substances:

- (a) prohibit all use except for scientific and very limited medical purposes by duly authorized persons, in medical or scientific establishments which are directly under the control of their Governments or specifically approved by them;
- (b) require that manufacture, trade, distribution and possession be under a special licence or prior authorization;
- (c) provide for close supervision of the activities and acts mentioned in paragraphs a) and b);
- (d) restrict the amount supplied to a duly authorized person to the quantity required for his authorized purpose;
- (e) require that persons performing medical or scientific functions keep records concerning the acquisition of the substances and the details of their use, such records to be preserved for at least two years after the last use recorded therein; and
- (f) prohibit export and import except when both the exporter and importer are the competent authorities or agencies of the exporting and importing country or region, respectively, or other persons or enterprises which are specifically authorized by the competent authorities of their country or region for the purpose.

As classification of controlled substances may vary among different EU member states, sponsors must be aware of the prevailing legislation in each country where a clinical trial may be conducted. Prior to operating or conducting any pre-clinical or clinical studies in any other EU member state, the Company will investigate the specific regulatory requirements of such EU member state. As referenced above, a licence is required for individuals and entities who wish to produce, dispense, import, or export Schedule I substances (including DMT), but the specific requirements vary from country to country. Currently, DMT is classified in Finland as a narcotic under the Finnish Narcotics Act (373/2008) and as such the production, manufacture, import, export, distribution, trade, handling, possession and use of DMT are prohibited.

Regulatory Approvals Required for Studies (Canada, the EU and the U.S)

Regulatory approvals are required for clinical (human) studies for all investigational products in all member countries of the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use, which includes the United States, Canada and EU member states.

Canada

CDSA

In order to conduct any scientific research, including pre-clinical (animal) and clinical (human) trials using a controlled substance (such as DMT) in Canada, an exemption under Section 56 of the CDSA is required. This exemption allows the holder to possess and use the controlled substance without being subject to the restrictions set out in the CDSA, subject to obtaining any additional approvals such as ethics and clinical trial approvals.

Specifically, the final approved clinical study protocol and a Health Canada issued No Objection Letter are required to obtain an exemption under subsection 56(1) of the CDSA to conduct clinical investigations with DMT in Canada.

Canada FDR

Products that contain a controlled substance such as DMT cannot be made, transported or sold without proper authorization from the government. A party can apply for a dealer's license under Part J of the Canada Food and Drug Regulations, which allows the party to produce, assemble, sell, provide, transport, send, deliver, import or export a restricted drug (as listed in Part J in the Canada Food and Drug Regulations – which includes DMT), assuming compliance with all relevant laws (the CDSA and Canada) and subject to any restrictions placed on the license by Health Canada. In order to qualify as a licensed dealer, a party must meet all regulatory requirements mandated by the regulations including having compliant facilities, compliant materials and staff that meet the qualifications under the regulations of a senior person in charge and a qualified person in charge.

United States

The DEA has a streamlined application process for researchers who wish to conduct clinical trials using a Schedule I substance not currently approved for medical use (such as DMT). Schedule I substances are defined as drugs, substances, or chemicals with no accepted medical use and a high potential for abuse. Applicants must provide information about their qualifications, research protocol, and institution where the research will take place; complete requirements are outlined in the United States Code of Federal Regulations Title 21 –Food and Drugs 21 Part 1301.18.

Europe

Refer to the discussion above under the heading “*Drug Scheduling Regulations - Europe*” for a general description of the regulatory requirements to conduct research and clinical and pre-clinical studies using a Schedule I substance such as (DMT) in one of the EU member states. The specific regulatory processes and approvals required may vary among different EU member states and are set forth in the respective legislation of each country, including Finland.

Clinical Studies and Market Authorization Regulations (Canada, the EU and the U.S)

The Company's goal is to ultimately get market authorization from Health Canada, the FDA and the EMA to sell any DMT products it creates in Canada, the United States and Europe. However, prior to doing so, the Company will need to go through the clinical trial regulatory process. The next stage would be the market authorization regulatory process, following the completing of phase 1, 2 and 3 clinical studies, associated nonclinical studies and preparation of manufacturing documentation. Set forth below is a description of the regulatory regimes in Canada, the United States and the European Union that the Company will be subject to as it moves through both: (i) the clinical study regulatory processes; and the (ii) market authorization regulatory process in respect of the any future DMT products and may be produced.

Canada – Health Canada

Clinical Study Regulatory Process

In Canada, a CTA is composed of three modules:

- Module 1 contains administrative and clinical information about the proposed trial, and includes the Investigator's Brochure, which details all safety, preclinical and clinical data for the drug under study. Other components of Module 1 are the clinical study synopsis and full protocol, informed consent documents, clinical trial site information, and letters of access;
- Module 2 contains common technical document summaries, including Chemistry, Manufacturing and Control ("CMC") information about the drug product(s) to be used in the proposed trial; and
- Module 3 contains additional supporting quality information including literature references.

The modules are organized and numbered consistently in an internationally adopted format, the Common Technical Document. Adhering to the Common Technical Document format facilitates evaluation by Health Canada and ensures consistency of documents in subsequent stages of the drug authorization process. Additional documents including a Clinical Trial Site Initiation Form, Qualified Investigator Undertaking and a Research Ethics Board Attestation must be completed for each clinical trial site. Once prepared, the Clinical Trial Application is sent to the Therapeutic Products Directorate at the Health Product and Food Branch ("HPFB") of Health Canada for review. The review process is 30 days, although during the current COVID-19 pandemic environment, Health Canada is able to extend review timelines for non COVID-19 related studies to 45 days.

Health Canada invites sponsors to request a pre-CTA consultation meeting. Such consultations may be particularly useful for new active substances or applications that will include complex issues that may be new to Health Canada. The Company has applied to Health Canada to hold a pre-CTA consultation meeting with Health Canada to discuss proposed clinical trials for on DMT.

Market Authorization Regulatory Process (Canada, the EU and the U.S)

The HPFB is the national authority that regulates, evaluates and monitors the safety, efficacy, and quality of therapeutic and diagnostic products available to Canadians. When a manufacturer decides that it would like to market a drug in Canada, the company must first file a "New Drug Submission" with one of the Directorates (e.g. Therapeutic Products Directorate) within the HPFB. The New Drug Submission contains information and data about the drug's safety, effectiveness and quality. It includes the results of the preclinical and clinical studies, whether done in Canada or elsewhere, details regarding the

production of the drug, packaging and labelling details, and information regarding therapeutic claims and side effects.

The HPFB performs a thorough review of the submitted information, sometimes using external consultants and advisory committees. HPFB evaluates the safety, efficacy and quality data to assess the potential benefits and risks of the drug. HPFB reviews the labelling information that the sponsor proposes to provide to health care practitioners and consumers about the drug (e.g. the drug label, product monograph, patient brochure). If, at the completion of the review, the conclusion is that the benefits outweigh the risks and that the risks can be mitigated, the drug is issued a Notice of Compliance, as well as a Drug Identification Number which permits the sponsor to market the drug in Canada and indicates the drug's official approval in Canada. In addition, Health Canada laboratories may test certain biological products before and after authorization to sell in Canada has been issued.

This is done through its Lot Release Process, in order to monitor safety, efficacy and quality. This process is predominantly utilized for biologic products seeking a marketing license. Once a drug is on the market, regulatory controls continue. The manufacturer (license holder) and distributors of the drug must report any new information received concerning serious side effects including failure of the drug to produce the desired effect. The manufacturer (license holder) must also notify HPFB about any studies that have provided new safety information and request approval for any major changes to the manufacturing processes, dose regime or recommended uses for the drug. HPFB conducts market surveillance, monitors adverse reaction reports, investigates complaints and problem reports, and manages recalls, should the necessity arise. In addition, HPFB licenses most drug production sites and conducts regular inspections as a condition for licensing.

United States – FDA

Clinical Study Regulatory Process

Current U.S. Federal law requires that a drug be the subject of an approved marketing application before it is transported or distributed across state lines. Because a sponsor (which is typically a research and development company or drug manufacturer) will want to ship the investigational drug to clinical investigators in many states, it must seek an exemption from that legal requirement. The IND is the means through which the sponsor technically obtains this exemption from the FDA. During a new drug's early preclinical development, the sponsor's primary goal is to determine if the product is reasonably safe for initial use in humans, and if the compound exhibits pharmacological activity that justifies commercial development. When a product is identified as a viable candidate for further development, the sponsor then focuses on collecting the data and information necessary to establish that the product will not expose humans to unreasonable risks when used in limited, early-stage clinical studies. FDA's role in the development of a new drug begins when the drug's sponsor, having screened the new molecule for pharmacological activity and acute toxicity potential in animals, wants to test its diagnostic or therapeutic potential in humans. At that point, the molecule changes in legal status under the Federal Food, Drug, and Cosmetic Act and becomes a new drug subject to specific requirements of the drug regulatory system.

The IND application must contain information in three broad areas:

- Animal Pharmacology and Toxicology Studies, consisting of preclinical data to permit an assessment as to whether the product is reasonably safe for initial testing in humans. Also included are any previous experience with the drug in humans (often foreign use);

- Manufacturing Information, pertaining to the composition, manufacturer, stability, and controls used for manufacturing the drug substance and the drug product. This is equivalent to the CMC data referenced above for Health Canada applications, and is assessed to ensure that the company can adequately produce and supply consistent batches of the drug; and
- Clinical Protocols and Investigator Information, including detailed protocols for proposed clinical studies to assess whether the initial trials will expose subjects to unnecessary risks. Also, information on the qualifications of clinical investigators to assess whether they are qualified to fulfill their clinical trial duties. Finally, commitments to obtain informed consent from the research subjects, to obtain review of the study by an Institutional Review Board, and to adhere to the investigational new drug regulations.

Once the IND is submitted, the sponsor must wait 30 calendar days before initiating any clinical trials. During this time, the FDA has an opportunity to review the IND for safety to assure that research subjects will not be subjected to unreasonable risk.

The FDA invites sponsors to request a pre-IND consultation meeting in advance of application submission. This fosters early communications between sponsors and new drug review divisions to provide guidance on the data necessary to warrant IND submission. The Company has requested a pre-IND consultation meeting to discuss its proposed clinical trials on DMT.

Market Authorization Regulatory Process (Canada, the EU and the U.S)

The FDA regulates the development, testing, manufacturing, labeling, storage, recordkeeping, promotion, marketing, distribution, and service of medical products in the United States to ensure that such medical products distributed domestically are safe and effective for their intended uses. In addition, the FDA regulates the export of medical products manufactured in the United States to international markets and the importation of medical products manufactured abroad. Unless an exemption applies, each new or significantly modified medical product a company seeks to commercially distribute in the United States will require FDA approval. The FDA approval process is conducted through the submission of a New Drug Application.

The process can be expensive, and lengthy (6-12 months), and require payment of significant user fees, unless an exemption is available. Significant reductions in fees are available through the Small Business Fee Waiver/Reduction program. Drug companies seeking to sell a drug in the United States must first test it. The company then sends the Centre for Drug Evaluation and Research at the FDA the evidence from these tests to prove the drug is safe and effective for its intended use, using the New Drug Application. A team of Centre for Drug Evaluation and Research physicians, statisticians, chemists, pharmacologists, and other scientists reviews the company's data and proposed labeling.

If this independent and unbiased review establishes that a drug's health benefits outweigh its known risks, the drug is approved for sale. The center does not actually test drugs itself, although it does conduct limited research in the areas of drug quality, safety, and effectiveness standards. The FDA drug approval process takes place within a structured framework that includes: (i) analysis of the target condition and available treatments; (ii) assessment of benefits and risks from clinical data; and (iii) strategies for managing risks.

In some cases, the approval of a new drug is expedited. Accelerated approval can be applied to promising therapies that treat a serious or life-threatening condition and provide therapeutic benefit over available therapies. The FDA also employs several approaches to encourage the development of certain drugs,

especially drugs that may represent the first available treatment for an illness, or ones that have a significant benefit over existing drugs. These approaches, or designations, are meant to address specific needs, and a new drug application may receive more than one designation, if applicable. Each designation helps ensure that therapies for serious conditions are made available to patients as soon as reviewers can conclude that their benefits justify their risks. Designations include: (i) fast track; (ii) breakthrough therapy; and (iii) priority review.

Europe – EMA

Clinical Study Regulatory Process

The IMPD is one of several regulatory documents required for conducting a clinical trial of a pharmacologically API (active product ingredient) intended for one or more European Union Member States. The IMPD includes summaries of information related to the quality, manufacture and control of any Investigational Medicinal Product (including reference product and placebo) (“IMP”), and data from non-clinical and clinical studies. Guidance concerning IMPDs is based on Regulation (EU) No 536/2014 on Clinical Trials on Medicinal Products for Human Use (the “EU Regulation”) and on the approximation of laws, regulations and administrative provisions of the Member States relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use (also commonly referred to as the “Clinical Trials Directive”). The EU Regulation came into force in 2016, harmonizing the laws, regulations and administrative provisions of the Member States relating to the implementation of Good Clinical Practice in the conduct of clinical trials on medicinal products for human use. European Member States have transformed the requirements outlined in the Clinical Trials Directive into the respective national laws.

The content of the IMPD may be adapted to the existing level of knowledge and the product’s phase of development. When applying for a clinical trial authorization, a full IMPD is required when little or no information about an API has been previously submitted to competent authorities, when it is not possible to cross-refer to data submitted by another sponsor and/or when there is no authorization for sale in the European Union. However, a simplified IMPD may be submitted if information has been assessed previously as part of a Marketing Authorization or a clinical trial to that competent authority. Although the format is not obligatory, the components of an IMPD are largely equivalent to clinical trial applications in Canada and the U.S. The IMPD need not be a large document as the amount of information to be contained in the dossier is dependent on various factors such as product type, indication, development phase etc.

The assessment of an IMPD is focused on patient safety and any risks associated with the IMP. Whenever any potential new risks are identified the IMPD must be amended to reflect the changes. Certain amendments are considered substantial in which case the competent authority must be informed of the substantial amendment. This may be the case for changes in IMP impurities, microbial contamination, viral safety, transmissible spongiform encephalopathies (e.g. mad cow disease) and in some particular cases to stability when toxic degradation products may be generated.

The Company is planning the Phase I study to obtain preliminary evidence of the safety and efficacy of DMT. The study will occur in the U.K. and the current focus is preparing an IMPD document that includes CMC (Chemistry, Manufacturing and Control) information, an Investigator’s brochure (including prior safety, preclinical and clinical data) and a clinical study protocol and supporting information to be

submitted to the regulatory authorities, all of which is subject to the risks, delays and related cost implications.

Market Authorization Regulatory Process

Under the centralized authorization procedure, pharmaceutical companies submit a single marketing-authorization application to the EMA, which provides the basis of a legally binding recommendation that will be provided by the EMA to the European Commission, the authorizing body for all centrally authorized products. This allows the marketing-authorization holder to market the medicine and make it available to patients and healthcare professionals throughout the European Union on the basis of a single marketing authorization. EMA's Committee for Medicinal products for Human Use or Committee for Medicinal Products for Veterinary Use carry out a scientific assessment of the application and give a recommendation on whether the medicine should be marketed or not, under any particular dosing regime. Although, under European Union law, the EMA has no authority to permit marketing in the different European Union countries, the European Commission is the authorizing body for all centrally authorized products, who takes a legally binding decision based on EMA's recommendation. This decision is issued within 67 days of receipt of EMA's recommendation.

Once granted by the European Commission, the centralized marketing authorization is valid in all European Union Member States as well as in the European Economic Area countries Iceland, Liechtenstein and Norway. European Commission decisions are published in the Community Register of medicinal products for human use. Once a medicine has been authorized for use in the European Union, the EMA and the European Union Member States constantly monitor its safety and take action if new information indicates that the medicine is no longer as safe and effective as previously thought. The safety monitoring of medicines involves a number of routine activities ranging from: assessing the way risks associated with a medicine will be managed and monitored once it is authorized; continuously monitoring suspected side effects reported by patients and healthcare professionals, identified in new clinical studies or reported in scientific publications; regularly assessing reports submitted by the Company holding the marketing authorization on the benefit-risk balance of a medicine in real life; and assessing the design and results of post-authorization safety studies which were required at the time of authorization.

The EMA can also carry out a review of a medicine or a class of medicines upon request of a Member State or the European Commission. These are called European Union referral procedures; they are usually triggered by concerns in relation to a medicine's safety, the effectiveness of risk minimization measures or the benefit-risk balance of the medicine. The EMA has a dedicated committee responsible for assessing and monitoring the safety of medicines, the Pharmacovigilance Risk Assessment Committee. This ensures that EMA and the European Union Member States can move very quickly once an issue is detected and take any necessary action, such as amending the information available to patients and healthcare professionals, restricting use or suspending a medicine, in a timely manner in order to protect patients.

Legislation on controlled substances United Kingdom

In the UK, there are two main "layers" of regulation with which products containing controlled substances must comply. These are:

- (i) controlled drugs legislation, which applies to all products containing controlled substances irrespective of the type of product, and
- (ii) the regulatory framework applicable to a specific category of products, in this case, pharmaceuticals and food/food supplements.

In the U.K., DMT is considered a Class A drug under the amended Misuse of Drugs Act 1971, and as a Schedule 1 drug under the amended Misuse of Drugs Regulations 2001 (the “MDR”).

Class A drugs are highly controlled and considered to be the most potentially harmful. Schedule 1 drugs receive the most restrictive controls. They are considered to have no legitimate or medicinal use, and can only be imported, exported, produced, supplied and the like under a Home Office license.

Even if granted a marketing authorization for SPL026 by the MHRA, DMT would still remain a Schedule 1 drug until rescheduled by the Home Office. Unless and until DMT is rescheduled under the MDR, and unless a statutory exemption were to be passed for SPL026 following the grant of a U.K. marketing authorization and before rescheduling, any prescribing doctors in the U.K. would require a Home Office license to prescribe SPL026. There can be no guarantee that such Home Office licenses would be granted or that rescheduling would be successful.

The amended Misuse of Drugs Act 1971, sets out the penalties for unlawful production, possession and supply of controlled drugs based on three classes of risk (A, B and C). The MDR sets out the permitted uses of controlled drugs based on which Schedule (1 to 5) they fall within. In the United Kingdom, Class A drugs are deemed to be the most dangerous, and so carry the harshest punishments for unlawful manufacture, production, possession and supply. Schedule 1 drugs can only be lawfully manufactured, produced, possessed and supplied under a Home Office licence. While exemptions do exist, none are applicable to the API.

Additional legislation was more recently passed in order to address an increasing prevalence of psychoactive drugs designed to circumvent the Misuse of Drugs Act 1971. The Psychoactive Substances Act 2016 (the “PSA”) prohibits certain activities regarding any psychoactive substance, defined in the PSA as a substance that produces a psychoactive effect, which by stimulating or depressing the central nervous system affects a person’s mental functioning or emotional state.

Controlled substances are exempt from the PSA, which therefore does not apply to SPL026. SPL028 and SPL029 may fall within the MDR. If either SPL028 or SPL029 are found to fall outside of the MDR then the PSA may apply, subject to certain exemptions which apply to experimental medicines. Approved medicines are also exempt from the PSA, so the PSA should not apply to SPL028 or SPL029, if approved by the MHRA.

Licensing Requirements

All UK-based facilities involved in the manufacture, analytical testing, release and clinical testing of DMT need to hold appropriate Home Office licenses. All premises that are licensed in the manufacture, analytical testing, release and clinical testing of controlled drugs are required to adhere to detailed security standards.

Typically, when controlled drugs are being transported between licensees, responsibility for their security remains with the owner and does not transfer to either the courier or the customer until the drugs arrive at their destination and are signed for. However, where a third party is involved in the transit and/or storage of controlled drugs, even if they are not the legal owners, this party also carries responsibility for their security by virtue of being ‘in possession’ of them. Under the Home Office guidance, each organisation involved in the movement of controlled drugs should have a standard operating procedure covering their responsibilities, record keeping, reconciliation and reporting of thefts/losses.

Advisory Board

Medical and Scientific Advisory Board

The Company has a Medical and Scientific Advisory Board in place, complete with individuals who have various backgrounds and experience to complement our operations, mission and business strategy. The Medical and Scientific Advisory Board provides suggestions to our management on as-needed basis. The Medical and Scientific Advisory Board does not have a charter and does not meet on a scheduled basis. It is comprised of the following individuals:

Name	Position
Dr. Martin Kolb	Medical and Scientific Advisory Board member
Dr. Jacky Smith	Medical and Scientific Advisory Board member
Dr. Mark Swaim	Medical and Scientific Advisory Board member

Dr. Martin Kolb, Medical and Scientific Advisory Board

Dr. Kolb is the Moran Campbell Chair and Professor in Respiratory Medicine and Director of the Division of Respiriology, McMaster University, Hamilton, Ontario, Canada. He is lead of the interstitial lung disease program, located at St. Joseph's Healthcare Hamilton, where more than 1,500 patients with different types of fibrotic interstitial lung disorders are seen annually. His major research interests are the mechanisms of lung fibrosis, with a particular interest in the role of growth factors, matrix abnormalities and pulmonary vessel remodelling in disease progression.

He leads activities in biomarker development for lung fibrosis, and is a Principal Investigator and steering committee member in numerous clinical trials. Dr. Kolb has authored over 150 peer-reviewed publications on different basic science and clinical topics. He is the Chief-Editor of the European Respiratory Journal, the flagship publication of the European Respiratory Society. He is also an editorial board member of American Journal of Respiratory and Critical Care Medicine, American Journal of Respiratory Cell and Molecular Biology, the European Respiratory Review and Respiriology and serves on the Lung Injury & Repair Study Section for the National Institute of Health.

Dr. Jacky Smith, Medical and Scientific Advisory Board

Dr. Smith is a Professor of Respiratory Medicine at the University of Manchester and an Honorary Consultant at Manchester University NHS Foundation Trust. She runs a multi-disciplinary research team whose focus is on understanding mechanisms underlying pathological cough and a regional clinical service seeing patients with refractory Chronic Cough. She is also the Director of the NIHR Manchester Clinical Research Facility and Leads the Rapid Translational Incubator Theme of the NIHR Manchester Biomedical Research Centre.

In collaboration with Mr. Kevin McGuinness (clinical engineer), she has developed a novel method for semi-automated cough detection that was licensed to Vitalograph Ltd., a medical device company with whom she collaborates. The subsequent commercialization of this cough monitoring system has changed the standards by which novel cough therapies are evaluated in regulatory clinical trials. Moreover, the use

of this system to quantify coughing in a study of patients attending her Chronic Cough clinic facilitated the discovery of a new class of efficacious anti-tussive therapy, P2X3 antagonists.

Dr. Mark Swaim, Medical and Scientific Advisory Board

On October 9, 2020 the Company announced that Dr. Mark Swaim, a former practicing physician and researcher has joined the Algernon Medical and Scientific Advisory Board.

Dr. Mark Swaim, MD, PhD graduated from Duke University with honours, where he was an NIH-sponsored Medical Scientist Training Program scholar, and was elected to the Alpha Omega Alpha Honor Medical Society and served as its president. He completed post-graduate training in internal medicine, gastroenterology and hepatology at Duke University Medical Center and post-doctoral research at National Taiwan University in Taipei. Dr. Swaim served on the faculties of Duke University Medical Center, University of Texas MD Anderson Cancer Center and the McGovern Medical School of University of Texas in Houston. He was elected to fellowship in the American College of Physicians. He is editor-in-chief and founder of BioPub.co, a small-cap biotech special situations investing website with a global following.

Business Advisory Board

The Company has a Business Advisory Board in place, complete with individuals who have various backgrounds and experience to complement our operations, mission and business strategy. The Business Advisory Board provides suggestions to our management on as-needed basis. The Business Advisory Board does not have a charter and does not meet on a scheduled basis. It is comprised of the following individuals:

<u>Name</u>	<u>Position</u>
Bruce Rowlands	Business Advisory Board member

Bruce Rowlands, Business Advisory Board

Bruce Rowlands has extensive public company experience over the last 25 years and recently was the Chairman of Xortx Therapeutics, a Canadian Biotech company focused in kidney disease on whose board he served for almost 8 years. He also served as Vice President & Director, Dominick & Dominick Securities Canada, SVP Lorus Therapeutics, now Aptose Bioscience, and Chairman & CEO Eurocontrol Technics Group Inc.

Employees

As at the end of the Company's most recently completed financial year, August 31, 2022, the Company had one employee, other than the Company's executive officers. As at the date of this AIF, the Company has one employee, other than the Company's executive officers. The Company uses consultants for the provision of all management and other services.

RISK FACTORS

The following are certain factors relating to the Company's business which prospective investors should carefully consider before deciding whether to purchase Common Shares in the Company's authorized capital. The following information is a summary only of certain risk factors and is qualified in its entirety

by reference to, and must be read in conjunction with, the detailed information appearing elsewhere in this AIF. These risks and uncertainties are not the only ones the Company is facing. Additional risk and uncertainties not presently known to us, or that we currently deem immaterial, may also impair our operations. If any such risks actually occur, the business, financial condition, liquidity and results of our operations could be materially adversely affected.

Limited Operating History

The Company has a limited history of operations and is considered a development stage company. As such, the Company is subject to many risks common to such enterprises, including under-capitalization, cash shortages, limitations with respect to personnel, financial and other resources and lack of revenues. There is no assurance that the Company will be successful in achieving a return on shareholders' investment and the likelihood of its success must be considered in light of its early stage of operations.

Negative Cash Flow for the Foreseeable Future

The Company has no history of earnings or cashflow from operations. The Company does not expect to generate material revenue or achieve self-sustaining operations for several years, if at all. To the extent that the Company has negative cash flow in future periods, the Company may need to allocate a portion of its cash reserves to fund such negative cash flow.

Going-Concern Risk

The consolidated financial statements have been prepared on a going concern basis under which an entity is considered to be able to realize its assets and satisfy its liabilities in the ordinary course of business. The Company's future operations are dependent upon the identification and successful completion of equity or debt financing and the achievement of profitable operations at an indeterminate time in the future. There can be no assurances that the Company will be successful in completing an equity or debt financing or in achieving profitability.

The financial statements do not give effect to any adjustments relating to the carrying values and classification of assets and liabilities that would be necessary should the Company be unable to continue as a going concern.

The Company may not be successful in its efforts to identify, license or discover additional product candidates.

Although a substantial amount of the Company's effort will focus on the continued research and pre-clinical and clinical testing, potential approval and commercialization of its existing product candidates, the success of its business also depends in part upon its ability to identify, license or discover additional product candidates. The Company's research programs or licensing efforts may fail to yield additional product candidates for clinical development for a number of reasons, including but not limited to the following:

- the Company's research or business development methodology or search criteria and process may be unsuccessful in identifying potential product candidates;
- the Company may not be able or willing to assemble sufficient resources to acquire or discover additional product candidates;

- the Company's product candidates may not succeed in pre-clinical or clinical testing;
- the Company's product candidates may be shown to have harmful side effects or may have other characteristics that may make the products unmarketable or unlikely to receive marketing approval;
- competitors may develop alternatives that render the Company's product candidates obsolete or less attractive;
- product candidates the Company develops may be covered by third parties' patents or other exclusive rights;
- the market for a product candidate may change during the Company's program so that such a product may become unreasonable to continue to develop;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe and effective by patients, the medical community or third-party payors.

If any of these events occurs, the Company may be forced to abandon its development efforts to identify, license or discover additional product candidates, which could have a material adverse effect on its business, prospects, results of operations and financial condition and could potentially cause the Company to cease operations. Research programs to identify new product candidates require substantial technical, financial and human resources. The Company may focus its efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful.

Violations of laws and regulations could result in repercussions, and psychedelic inspired drugs may never be approved as medicines

In the Canada, under the CDSA, DMT is classified as a Schedule III drug and as such, medical and recreational use is illegal under the Canadian laws. Certain other jurisdictions, including the jurisdictions in which the Corporation has engaged third-party contractors, including Finland (EU) and the United Kingdom, have similarly regulated DMT. There is no guarantee that DMT will ever be approved as medicines in any jurisdiction in which the Company or its third-party contractors operate. The Company's third party contractors will conduct programs involving DMT in strict compliance with the laws and regulations regarding the production, storage and use of DMT. As such, all facilities engaged with such substances by or on behalf of the Company do so under current licenses and permits issued by appropriate federal, state and local governmental agencies. While a portion of the Company's research programs will be focused on using psychedelic inspired compounds, the Company does not have any direct or indirect involvement with the illegal selling, production or distribution of any substances in the jurisdictions in which it operates and does not intend to have any such involvement. However, a violation of any Canadian laws and regulations, such as the CDSA, or of similar legislation in the other jurisdictions, including Finland (EU) and the United Kingdom, could result in significant fines, penalties, administrative sanctions, convictions or settlements arising from civil proceedings initiated by either government entities in the jurisdictions in which the Company or its third party contractors operate, or by private citizens, or through criminal charges. The loss of the necessary licenses and permits for Schedule III drugs by the Company's third party contractors could have an adverse effect on Algernon's operations.

None of the Company's product candidates has to date received regulatory approval for their intended commercial sale.

None of the Company's product candidates has to date received regulatory approval for their intended commercial sale. The Company cannot market a pharmaceutical product in any jurisdiction until it has completed rigorous preclinical testing and clinical trials and passed such jurisdiction's extensive regulatory approval process. In general, significant research and development and clinical studies are required to demonstrate the safety and efficacy of a product candidate before it can be submitted for regulatory approval. Even if a product candidate is approved by the applicable regulatory authority, the Company may not obtain approval for an indication whose market is large enough to recover the Company's investment in that product candidate. In addition, there can be no assurance that we will ever obtain all or any required regulatory approvals for any of our product candidates.

The Company relies on contract research organizations consultants to design, conduct, supervise and monitor research due to a lack of internal resources to perform these functions.

Outsourcing these functions involves risk that third party providers may not perform to the Company's standards, may not produce results in a timely manner or may fail to perform at all. If any contract research organization fails to comply with applicable regulatory requirements, the research and data generated may be deemed unreliable to regulatory authorities. Additional pre-clinical and clinical trials may be required before approval of marketing applications will be given. The Company cannot provide assurance that all third party providers will meet the regulatory requirements for research and pre-clinical trials. Failure of third party providers to meet regulatory requirements could result in repeat pre-clinical and clinical trials, which would delay the regulatory approval process or result in termination of pre-clinical and clinical trials. Any of the foregoing could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

Reliance on Third Parties for Research

The Company relies on third parties for the execution of a significant portion of its regulatory, pharmacovigilance medical information, and logistical responsibilities and such third parties may fail to meet their obligations as a result of inadequacies in their systems and processes or execution failure.

The Company also relies on third parties to perform critical services, including preclinical testing, clinical trial management, analysis and reporting, regulatory, pharmacovigilance, medical information and logistical services.

These third parties may not be available on acceptable terms when needed or, if they are available, may not comply with all regulatory and contractual requirements or may not otherwise perform their services in a timely or acceptable manner. This non-compliance may be due to a number of factors, including inadequacies in third-party systems and processes or execution failure. The Company may also experience unexpected cost increases that are beyond its control. As a result, the Company may need to enter into new arrangements with alternative third parties that may be costly. The time that it takes the Company to find alternative third parties may cause a delay, extension or termination of its preclinical studies or clinical trials and the Company may incur significant costs to replicate data that may be lost. These third parties may also have relationships with other commercial entities, some of which may compete with Algernon. In addition, if such third parties fail to perform their obligations in compliance with regulatory requirements and the Company's protocols, Algernon's preclinical studies or clinical trials may not meet regulatory requirements or may need to be repeated and its regulatory filings, such as

marketing authorizations or new drug submissions, may not be completed correctly or within the applicable deadlines. As a result of Algernon's dependence on third parties, the Company may face delays or failures outside of its direct control in its efforts to develop product candidates.

Regulatory approval risk

Algernon's and its contract research organization's research and development activities and are and will be significantly regulated by a number of governmental entities, including Health Canada, the EMA, the Home Office in the U.K. and the FDA. Regulatory approvals are required prior to each clinical trial and Company and its contract research organizations may fail to obtain the necessary approvals to commence or continue clinical testing in one or more jurisdictions. The time required to obtain approval by regulatory authorities is unpredictable but typically takes many years following the commencement of clinical trials. Any analysis of data from clinical activities Algernon and its contract research organizations perform is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. Approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary by jurisdiction. The Company and its contract research organizations could fail to receive regulatory approval for Algernon's planned research for many reasons, including but not limited to:

- disagreement with the design or implementation of its clinical trials;
- failure to demonstrate that a product candidate is safe and effective for its proposed indication;
- failure of clinical trials to meet the level of statistical significance required for approval;
- failure to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- disagreement with Algernon's interpretation of data from preclinical studies or clinical trials;
- the insufficiency of data collected from clinical trials to support the submission and filing of a submission to obtain regulatory approval;
- deficiencies in the manufacturing processes or the failure of facilities of collaborators with whom Algernon contracts for clinical supplies to pass a pre-approval inspection;
- changes in the approval policies or regulations that render Algernon's preclinical and clinical data insufficient for approval.

Psychedelic regulatory risks

Psychedelic therapy is a new and emerging industry with ambiguous existing regulations and uncertainty as to future regulations. Certain psychedelics may be illegal substances other than when used for scientific or medical purposes. As such, new risks may emerge, and management may not be able to predict all such risks or be able to predict how such risks may result in actual results differing from the results contained in any forward-looking statements. This industry is subject to extensive controls and regulations, which may significantly affect the financial condition of market participants. The

marketability of any product may be affected by numerous factors that are beyond the control of the Company and cannot be predicted, such as changes to government regulations, including those relating to taxes and other government levies which may be imposed. Changes in government levies, including taxes, could make future capital investments or operations uneconomic. The psychedelic therapy industry is also subject to numerous legal challenges, which may significantly affect the financial condition of market participants and which cannot be reliably predicted.

Decriminalisation of psychedelics

Despite the current status of DMT as a controlled substance in the Canada, the EU, the United Kingdom and United States, there may be changes in the status of DMT under the laws of certain jurisdictions. Possession of psilocybin, for example, was voted to be decriminalised in May 2019 in Denver and in November 2020, voters in Oregon approved the legal medical use of “psilocybin products,” including magic mushrooms, to treat mental health conditions in licensed facilities with registered therapists (Measure 109). The legalization of psychedelics with inadequate regulatory oversight may lead to the development of psychedelic tourism in such states in clinics without proper therapeutic infrastructure or adequate clinical research. While drug laws pertaining to DMT are less likely to be as forthcoming, the expansion of such an industry which could put patients at risk may bring reputational and regulatory risk to the entire industry, leading to challenges for Algernon to achieve regulatory approval. The legalization of psilocybin, and potentially other psychedelic compounds (including DMT) in the future may also impact commercial sales for Algernon due to a reduced barrier to entry leading to a risk of increasing competition.

Enforcing Contracts

Due to the nature of the business of Algernon and the fact that certain of its contracts involve the possession, manufacture, production or supply of DMT, the use of which is not legal under U.K., EU, U.S. or Canadian law and in certain other jurisdictions, Algernon may face difficulties in enforcing its contracts in the courts in the UK, EU, U.S. or Canada. The inability to enforce any of its contracts could have a material adverse effect on its business, operating results, financial condition or prospects.

In order to manage its contracts with contractors, Algernon will ensure that such contractors are appropriately licensed. Were such contractors to operate outside the terms of these licenses, Algernon may experience an adverse effect on its business, including the pace of development of its product.

Unfavourable publicity or consumer perception

The success of the industry in which the Corporation operates may be significantly influenced by the public's perception of psychedelic inspired medicinal applications. There is no guarantee that future scientific research, publicity, regulations, medical opinion, and public opinion relating to psychedelic inspired medicine will be favourable. The industry in which the Company operates is in its early stages and is constantly evolving, with no guarantee of viability. The market for psychedelic inspired medicines is uncertain, and any adverse or negative publicity, scientific research, limiting regulations, medical opinion and public opinion relating to the consumption of psychedelic inspired medicines may have a material adverse effect on the Company's operational results, consumer base and financial results. While the Company is undertaking research programs using psychedelic inspired compounds, and does not advocate for the legalization of any psychedelic substances or deal with psychedelic substances except within laboratory and clinical trial settings conducted within approved regulatory frameworks, any unfavourable publicity or consumer perception regarding psychedelic substances (in addition to psychedelic inspired medicines) could also have a material adverse effect on the Company's operational results, consumer base and financial results.

The psychedelic therapy industry is difficult to quantify and investors will be reliant on their own estimates of the accuracy of market data

Because the psychedelic therapy industry is in a nascent stage with uncertain boundaries, there is a lack of information about comparable companies available for potential investors to review in deciding about whether to invest in Algernon and, few, if any, established companies whose business model Algernon can follow or upon whose success Algernon can build. Accordingly, investors will have to rely on their own estimates in deciding about whether to invest in Algernon. There can be no assurance that Algernon's estimates are accurate or that the market size is sufficiently large for its business to grow as projected, which may negatively impact its financial results.

Failure to follow regulatory requirements

The Company's prospects must be considered in light of the risks, expenses, shifts, changes and difficulties frequently encountered with companies whose businesses are regulated by various federal, state and local governments. The health care, wellness, workers compensation and similar companies are subject to a variety of regulatory requirements and the regulatory environment is ever changing particularly with recent legislation, the full impact of which is not yet understood as regulations have not been issued. Failure to follow applicable regulatory requirements will have a materially negative impact on the business of the Company. Furthermore, future changes in legislation cannot be predicted and could irreparably harm the business of the Company.

Additional financing needs

The Company will require equity and/or debt financing to support on-going operations, to undertake capital expenditures or to undertake acquisitions or other business combination transactions. There can be no assurance that additional financing will be available to the Company when needed or on terms which are acceptable. The Company's inability to raise financing to fund capital expenditures or acquisitions could limit its growth and may have a material adverse effect upon its business, prospects, results of operations and financial condition.

If additional funds are raised through further issuances of equity or convertible debt securities, existing shareholders could suffer significant dilution, and any new equity securities issued could have rights, preferences and privileges superior to those of holders of common shares. Any debt financing secured in the future could involve restrictive covenants relating to capital raising activities and other financial and operational matters, which may make it more difficult for the Company to obtain additional capital and to pursue business opportunities, including potential acquisitions.

Because of the early stage of the industry in which the Company will operate, the Company expects to face additional competition from new entrants. To become and remain competitive, the Company will require research and development, marketing, sales and client support. The Company may not have sufficient resources to maintain research and development, marketing, sales and client support efforts on a competitive basis which could materially and adversely affect the business, financial condition and results of operations of the Company.

Intellectual Property Rights

The Company could be adversely affected if it does not adequately protect its intellectual property rights. The Company regards its marks, rights, and trade secrets and other intellectual property rights as critical to its success. To protect its investments and the Company's rights in these various intellectual properties, it may rely on a combination of patents, trademark and copyright law, trade secret protection and confidentiality agreements and other contractual arrangements with its employees, clients, strategic partners, acquisition targets and others to protect proprietary rights. There can be no assurance that the steps taken by the Company to protect proprietary rights will be adequate or that third parties will not infringe or misappropriate the Company's copyrights, trademarks and similar proprietary rights, or that the Company will be able to detect unauthorized use and take appropriate steps to enforce rights. In addition, although the Company believes that its proprietary rights do not infringe on the intellectual property rights of others, there can be no assurance that other parties will not assert infringement claims against the Company. Such claims, even if not meritorious, could result in the expenditure of significant financial and managerial resources.

The Company will rely on trade secrets to protect technology where it does not believe patent protection is appropriate or obtainable. Trade secrets are difficult to protect. While commercially reasonable efforts to protect trade secrets will be used, strategic partners, employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose information to competitors.

If the Company is not able to defend patents or trade secrets, then it will not be able to exclude competitors from developing or marketing competing products, and the Company may not generate enough revenue from product sales to justify the cost of development of products and to achieve or maintain profitability.

Pre-clinical and clinical trials, including reliance on third parties to conduct such trials

The Company's clinical trials for each product candidate may fail to adequately demonstrate the safety and efficacy of that candidate, which could force the Company to abandon its product development plans for that product candidate. Before obtaining regulatory approval for the commercial sale of any of its product candidates, the Company must demonstrate, through lengthy, complex and expensive pre-clinical testing and clinical trials, that each product is both safe and effective for use in each target indication. Clinical trial results are inherently difficult to predict, and the results the Company has obtained or may obtain from third-party trials or from its own trials may not be indicative of results from future trials. The

Company may also suffer significant setbacks in advanced clinical trials even after obtaining promising results in earlier studies.

Although the Company intend to modify any of its protocols in ongoing studies or trials to address any setbacks, there can be no assurance that these modifications will be adequate or that these or other factors will not have a negative effect on the results of its clinical trials. This could significantly disrupt the Company's efforts to obtain regulatory approvals and commercialize its product candidates. Furthermore, the Company may voluntarily suspend or terminate its clinical trials if at any time it believes that they present an unacceptable safety risk to patients, either in the form of undesirable side effects or otherwise. If the Company cannot show that its product candidates are both safe and effective in clinical trials, it may be forced to abandon its business plan.

The Company will rely on third parties to conduct its product development, chemistry activities, as well as pre-clinical and clinical trials. If these third parties do not perform as contractually required or as otherwise expected the Company may not be able to obtain regulatory approval for its product candidates, which may prevent it from becoming profitable.

Pre-clinical and clinical trials will be lengthy and expensive. Delays in clinical trials are common for many reasons and any such delays could result in increased costs to us and jeopardize or delay our ability to obtain regulatory approval and commence product sales as currently contemplated.

As part of the regulatory process, the Company would need to conduct clinical trials for any drug candidate to demonstrate safety and efficacy to the satisfaction of the regulatory authorities, including the FDA for the U.S. and Health Canada for Canada should it decide to seek approval in those jurisdictions. Clinical trials are subject to rigorous regulatory requirements and are expensive and time-consuming to design and implement. The Company may experience delays in clinical trials for any of its drug candidates, and the projected timelines for continued development of the technologies and related drug candidates by the Company may otherwise be subject to delay or suspension. Any planned clinical trials might not begin on time; may be interrupted, delayed, suspended, or terminated once commenced; might need to be redesigned; might not enroll a sufficient number of patients; or might not be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including the following:

- delays in obtaining regulatory approval to commence a trial;
- imposition of a clinical hold following an inspection of our clinical trial operations or trial sites by the FDA or other regulatory authorities;
- imposition of a clinical hold because of safety or efficacy concerns by the FDA, a data safety monitoring board or committee or by the Company;
- delays in reaching agreement on acceptable terms with prospective contract research organizations and clinical trial sites;
- delays in obtaining required monitoring board approval at each site for clinical trial protocols;
- delays in identifying, recruiting and training suitable clinical investigators;
- delays in recruiting suitable patients to participate in a trial;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;

- clinical sites dropping out of a trial to the detriment of enrollment;
- time required to add new sites;
- delays in obtaining sufficient supplies of clinical trial materials, including comparator drugs;
- delays resulting from negative or equivocal findings of a data safety monitoring board for a trial; or
- adverse or inconclusive results from pre-clinical testing or clinical trials.

Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors, including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, competing clinical trials, and clinicians' and patients' perceptions as to the potential advantages of the biologic being studied in relation to other available therapies, including any new biologics that may be approved for the indications we are investigating. Any of these delays in completing our clinical trials could increase costs, slow down the product development and approval process, and jeopardize the Company's ability to commence product sales and generate revenue.

The Company may be required to suspend or discontinue clinical trials because of adverse side effects or other safety risks that could preclude approval of its drug candidates.

Clinical trials may be suspended or terminated at any time for a number of reasons. A clinical trial may be suspended or terminated by the Company, its collaborators, the FDA, or other regulatory authorities because of a failure to conduct the clinical trial in accordance with regulatory requirements or the Company's clinical protocols, presentation of unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using the investigational biologic, changes in governmental regulations or administrative actions, lack of adequate funding to continue the clinical trial, or negative or equivocal findings of the data safety monitoring board for a clinical trial. The Company may voluntarily suspend or terminate its clinical trials if at any time it believes that they present an unacceptable risk to participants. If the Company elects or is forced to suspend or terminate any clinical trial of any proposed product that it develops, the commercial prospects of such proposed product will be harmed and the Company's ability to generate product revenue from such proposed product will be delayed or eliminated. Any of these occurrences could have a materials adverse effect on the Company's business, prospects, results of operations and financial condition.

The Company faces product liability exposure, which, if not covered by insurance, could result in significant financial liability.

The risk of product liability is inherent in the research, development, manufacturing, marketing and use of pharmaceutical products. Product candidates and products that we may commercially market in the future may cause, or may appear to have caused, injury or dangerous drug reactions, and expose the Company to product liability claims. These claims might be made by patients who use the product, healthcare providers, pharmaceutical companies, corporate collaborators or others selling such products. If the Company's product candidates during clinical trials were to cause adverse side effects, the Company may be exposed to substantial liabilities. Regardless of the merits or eventual outcome, product liability claims or other claims related to the Company's product candidates may result in:

- decreased demand for our products due to negative public perception;
- injury to our reputation;

- withdrawal of clinical trial participants or difficulties in recruiting new trial participants;
- initiation of investigations by regulators;
- costs to defend or settle related litigation;
- a diversion of management's time and resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenues from product sales; and
- the inability to commercialize any of product candidates, if approved.

The Company intends to obtain clinical trial insurance once a clinical trial is initiated. However, the insurance coverage may not be sufficient to reimburse the Company for any expenses or losses it may suffer. Insurance coverage is becoming increasingly expensive, and, in the future, the Company, or any of its collaborators, may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts or at all to protect against losses due to liability. Even if the Company's agreements with any future collaborators entitle it to indemnification against product liability losses, such indemnification may not be available or adequate should any claim arise. The Company's inability to obtain sufficient product liability insurance at an acceptable cost to protect against product liability claims could prevent or inhibit the commercialization of its product candidates. If a successful product liability claim or series of claims is brought against the Company for uninsured liabilities or in excess of insured liabilities, its assets may not be sufficient to cover such claims and its business operations could be impaired.

Should any of the events described above occur, this could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

In light of the Company's current resources and limited experience, it may need to establish successful third-party relationships to successfully commercialize its future product candidates.

The long-term viability of the Company's future product candidates may depend, in part, on the Company's ability to successfully establish new strategic collaborations with pharmaceutical and biotechnology companies, non-profit organizations and government agencies. Establishing strategic collaborations and obtaining government funding is difficult and time-consuming. Potential collaborators may reject collaborations based upon their assessment of the Company's financial, regulatory or intellectual property position or based on their internal pipeline; government agencies may reject contract or grant applications based on their assessment of public need, the public interest, the ability of the Company's products to address these areas, or other reasons beyond our expectations or control. If the Company fails to establish a sufficient number of collaborations or government relationships on acceptable terms, it may not be able to commercialize any future drug candidates or generate sufficient revenue to fund further research and development efforts.

Even if the Company establishes new collaborations or obtains government funding, these relationships may never result in the successful development or commercialization of any drug candidates for several reasons, including the fact that:

- the Company may not have the ability to control the activities of its partners and cannot provide assurance that they will fulfill their obligations to us, including with respect to the

license, development and commercialization of drug candidates, in a timely manner or at all;

- such partners may not devote sufficient resources to the Company's drug candidates or properly maintain or defend our intellectual property rights;
- relationships with collaborators could also be subject to certain fraud and abuse laws if not structured properly to comply with such laws;
- any failure on the part of the Company's partners to perform or satisfy their obligations to the Company could lead to delays in the development or commercialization of drug candidates and affect the Company's ability to realize product revenue; and
- disagreements, including disputes over the ownership of technology developed with such collaborators, could result in litigation, which would be time-consuming and expensive, and may delay or terminate research and development efforts, regulatory approvals and commercialization activities.

If the Company or its collaborators fail to maintain our existing agreements or in the event we fail to establish agreements as necessary, the Company could be required to undertake research, development, manufacturing and commercialization activities solely at its own expense. These activities would significantly increase capital requirements and, given the Company's lack of sales, marketing and distribution capabilities, significantly delay the commercialization of future drug candidates

Rapid Technological Change

The business of the Company is subject to rapid technological changes. Failure to keep up with such changes could have a material adverse effect on the Company's business, prospects, results of operations and financial condition. The Company is subject to the risks of companies operating in the medical and healthcare business.

The market in which Algernon competes is characterized by rapidly changing technology, evolving industry standards, frequent new service and product announcements, introductions and enhancements and changing customer demands. As a result, an investment in the common shares of the Company is highly speculative and is only suitable for investors who recognize the high risks involved and can afford a total loss of investment.

Protection and Enforcement of Intellectual Property Rights

The Company regards the protection of its copyrights, service marks, trademarks, trade dress and trade secrets as critical to its future success and relies on a combination of copyright, trademark, service mark and trade secret laws and contractual restrictions to establish and protect its proprietary rights in products and services. The Company has entered into confidentiality and invention assignment agreements with its officers and contractors, and nondisclosure agreements with parties with which it conducts business in order to limit access to and disclosure of its proprietary information. There can be no assurance that these contractual arrangements or the other steps taken by the Company to protect its intellectual property will prove sufficient to prevent misappropriation of the Company's technology or to deter independent third-party development of similar technologies.

To date, the Company has not been notified that its technologies infringe the proprietary rights of third parties, but there can be no assurance that third parties will not claim infringement by the Company with

respect to past, current or future technologies. The Company expects that participants in its markets will be increasingly subject to infringement claims as the number of services and competitors in the Company's industry segment grows. Any such claim, whether meritorious or not, could be time-consuming, result in costly litigation, cause service upgrade delays or require the Company to enter into royalty or licensing agreements. Such royalty or licensing agreements might not be available on terms acceptable to the Company or at all. As a result, any such claim could have a material adverse effect upon the Company's business, prospects, results of operations and financial condition.

Litigation Risks

The Company may become party to litigation from time to time in the ordinary course of business which could adversely affect its business. Should any litigation in which the Company becomes involved be determined against the Company such a decision could adversely affect the Company's ability to continue operating and the market price for the Company's common shares. Even if the Company is involved in litigation and wins, litigation can redirect significant company resources.

Commercial success of the Company will depend in part on not infringing upon the patents and proprietary rights of other parties and enforcing its own patents and proprietary rights against others. The research and development programs will be in highly competitive fields in which numerous third parties have issued patents and pending patent applications with claims closely related to the subject matter of the Company's programs. The Company is not currently aware of any litigation or other proceedings or claims by third parties that its technologies or methods infringe on their intellectual property.

While it is the practice of the Company to undertake pre-filing searches and analyses of developing technologies, they cannot guarantee that they have identified ever patent or patent application that maybe relevant to the research, development, or commercialization of its products. Moreover, the Company can provide no assurance that third parties will not assert valid, erroneous, or frivolous patent infringement claims.

There may be larger, better financed companies which may become competition for the Company.

There is high potential that the Company will face intense competition from other companies, some of which can be expected to have longer operating histories and more financial resources and research and manufacturing than the Company. Increased competition by larger and better financed competitors could materially and adversely affect the business, financial condition and results of operations of the Company.

At present, management believes that there are a number of drug development companies, on a global scale, that are advancing compounds for the treatment of NASH, IBD and CKD and are in various stages of development from pre-clinical up to and including Phase 3 human trials.

In regards to its medical device, the Company has certain direct competition from Menssana Research Inc., which is based in New Jersey, U.S. and Owlstone Nanotech Inc., which is based in the United Kingdom. These companies have the financial ability to compete directly with the Company.

Competitive pressures created by any one of these companies, or by the Company's competitors collectively, could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

The Company believes that the principal competitive factors in its market are its ability to develop drug compounds that are more efficacious than the current gold standard treatment of other drugs under development, to protect its intellectual property and to also be the first company to deliver its medical device products to the market on a timely and cost-effective basis.

Better performing drugs and the expansion of existing technologies may increase the competitive pressures on the Company by enabling the Company's competitors to receive regulatory approval to market for certain drugs before its compounds are approved, offer a lower-cost product.

Reliance on Management

The success of the Company is dependent upon the ability, expertise, judgment, discretion and good faith of its senior management. While employment/consulting agreements are customarily used as a primary method of retaining the services of key management, these agreements cannot assure the continued services of such persons. Any loss of the services of such individuals could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

Dividends

The Company has no earnings or dividend record, and does not anticipate paying any dividends on the common shares in the foreseeable future. Dividends paid by the Company would be subject to tax and, potentially, withholdings.

Limited Market for Securities

The Company's Common Shares are listed on the CSE. There can be no assurance that an active and liquid market for the Common Shares will be maintained and an investor may find it difficult to resell any securities of the Company.

Permits and Licenses

The operations of the Company may require licenses and permits from various governmental authorities. There can be no assurance that such licenses and permits will be granted.

Uninsurable Risks

The business of the Company may not be insurable or the insurance may not be purchased due to high cost. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the Company.

The market price of the Company's common shares may be subject to wide price fluctuations

The market price of the Company's common shares may be subject to wide fluctuations in response to many factors, including variations in the operating results of the Company and its subsidiaries, divergence in financial results from analysts' expectations, changes in earnings estimates by stock market analysts, changes in the business prospects for the Company and its subsidiaries, general economic conditions, legislative changes, and other events and factors outside of the Company's control. In addition, stock markets have from time to time experienced extreme price and volume fluctuations, which, as well as

general economic and political conditions, could adversely affect the market price for the Company's common shares.

The lack of product for commercialization

If the Company cannot successfully develop, manufacture and distribute its products, or if the Company experiences difficulties in the development process, such as capacity constraints, quality control problems or other disruptions, the Company may not be able to develop market-ready commercial products at acceptable costs, which would adversely affect the Company's ability to effectively enter the market. A failure by the Company to achieve a low-cost structure through economies of scale or improvements in cultivation and manufacturing processes could have a material adverse effect on the Company's commercialization plans and the Company's business, prospects, results of operations and financial condition.

The lack of experience of the Company/Management in marketing, selling, and distribution products

The Company's management's lack of experience in marketing, selling, and distributing our products could lead to poor decision-making which could result in cost-overruns and/or the inability to produce the desired products. Although management of the Company intends to hire experienced and qualified staff, this inexperience could also result in the company's inability to consummate revenue contracts or any contracts at all. Any combination of the aforementioned may result in the failure of the Company and a loss of your investment.

Risks Associated with Future Acquisitions

If appropriate opportunities present themselves, the Company intends to acquire businesses, technologies, services or products that the Company believes are strategic. The Company currently has no understandings, commitments or agreements with respect to any other material acquisition and no other material acquisition is currently being pursued. There can be no assurance that the Company will be able to identify, negotiate or finance future acquisitions successfully, or to integrate such acquisitions with its current business. The process of integrating an acquired business, technology, service or product into the Company may result in unforeseen operating difficulties and expenditures and may absorb significant management attention that would otherwise be available for ongoing development of the Company's business. Future acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities and/or amortization expenses related to goodwill and other intangible assets, which could materially adversely affect the Company's business, results of operations and financial condition. Any such future acquisitions of other businesses, technologies, services or products might require the Company to obtain additional equity or debt financing, which might not be available on terms favourable to the Company, or at all, and such financing, if available, might be dilutive.

Difficulty to Forecast

The Company must rely largely on its own market research to forecast sales as detailed forecasts are not generally obtainable from other sources at this early stage of the industry. A failure in the demand for its products to materialize as a result of competition, technological change or other factors could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

Conflicts of Interest

Certain of the directors and officers of the Company are, or may become directors and officers of other companies, and conflicts of interest may arise between their duties as officers and directors of the Company and as officers and directors of such other companies.

Global Economy Risk

The ongoing economic slowdown and downturn of global capital markets has generally made the raising of capital by equity or debt financing more difficult. Access to financing has been negatively impacted by the ongoing global economic risks. As such, the Company is subject to liquidity risks in meeting our development and future operating cost requirements in instances where cash positions are unable to be maintained or appropriate financing is unavailable. These factors may impact the Company's ability to raise equity or obtain loans and other credit facilities in the future and on terms favourable to the Company. If uncertain market conditions persist, the Company's ability to raise capital could be jeopardized, which could have an adverse impact on the Company's operations and the trading price of the Company's shares on the stock exchange.

Public Health Crises, including COVID-19

A local, regional, national or international outbreak of a contagious disease, such as COVID-19, could have an adverse effect on local economies and potentially the global economy, which may adversely affect the Company's ability to conduct operations and may result in shortages of staff and disturbances where the Company or its collaborative partners are enrolling patients in the Company's clinical trials. Such an outbreak, if uncontrolled, could have a material adverse effect on our business, prospects, results of operations and financial condition, including a potential disruption to the supply chain and the manufacture or shipment of both drug substance and finished drug product for our product candidates for preclinical testing and clinical trials and adversely impact our business, financial condition or results of operations. The extent to which the COVID-19 outbreak impacts our results will depend on future developments that are highly uncertain and cannot be predicted, including new information that may emerge concerning the severity of the virus and the actions to contain its impact.

DIVIDENDS AND DISTRIBUTIONS

The Company has not paid dividends or made distributions on its Common Shares during the past three financial years and through the date of this AIF. The Company has no present intention of paying dividends in the near future. It will pay dividends when, as and if declared by the Board. The Company expects to pay dividends only out of retained earnings in the event that it does not require its retained earnings for operations and reserves. There are no restrictions in the Company's articles of incorporation or bylaws that prevent it from declaring dividends. The Company has no shares with preferential dividend and distribution rights authorized or outstanding.

DESCRIPTION OF CAPITAL STRUCTURE

The Company's authorized share capital consists of an unlimited number of Common Shares without par value. As of the date of this AIF, there are 2,385,332 Common Shares issued and outstanding. Holders of Common Shares:

- have one vote per share on election of each director and other matters submitted to a vote of stockholders;
- do not have cumulative voting rights;
- have equal rights with all holders of issued and outstanding Common Shares to receive dividends from funds legally available therefore, if any, when, as and if declared from time to time by the Board; and
- are entitled to share equally with all holders of issued and outstanding Common Shares in all of our assets remaining after payment of liabilities, upon liquidation, dissolution or winding up of the Company's affairs.

MARKET FOR SECURITIES

Trading Price And Volume

On February 1, 2016, the Common Shares began trading on the CSE under the trading symbol "BTH". On February 19, 2019, the Common Shares commenced trading under the symbol "AGN" on the CSE. The table below sets forth the reported high and low closing prices and the aggregate volume of trading of the Company's Common Shares on the for each of the months (or, if applicable, partial months) indicated (on a post-consolidation basis):

Month	CSE Price Range (\$)		Total Volume
	High	Low	
August, 2021	12.50	8.50	37,625
September, 2021	10.00	8.00	33,273
October, 2021	9.00	7.50	24,625
November, 2021	7.50	4.50	107,587
December, 2021	5.70	3.50	186,909
January 2022	11.15	4.10	246,408
February 2022	7.99	5.50	56,818
March 2022	6.00	4.80	57,525
April 2022	6.24	4.11	55,896
May 2022	6.00	4.42	61,808
June 2022	5.65	3.74	56,959
July 2022	3.70	3.02	63,826
August 2022	5.34	3.34	183,207

Prior Sales

During the financial year ended August 31, 2022, the Company issued the following securities exercisable into Common Shares (on a post-consolidation basis).

Date of Issuance	Class of security	Number of securities issued	Exercise price per security
January 1, 2022	Stock Options	96,000 ⁽¹⁾	\$4.10
July 4, 2022	Warrants	309,117 ⁽²⁾	\$4.70 ⁽⁶⁾
July 4, 2022	Broker Warrants	10,845 ⁽²⁾	\$4.125
August 22, 2022	Warrants	373,900 ⁽³⁾	\$4.25
August 22, 2022	Finders Warrants	20,480 ⁽³⁾	\$4.125
August 31, 2022	Stock Options	92,000 ⁽⁴⁾	\$5.39
August 31, 2022	Restricted Share Units	221,000 ⁽⁵⁾	N/A

Notes:

- (1) Granted to directors, officers, employees and consultants pursuant to the Company's stock option plan expiring on January 1, 2027.
- (2) Issued in connection with the July 2022 Offering.
- (3) Issued in connection with the August 2022 Offering.
- (4) Granted to directors, officers, employees and consultants pursuant to the Company's stock option plan expiring on August 31, 2027.
- (5) Granted to directors, officers, employees and consultants of the Company with a fair value of \$0.35 per restricted share unit. One-third vests on January 1, 2023, one-third vests on June 2023 and the remaining one-third vests on January 1, 2024.
- (6) The August 2022 Offering resulted in a Dilutive Issuance and the exercise price of the Warrants issued in the July 2022 Offering has been reduced to \$3.75 per share and the number of shares issuable under each Warrant has been increased such that the aggregate exercise price payable after taking into account the decrease in the exercise price shall be equal to the aggregate exercise price prior to the adjustment.

Subsequent to August 31, 2022, the Company issued 27,447 Common Shares upon the exercise of 21,900 warrants of the Company issued on July 4, 2022 by warrant holders for gross proceeds to the Company of \$102,929.

ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

As at August 31, 2022, to the Company's knowledge, none of the Company's securities were in escrow or subject to a contractual restriction on transfer.

DIRECTORS AND OFFICERS

Name, Occupation and Security Holding

The following table sets forth information regarding the Company's directors and executive officers. The term of office for the Directors expires at the Company's next Annual General Meeting.

Name, Province or State, and Country of Residence	Positions with the Company	Date of Appointment	Principal Occupation within the past five years	Common Shares Beneficially Owned or Controlled ⁽¹⁾
Christopher J. Moreau Manitoba, Canada	Chief Executive Officer and Director	March 1, 2018	CEO & Director of Miraculins from 2007 – 2016, CEO of Algernon 2018 to Present	18,017
Dr. Mark Williams Manitoba, Canada	Director and Former Chief Science Officer ⁽²⁾	September 16, 2021	Chief Scientific Officer of Marvel Biotechnology Inc since June 2021. VP Research Diamedica 2011 – 2016, VP Research & Clinical Affairs Cerebra 2016 – 2018; Chief Science Officer of Algernon October 2018 to March 2021	1,200
Raj Attariwala ⁽⁷⁾⁽⁸⁾⁽⁹⁾ British Columbia, Canada	Director	October 26, 2015	Radiologist at Aim Medical Imaging Inc. since 2009.	12,337
Howard Gutman ⁽⁶⁾⁽⁷⁾⁽⁸⁾⁽⁹⁾ Maryland, United States of America	Director	February 28, 2022	Retired US Ambassador to Belgium. Principal of the Gutman Group	2,045
Harry J. Bloomfield, QC. ⁽³⁾⁽⁷⁾⁽⁸⁾⁽⁹⁾ Quebec, Canada	Chairman and Director	September 7, 2021	Lawyer at Bloomfield & Avocats; Business Manager and Philanthropist with the Eldee Foundation.	6,000
Dr. Christopher Bryan ⁽⁴⁾ Manitoba, Canada	Vice President, Research and Operations	March 1, 2021	Vice President, Research and Operations of the Company since March 2021. Various roles in research and development and operations at various entities.	Nil

Name, Province or State, and Country of Residence	Positions with the Company	Date of Appointment	Principal Occupation within the past five years	Common Shares Beneficially Owned or Controlled ⁽¹⁾
James Kinley ⁽⁵⁾ Manitoba, Canada	Chief Financial Officer	December 1, 2021	Chief Financial Officer of the Company since December 1, 2021; Chief Financial Officer of Medicare Inc. from 2011 to May 2021; Chief Financial Officer[s] of a private entity from May 2021 to November 2021.	1,374

Notes:

- (1) On a post-consolidation basis.
- (2) Dr. Williams resigned as the Company's Chief Science Officer on March 1, 2021 and was appointed to the Board of Directors on September 16, 2021.
- (3) Harry Bloomfield was appointed to the Board of Directors and as Chairman on September 7, 2021.
- (4) Christopher Bryan was appointed as Vice-President of Research and Operations on March 1, 2021.
- (5) James Kinley was appointed as Chief Financial Officer on December 1, 2021.
- (6) Howard Gutman was appointed to the Board of Directors on February 28, 2022.
- (7) Member of Audit Committee.
- (8) Member of the Compensation Committee.
- (9) Member of the Nominating and Corporate Governance Committee.

As of the date of this AIF, the Company's directors and executive officers, as a group, beneficially owned, directly or indirectly, or exercised control of direction over 40,973 Common Shares (on a post-consolidation basis), representing approximately 2% of the issued and outstanding Common Shares.

CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS

Other than set out below, no director or executive officer of the Company is, as at the date of this AIF, or has been within 10 years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including the Company), that:

- a) was subject to a cease trade order, an order similar to a cease trade order, or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days, that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, or
- b) was subject to a cease trade order, an order similar to a cease trade order, or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days, that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

No director or executive officer of the Company, nor a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company:

- a) is, as at the date of this AIF, or has been within 10 years before the date of this AIF, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
- b) has, within 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director.

No director or executive officer of the Company has been subject to:

- a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable security holder in deciding whether to vote for a proposed director.

CONFLICTS OF INTEREST

The Company's directors and officers may serve as directors or officers, or may be associated with, other reporting companies, or have significant shareholdings in other public companies. To the extent that such other companies may participate in business or asset acquisitions, dispositions, or ventures in which the Company may participate, the directors and officers of the Company may have a conflict of interest in negotiating and concluding terms respecting the transaction. If a conflict of interest arises, the Company will follow the provisions of the BCBCA dealing with conflict of interest. These provisions state that where a director has such a conflict, that director must, at a meeting of the Company's directors, disclose his or her interest and refrain from voting on the matter unless otherwise permitted by the BCBCA. In accordance with the laws of the Province of British Columbia, the directors and officers of the Company are required to act honestly, in good faith, and the best interest of the Company.

To the best of the Company's knowledge, and other than disclosed herein, there are no known existing or potential conflicts of interest among the Company, its promoters, directors and officers or other members of management of the Company or of any proposed promoter, director, officer or other member of management as a result of their outside business interests except that certain of the directors and officers serve as directors and officers of other companies, and therefore it is possible that a conflict may arise between their duties to the Company and their duties as a director or officer of such other companies. If a conflict of interest arises at a meeting of the Board, any director in a conflict will disclose his interest and abstain from voting on such matter.

PROMOTORS

A “Promoter” is defined in the *Securities Act* (British Columbia) as a “person who (a) alone or in concert with other persons directly or indirectly takes the initiative of founding, organizing or substantially reorganizing the business of the issuer; or (b) in connection with the founding, organization or substantial reorganization of the business of the Company, directly or indirectly receives, in consideration of services or property or both, 10% or more of a class of the Company’s own securities or 10% or more of the proceeds from the sale of a class of the Company’s own securities of a particular issue.

No person or company has been, within the two most recently completed financial years or during the current financial year, a promoter of the Company or of a subsidiary of the Company.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

The Company is not, and was not during the most recently completed financial year, engaged in any legal proceedings and none of its property is or was during that period the subject of any legal proceedings. The Company does not know of any such legal proceedings which are contemplated.

Regulatory Proceedings

During the most recently completed financial year and during the current financial year, the Company is not and has not been the subject of any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority, any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor, or entered into any settlement agreements before a court relating to securities legislation or with a securities regulatory authority.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as described elsewhere in this AIF, none of our directors, executive officers or shareholders, owning or exercising control or direction over more 10% of the Common Shares, or any associate or affiliate of the foregoing, has had any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the current financial year prior to the date of this AIF that has materially affected us or is reasonably expected to materially affect the Company.

TRANSFER AGENTS AND REGISTRARS

The Company’s Registrar and Transfer Agent is TSX Trust Company located at P.O. Box 700 Station B, Montreal, Quebec H3B 3K3.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business, as of the date of this AIF, the only material contracts which the Company entered into within the most recently completed financial year, subsequent to the most recently completed financial year to the date of this AIF, or prior to the most recently completed financial year but which are still in effect are set out below:

- Warrant Indenture dated July 4, 2022 between the Company and the Agent with respect to the July 2022 Offering. See “General Development of Business – Three Year History – July 2022 Offering of Units”.

INTERESTS OF EXPERTS

Names of Experts

The following are persons or companies whose profession or business gives authority to a statement made in this AIF as having prepared or certified a part of that document or report described in this AIF:

Smythe LLP is the external auditor of the Company and reported on the Company’s audited consolidated financial statements for the years ended August 31, 2022 and 2021, which are filed on SEDAR.

To the knowledge of management, as of the date hereof, no expert, nor any associate or affiliate of such person has any beneficial interest, direct or indirect, in the securities or property of the Company or of an associate or affiliate of any of them, and no such person is or is expected to be elected, appointed or employed as a director, officer or employee of the Company or of an associate or affiliate thereof.

Interests of Experts

Smythe LLP, auditors of the Company, have confirmed that they are independent of the Company within the meaning of the ‘CPABC Code of Professional Conduct’ of the Chartered Professional Accountants of British Columbia.

ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at www.sedar.com. Additional information, including directors’ and officers’ remuneration and indebtedness, the Company’s principal shareholders, and securities authorized for issuance under equity compensation plans, if applicable, is contained in the Company’s most recently filed management information circular available on SEDAR at www.sedar.com. Additional financial information is provided in our consolidated financial statements and management’s discussion and analysis for the financial year ended August 31, 2022.