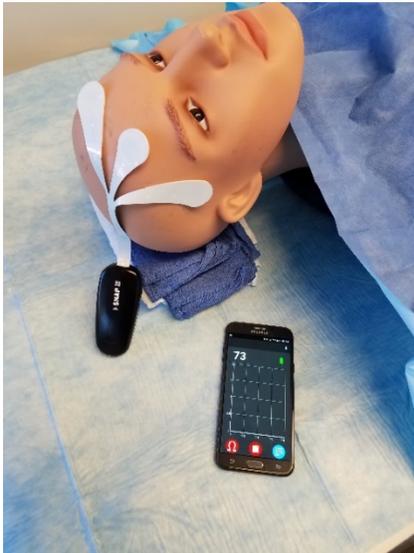




Making Healthcare Better Through Innovation



Belluscura PLC - Business Plan
Last Updated: February 19, 2019

Table of Contents

- I. **Executive Summary**
 - Belluscura' Business
 - Product's in Development
 - Markets. Opportunities and Competition
 - Management and Advisors
 - Financial Information

- II. **Background and Product Pipeline**
 - Respiratory
 - Wound Care
 - Drug Delivery
 - Level of Consciousness
 - Sleep

- III. **Markets and Marketing**
 - Oxygen Market
 - X-PLO₂R Sales and Marketing Plan and Strategy
 - Anesthesiology
 - Sleep

- IV. **Operations/Business Strategy**
 - General Strategy
 - Product Strategy – X-PLO₂R

- V. **Management and Organization**
 - Corporate Structure
 - Organizational Structure
 - Board Members
 - Executive Management
 - Research and Development Partners

- VI. **Financial Information**
 - Latest Filing
 - Simplified P&L

- VII. **Appendix**

I. EXECUTIVE SUMMARY

Belluscura's Business. Belluscura plc is a startup focused on improving healthcare and people's lives by developing new and innovative treatment platforms. We license and develop proprietary technologies that can be applied across a broad range of treatment possibilities.

Developing novel, cost effective medical device platforms means little, however, if you cannot bring the innovation to market quickly. We, therefore, identify those platforms that can make a significant improvement in a large market while also having a clear, finite regulatory clearance path.

Products in Development. Our most current platform technology, the X-PLO₂R™ portable oxygen concentrator ("POC"), will change the \$1.6bn portable medical oxygen market when it launches in Q3 2019. POC's are typically prescribed to people suffering from chronic obstructive pulmonary disease ("COPD"). COPD is a non-curable, chronic and progressive disease that reduces airflow to the lungs making breathing difficult. According to the World Health Organization, over 250 million people suffer from COPD and it is the third leading cause of death. The estimated cost of COPD in the US and Europe alone exceeds \$91bn annually.

The X-PLO₂R POC generates 95% pure oxygen from ordinary air through a process known as pressure swing adsorption and a material called zeolite. Traditionally, patients carried around heavy tanks filled with oxygen. POC's are known in the industry and are seeing significant growth in use, however, when the X-PLO₂R launches in 2019 it will be the quietest, lightest, most energy efficient and only modular POC in the world. The leading competitor will be 50% heavier. A significant weight difference when you consider the age and strength of the typical COPD sufferer. Moreover, as the world's first modular POC with consumer replaceable filter cartridges, the X-PLO₂R will be significantly less expensive, upwards of 70%, to both the patient and health insurers over the typical 6-7 years use of supplemental oxygen for competing POC's and upwards of 500% less expensive compared to oxygen cylinders over that same time period!

The innovative, patented aspects of the X-PLO₂R have created a unique oxygen treatment platform like none other available in the world. We believe the X-PLO₂R technology can be readily expanded into the multibillion-dollar sleep apnea, drug delivery, wound care and artificial lung markets. Working prototypes have already been built for sleep apnea and wound care applications. Moreover, the technology is now being evaluated as part of a potential joint development project with a major research university or corporation for use in a next generation extracorporeal portable lung.

Belluscura has a second platform technology, the Snap™ 3 level of conscious (LOC) monitor. LOC monitors are used to monitor the consciousness of an anesthetized patient undergoing surgery. The Snap 3, a previously cleared FDA technology, utilizes a unique, patented algorithm and database system that collects high- and low-frequency EEG signals while a patient is in surgery.

Belluscura acquired an exclusive license to the Snap LOC device including related trade secrets, know-how and patented technology in 2016, but although successfully used in over 250,000 procedures, decided not to re-launch the product due to its high manufacturing and retail cost of several thousand dollars.

After speaking with anesthesiologists and other physicians while reviewing the competitive landscape of the global anesthesia monitoring market (estimated to be \$1.29bn.), Belluscura concluded that it could significantly improve healthcare by updating the Snap device. More specifically, by integrating the latest digital hardware technology and mobile app technology, we developed the Snap 3™. A next generation LOC platform that will cost an estimated 1/10th the cost of the original Snap II and have potential application far beyond the original Snap.

By moving an FDA cleared device to a significantly lower cost of hardware combined with a readily available display and processor such as a Samsung® or Apple® tablet, we create the possibility of numerous new software applications being developed to utilize the Snap 3 EEG monitor. The Snap 3 will be the world’s first Open Source EEG brain monitor allowing medical, research organizations and even consumer products companies to develop software apps that can be connected to other databases and connected devices such as smartwatches, or other devices.

Markets, Opportunity and Competition. The X-PLO₂R will be introduced into the rapidly growing \$1.6bn POC market (15-17% CAGR). It is important to note that the leading competitor has estimated that the market is more than double this size.

The X-PLO₂R will be 40% lighter, quieter and significantly more cost-effective to operate than anything on the market. It will also produce 37% more oxygen per pound than the Inogen G3 and upwards of 100% more oxygen per pound than other 5 liter units on the market.

5 Liter Portable Oxygen Concentrators

Product	Belluscura X-PLO ₂ R™ 5L	Invacare Platinum™	GCE Zen-O Lite™	Philips SimplyGo Mini™	Caire FreeStyle™ 5L	Inogen G3™	O2 Concepts OxLife Freedom™	Resmed Mobi
								
Weight	2.33 LBS	5 LBS	5.5 LBS	3.9 LBS	4.0 LBS	3.5 LBS	4.5 LBS	5.5 LBS
Noise Setting 2	38dBA	40dBA	38dBA	43dBA	43dBA	39dBA	56dBA at level 5	38dBA
Standard Battery life	5.0 hours	5 hours	4 hours	4.5 hours	3.9 hours	4.5 hours	4 hours	6 hours
Weight w/Battery	3.4 LBS	6 LBS	6.4 LBS	5 LBS	5 LBS	4.9 LBS	5.9 LBS	5.5 LBS
Ext. Battery life	n/a	10 hours	n/a	9 hours	8 hours	9.5 hours	n/a	external
Weight w/Battery	n/a	7 LBS	n/a	7 LBS	6 LBS	5.7 LBS	n/a	?
Maximum Flow	960 ml/min	880 ml/min	1,000 ml/min	1,000 ml/min	1,050 ml/min	1,050 ml/min	800 ml/min	680 ml/min
O₂ Flow per pound	412ml/LB	176ml/LB	182ml/LB	256ml/LB	263ml/LB	300ml/LB	178ml/LB	124ml/LB
O ₂ Flow per pound w/standard battery	282ml/LB	147ml/LB	156ml/LB	200 ml/LB	210 ml/LB	214ml/LB	135 ml/LB	124ml/LB
Retail price with 3-year warranty	\$2,495 or \$750 for the upgrade	\$2,495	\$2,495	\$2,195	\$2,495	\$2,395	\$2,495	\$2,000+
Patient replaceable cartridges?	YES	NO	NO	NO	NO	YES	NO	NO
Modular?	YES	NO	NO	NO	NO	NO	NO	NO

Medicare pays an oxygen rental fee for 36 months to Durable Medical Equipment (DME) providers. The oxygen fee is applicable to oxygen tanks, portable oxygen concentrators or stationary oxygen concentrators. Because of the lower upfront cost for steel tanks, DME's, for Medicare purposes, tend to push oxygen tanks to patients that need supplemental oxygen. Because of the mobility, longevity of the POC, lack of maintenance and travel opportunities of POC, however, the private retail market for POC's continues to grow at a rate faster than the market itself. It has been estimated (Inogen study) that only 15% of the ambulatory patient market has been penetrated. Belluscura is very confident that the X-PLO₂R will grab significant market share (4-8%) within 3 years.

A second market is the stationary market. The stationary oxygen market is estimated to be nearly \$1bn. Belluscura plans to launch within 18 months a next generation 2L continuous/6-8L pulse portable/stationary product, the Adapt™ oxygen concentrator that will be 30-50% lighter than the continuous flow units currently available.

In addition, the X-PLO₂R patented technology opens the door to additional potential opportunities in the greater respiratory, sleep, wound care and drug delivery markets. The combined total size of these markets exceeds \$60bn.

An emerging market is the recreational/industrial market. It is estimated to grow to be over \$2bn by 2024. Ski resorts are already renting oxygen concentrators to people traveling to ski resorts over 2500 meters. From an industrial standpoint, it is also recommended that miners wear POC's while working due to limitations on ventilation. The same with workers at high altitudes.

The leading competition in the POC market include Inogen, Philips (Respironics), NGK Spark Plug (AirSep, SeQual), Invacare, Precision Medical, and GCE. Resmed recently purchased Inova Labs, but discontinued its product line (Activox LifeChoice) in favor of a just released self-branded POC called the Mobi. Mobi appears to be an Activox with a new housing. With 2018 global sales estimated to be \$350m (21% Int'l), Inogen has an estimated 22% of the global POC market (Market Research data). Inogen is capturing about 30% of the annual market growth, meaning the other competitors, on average, continue to grow their POC businesses.

A typical POC costs \$2,500. Currently, patients have two options regarding weight and performance. Five-liter units (typically the highest volume of oxygen available for a POC) weigh anywhere from 4.9 to 6 lbs. The 5L X-PLO₂R weighs 3.3 lbs, meaning the 5L competition weighs 45-75% heavier. There are two POC's generating 2 or 3 liters of oxygen. They weigh approximately 2.9 lbs. The 3L X-PLO₂R weighs 3.0 lbs. Modularity allows a patient to start with the 3 liter X-PLO₂R unit at 3 lbs and then, when their disease progresses to the point they need 4 liters of oxygen, the patient can upgrade their unit for around \$750 to a 5 liter unit (new module and battery). For patients that purchased 2 or 3 liter competitive products, they will need to purchase new 5 liter units at a cost of \$2,300 – 2,500.00. Thus, purchasing an X-PLO₂R

can save a patient over \$1,500 over the duration of the disease compared to POC available on the market.

The **Snap 3** as a LOC monitor will be reintroduced into a \$1.29bn global market. A competitive advantage of the Snap 3 will be its significantly (75%) lower cost and size. In addition, by making the product an “open source” platform for caregivers, researchers and even other medical device companies to develop software apps that can utilize the EEG data processed by the Snap 3, we believe that the Snap will be able to continue expanding its market beyond the anesthesiology market to include sleep, sleep disorders, dental surgery, and others illnesses tied to brainwave evaluation.

The leading companies in LOC monitoring are Covidien (BIS monitor) and Masimo (Sedline). Their capital equipment costs anywhere from \$2,000 – \$4,000 with single use disposable sensors costing \$30-45. By reintroducing a successful product (used in 250,000 procedures) at a price point near \$400 and open source technology, giving the product potentially multiple different clinical and non-clinical uses, we believe the Snap 3 can be a successful product.

For example, it is envisioned that a hospital could purchase 10 Snap 3 for the cost of a single competitive LOC. The hospital could use the Snap 3's as an LOC, but then use the same unit to measure sleep quality post operatively saving considerable money on capital equipment while increasing recovery outcomes.

Management & Advisors. Belluscura's management has over 50 years of experience in the medical device industry in the fields of finance, sales, marketing, legal, regulatory, quality, business development, licensing and operations.

Robert “Bob” Rauker, CEO, is a senior management executive with a demonstrable track record in the medical device sector. Over his extensive career Bob has been involved in the valuation, acquisition and sale of multiple medical devices. Bob served as Head of Medical Device & Life Sciences Group for Acacia Research Group in the role of Senior Vice President, where he built the medical device business to \$30 million in revenue. Previously he served as global chief IP counsel for Synthes Inc. now DePuy Synthes and Boston Scientific Endoscopy, both multi-billion dollar companies, where he managed the medical products acquisition and licensing transactions along with other senior management roles. Bob has a bachelor's degree in mechanical engineering and an MBA from the University of Massachusetts and a juris doctorate from the New Hampshire School of Law. Additionally, he is a registered patent attorney, a named inventor on 14 US patents and pending applications in the medical device sector.

Tony Dyer, CFO, has over ten years' experience in acting as a public company chief financial officer. Between 2004 and 2017 he led the finance function and played a key strategic role in Gattaca plc becoming one of the UK's leading engineering and technology recruiters growing from one office, 40 staff and revenues of £30 million in 1996 to 14 offices in ten countries, 800

staff and global revenues of £650 million in 2017, 30 per cent. of which was generated outside the UK. Tony was a core member of the team that completed the over-subscribed fundraising and admission to trading on AIM of Gattaca plc (then Matchtech Group plc). He also led the successful £60 million acquisition and integration of AIM quoted Networkers International plc.

Cary Parrott, Sr. VP Sales and Marketing, has over fifteen years' sales experience in the medical device industry running sales teams and delivering marketing and sales plans to a variety of customer types including surgeons, operating room management, pharmacy management and c-suite. He has a broad-based background in medical products including extensive experience with start-up companies and launching new products, having served in various management positions with top medical companies such as Ethicon, Inc., ZymoGenetics, HemCon Medical Technologies, Inc. and Marine Polymer Technologies, Inc.

After completing the bachelor's degree in engineering physics at Cornell University, Raymond "Paul" Bray's professional career began with a commission in the United States Air Force. He served for over seven years as a navigator on the KC-135A air refueling tanker and as a bioenvironmental engineer in the Biomedical Sciences Corps. He resigned from the military to attend graduate school at Texas Tech University, where he obtained a PhD in chemical engineering. Over the last 20 years, his experience has included engineering and quality management roles in the semiconductor, electronics, building materials, and medical device industries. Since 2010, Paul has been a manufacturing engineer in the neuromodulation division of St. Jude Medical; a consultant with Maetrics while providing support to Johnson & Johnson; and a manufacturing and quality engineer at Apollo Endosurgery. He is a co-inventor of the deep brain stimulation lead with segmented electrodes (US patent 9,370,653 B2). Paul joined Belluscura in 2018 and brought his expertise in product development, supporting regulatory submissions, setting up manufacturing lines, and launching new products.

Our lead advisor, Dr. Patrick J. Stollo, Jr. MD, FACP, FCCP, FAASM, has been advising Belluscura on the development of the X-PLO₂R since the project started in 2017. Dr. Stollo is Vice Chair for Veterans Affairs, Department of Medicine Pittsburgh, Vice President Medical Service Line VA Pittsburgh Health System, and Professor of Medicine and Clinical and Translational Science. Dr. Stollo received a Bachelor of Science in Chemistry from Washington College, a Master of Science in Biomedical Sciences from Wagner College and his MD from the Uniformed Services University of Health Sciences. Dr. Stollo has authored or jointly authored over 100 publications in the respiratory field. His accomplishments include the Air Force Achievement Medal, Meritorious Service Medal, Best Doctors in America, Castle Connolly's Top Doctors and an Excellence in Education Award.

Financial Information.

With commercial launch effective the end of Q3 2019, we believe a 2.85% market share by the end of 2021 and 7.61% in 2023 are reasonable forecasts. Even under the aggressive High Target of 11.41% market share by 2023, the unit sales would only be about 14,000 per month. Gross margins on retail price are anticipated to be 75%. This gross margin does not include margin premiums generated through extended warranties.

Market Size	2019 \$1.5bn	Mkt Share	2020 \$1.7bn	Mkt Share	2021 \$1.8bn	Mkt Share	2022 \$2.0bn	Mkt Share	2023 \$2.2bn	Market Share
Target-Low	\$.6 M	0.04%	\$7.2 M	0.42%	\$25.6 M	1.42%	\$56.1 M	2.81%	\$83.7 M	3.80%
Target-Mid	\$1.2 M	0.08%	\$14.4 M	0.85%	\$51.3 M	2.85%	\$112.1 M	5.61%	\$167.4 M	7.61%
Target-High	\$1.7 M	0.11%	\$24.9 M	1.46%	\$76.1 M	4.23%	\$168. M	8.40%	\$251. M	11.41%

II. BACKGROUND AND PRODUCT PIPELINE

RESPIRATORY

Background:

Over 250 million people worldwide suffer from Chronic Obstructive Pulmonary Disease (COPD) and is now the third leading cause of death.ⁱ COPD hospitalizations are projected to be an epidemic over the next 15 years with the global cost of COPD estimated to rise from \$2.1tr (USD) in 2010 to \$4.8tr by 2030.^{ii, iii} In the US alone, costs of COPD are estimated to rise from \$32bn in 2014 to \$49bn by 2020.^{iv}

With this incredible financial burden facing global healthcare, acute and disruptive policies and therapeutic interventions aimed at reducing the burden of COPD need to be developed and implemented as soon as possible. Any disease-management strategies, including new and cost-effective technologies, that can efficiently manage and alleviate COPD burden in the community can potentially slow the escalating cost of this disease.

Technology:

There is no cure for COPD. Those with severe COPD are typically prescribed supplemental oxygen to alleviate their symptoms and improve their quality of life. Supplemental oxygen is usually provided either in the form of an oxygen tank, a/k/a cylinder, or via an oxygen concentrator.

Oxygen cylinders have been around for many years. An oxygen supplier or other medical supplies provider typically delivers the tanks to a patient based on their level of oxygen usage and prescription. A major problem with oxygen cylinders is that they have a finite supply of

oxygen with many smaller ones lasting only a few hours while larger ones being very difficult for patients to carry, especially those suffering from later stage COPD. In addition, oxygen cylinders cannot be taken on aircraft.

Oxygen concentrators, on the other hand, generate concentrated oxygen from ordinary air which is typically 20% oxygen, 79% nitrogen and 1% argon and other trace gases. A concentrator generates 85-95% concentrated oxygen through an adsorption process involving a material called a zeolite that removes the nitrogen. Portable oxygen concentrators run on batteries (or can be plugged in directly to an outlet) and will keep generating concentrated oxygen as long as the battery has a charge. The portable oxygen market has seen tremendous growth the past few years with an estimated global market size of \$1.4bn, growing rapidly to \$2.4bn by 2024.^v

Belluscura researched the portable oxygen market and concluded that new technology could improve the quality and efficiency of oxygen concentrators while also reducing the cost to the patient or caregiver. Since that initial research, Belluscura has exclusively licensed, acquired or filed 13 patents and applications in the field of concentrated oxygen generation. Some of the technology has won national awards for innovation.

Products in the Pipeline:

The technology Belluscura is developing and licensing is allowing the company to develop oxygen concentrators that are significantly smaller, lighter, quieter, more energy efficient, and less expensive than units currently available on the market. Moreover, these attributes along with additional innovations allow us to create an oxygen platform technology beyond the prescription portable oxygen market to include smaller stationary units than currently available, recreational and industrial units, wound care units and drug delivery units.

Belluscura's pipeline oxygen concentrators are considered Class II prescription products that must receive Food and Drug Administration (FDA) clearance through what is known as a 510(k) application. The purpose of a 510(k) submission is to demonstrate that a device is "substantially equivalent" in safety and efficacy to a predicate device (one that has been cleared by the FDA or marketed before 1976). The 510(k) applicant compares the subject and predicate devices, explaining why any differences between them should be acceptable. Human data is not required for an oxygen concentrator 510(k) submission.

By comparison, a Premarket Approval (PMA) is used to demonstrate to the FDA that a new or modified device is safe and effective. This standard is higher than is required for 510(k) submissions. Much like a new drug, human use data from a formal clinical study is almost always required in addition to laboratory studies.

Belluscura's oxygen concentrators will be lightweight, quiet, energy efficient, have easy consumer replaceable filter cartridges, and be modular allowing a patient to upgrade their concentrator over time as their prescription changes.

1. X-PLO₂R™ portable oxygen concentrator: Anticipated commercial launch Q2 2019

Product Description:



Target Product Specifications:

- 2.35lbs (w/o battery)
- 2.95lbs (3 Liter w/4 cell battery)
- 3.4lbs (5 Liter w/8 cell battery)
- 39 dbA
- Consumer Replaceable Sieve Modules
- Modular
- 3 hours on 4 cell, 5 hours on 8 cell



2. X-PLO₂R™ stationary oxygen concentrator: Anticipated commercial launch Q4 2020

- Specifications:
 - Less than 10 lbs
 - 2 liters continuous, 8 liters pulse
 - 39 dBa

WOUND CARE

Background

Nearly 15% of Medicare beneficiaries in the United States had at least one type of wound or infection.^{vi} The cost, for example, to treat pressure ulcers, i.e., bed sores, alone cost anywhere from \$3.8bn – \$22bn per year.^{vii} The entire wound care market size is estimated to be at least \$25.5bn.^{viii} Recent studies of chronic wound care has shown that topical transdermal oxygen can help to improve the healing of chronic wounds.^{ix}

Additionally, ozone, an inorganic molecule with the chemical formula O₃ is a powerful oxidant that when dissolved in water has been found to be an effective bactericidal agent against biofilms.^x It has also been shown to have anti-inflammatory effects^{xi}, improve the healing of wounds,^{xii} and even have anti-tumor effects,^{xiii} Ozone, for example, has long been used to disinfect drinking water, swimming pools, laundry systems and waste water.

Besides occurring naturally from lightning or the sun's UV rays, ozone is typically produced for industrial or medical uses through what is known as the corona discharge method where an electric current, i.e., a spark, flows from an electrode with a high potential into air. The spark splits some oxygen molecules (O₂) into two oxygen atoms (O) which then bond to nearby oxygen molecules to form ozone (O₃).

Technology

Belluscura's oxygen generation patent portfolio includes numerous descriptions, disclosures and claims to oxygen concentrator wound care treatment devices and methods. Belluscura's small, lightweight, battery-operated and quiet design, with patented user-replaceable filter cartridges, makes it an ideal product that can be used multiple times unlike disposable chemical based topical oxygen units. This, we believe, would be ideal where, for example, a physician's office rents out a unit multiple times during a year. Moreover, we believe that a portable design with a micro compressor can deliver more concentrated oxygen at a higher pressure than low pressure chemical designs.

Typical ozone generators utilize ambient air to generate ozone. Whereas, typical air is 20% oxygen, 79% nitrogen and 1% argon, connecting the 96% pure oxygen from an oxygen concentrator to the generator significantly increases the productivity and efficiency of the system. Prototypes have been built for potential clinical and home use to deliver topical oxygen or ozone to wounds.

Products in the Pipeline:

1. Portable low-pressure topical oxygen
2. Improved Ozone Generator

DRUG DELIVERY

Background

For purposes of Belluscura's oxygen generation technology, we have been evaluating two drug delivery applications: (1) bronchial applications and (2) topical wound care. Numerous studies have shown that aerosol therapy can be achieved with patients receiving noninvasive positive pressure ventilation (NIPPV), for example, CPAP or BiPAP devices.^{xiv} Patients with acute or acute-on-chronic respiratory failure who receive NIPPV often require inhaled bronchodilators for relief of airway obstruction. One option is to remove the patient from NIPPV and administer bronchodilators by pressurized metered-dose inhaler (pMDI) and holding chamber or nebulizer as patients can tolerate brief periods of discontinuation that are needed for providing such treatments. The preferable option, however, is to continue NIPPV without interruption, especially in hypoxemic or acutely dyspneic patients.^{xv}

Another source of aerosol delivery of medication is through a nebulizer. Hypoxemia during nebulization with air-driven nebulizers can easily be prevented by simple addition of oxygen source to the air inlet of available nebulizers as mentioned above, since oxygen has to be given to children in severe attacks of asthma not only before and after but also during treatment with β_2 -agonist. This is important in preventing continued deaths occurring from asthma.^{xvi}

Examples of topical antimicrobials used in the treatment of chronic wounds include antiseptics and antibiotics. Antiseptics are disinfectants that can be used on intact skin and some open wounds to kill or inhibit microorganisms. They often have multiple microbial targets, a broad antimicrobial spectrum, and residual anti-infective activity but are often toxic to host tissues (eg, fibroblasts, keratinocytes, and possibly leukocytes).^{xvii} Antibiotics are chemicals produced either naturally (by a microorganism) or synthetically that in dilute solution inhibit or kill other microorganisms. They usually act on one specific cell target, have a narrower spectrum of activity, are relatively nontoxic, and are more susceptible to losing their effectiveness to bacterial resistance.^{xviii}

Technology

In addition to Belluscura's patented and patent pending oxygen generating technology, we have filed patent applications on various drug delivery mechanisms relating to oxygen concentrator units. For example, there are numerous embodiments disclosed in the patents and patent applications describing a method of delivering medication via the consumer replaceable sieve cartridges. It is contemplated in the intellectual property that a user of an oxygen concentrator practicing Belluscura's patents could receive bronchial medication via the nasal cannula or medication such as an antiseptic or antibiotic through a cannula to the wound site.

Product Pipeline

1. Molecular sieve beds seeded with medications

ARTIFICIAL LUNG

Extracorporeal membrane oxygen (ECMO) has been used for many years in patients with life-threatening hypoxaemia and/or hypercarbia. While early trials demonstrated that it was associated with poor outcomes and extensive haemorrhage, the technique has evolved. It now encompasses new technologies and understanding that the lung protective mechanical ventilation it can facilitate is inextricably linked to improving outcomes for patients.

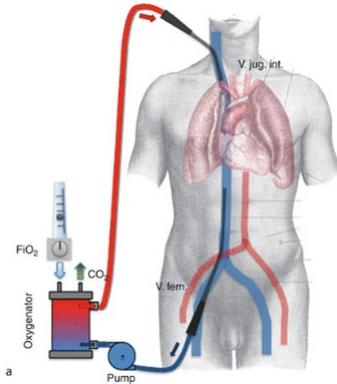
The positive results from the CESAR (Conventional ventilation or ECMO for Severe Adult Respiratory failure) study and excellent outcomes in patients who suffered severe influenza A (H1N1/09) infection have established ECMO in the care of patients with severe acute respiratory distress syndrome. Controversy remains as to at what point in the clinical pathway ECMO should be employed; as a rescue therapy or more pro-actively to enable and ensure high-quality lung protective mechanical ventilation.^{xix}

Preliminary discussions with leading research university and cardiovascular company. Next generation artificial lungs are basically gas exchange mechanisms wherein carbon dioxide is removed from the blood and oxygen is introduced into the blood stream. Belluscura's patented oxygen generation technology is in the process of being tested to show how it can perform the steps of replacing oxygen cylinders currently used today, allowing continuous oxygen flow and being utilized to "sweep" carbon dioxide from the blood.

Carbon dioxide can be removed from blood at a much higher rate, per unit blood flow, than oxygen can be delivered using membrane-based extracorporeal blood gas exchange devices. This is, of course, a physiologic result of the mechanisms by which oxygen and carbon dioxide are carried in the blood, as well as the higher solubility and diffusivity of carbon dioxide in blood compared to oxygen.

Using Belluscura's patented technology would allow a physician to "size" the oxygen flow and concentration in accordance of the needs and size of the patient. Moreover, the Belluscura technology would significantly reduce the weight and size of current systems by eliminating the tanks while greatly extending the portability of the artificial lung as the only limitation on travel would be battery duration. Elimination of the oxygen cylinder opens up potential air travel also.

Unlike the portable oxygen invention disclosed in the US Patent Application 2017/0252505 Wu et al (Breathe, Inc.), we have designed a closed circuit that utilizes a portable oxygen concentrator 100% of the time to both oxygenate the blood and remove CO₂. By using a closed circuit, we can enriched oxygen to both oxygenate the blood, but also to remove CO₂ and then further remove CO₂ from the enriched oxygen flow via CO₂ attractive zeolites such as MFI-type zeolites (Na-ZSM-5 and B-ZSM-5). Recent developments have demonstrated that PSA is a promising option for separating CO₂ due to its ease of applicability over a relatively wide range of temperature and pressure conditions, its low energy requirements, and its low capital investment cost.



LEVEL OF CONSCIOUSNESS / SLEEP MONITOR

Background

The type of anesthesia a patient receives is dependent on the type of surgery being performed, as well as specific patient needs. The anesthesiology professional will select a specific type of anesthesia in consultation with the patient and surgical team. Local anesthesia is usually used to numb a specific region of the body, while regional anesthesia, such as epidural delivery of an anesthetic compound, targets multiple nerve clusters (American Society of Anesthesiologists, 1994). General anesthesia is usually used to induce a lack of consciousness and awareness and loss of sensation during large and extensive procedures. Typically, general anesthesia includes the use of paralytic agents to prevent voluntary and involuntary movements in response to surgical manipulation. With this type of anesthesia, it is very important for an anesthesiology professional to monitor a patient's level of consciousness in order to control and stabilize the patient's bodily functions (American Society of Anesthesiologists, 2005).

The goal of the anesthesiology professional – a specialty that includes anesthesiologists, nurse anesthetists and anesthesiology technicians – is to administer the exact dose of anesthetic to ensure a loss of consciousness that is sufficient for surgery to progress while allowing a rapid return to consciousness when the procedure is complete. In preparing a patient for general anesthesia, the anesthesiology professional conducts a pre-operative evaluation to determine the appropriate anesthetic as well as to assess the extent of intraoperative monitoring the

patient will require. The amount of anesthetic used to medicate a patient is usually based on the patient's body weight.

Anesthesia awareness (AA) is an uncommon but serious event that occurs when a patient under general anesthesia stays conscious or becomes conscious during surgery due to delivery of an inadequate amount of anesthetic. Such an experience may be extremely traumatic for the patient, who may feel pressure or pain from the surgery, may hear conversations, or may feel unable to breathe. The condition is exacerbated when the patient is unable to communicate, particularly when movement is inhibited by delivery of a paralytic or muscle relaxant. The most traumatic case of anesthesia awareness is full consciousness during surgery, whereby the patient experiences pain and explicit recall of intraoperative events; some patients experiencing extreme cases compare it to torture. About half of those who endure anesthesia awareness complain about mental distress following surgery, a problem that sometimes manifests itself as post-traumatic stress disorder (PTSD)^{xxxxi}. The trauma may be so profound it can dissuade sufferers from ever undergoing surgery again. In severe cases, patients have described having flashbacks and panic attacks triggered by the smell of rubbing alcohol, the sound of metal on metal (reminding them of surgical instruments), or media images of people wearing surgical scrubs.

The incidence of AA in the United States is believed to be 20,000 to 40,000 cases per year, which represents 0.1% to 0.2% of all patients undergoing general anesthesia.^{xxii} Awareness claims formed 2% of all malpractice claims from 1990 to 2001, including 56 claims for recall under general anesthesia and nine claims for awake paralysis.

“THE MOST TRAUMATIC CAUSE OF ANESTHESIA AWARENESS IS FULL CONSCIOUSNESS DURING SURGERY, WHEREBY THE PATIENT EXPERIENCES PAIN AND EXPLICIT RECALL.”

Each day in the U.S., many thousands of patients undergo surgical procedures that require general anesthesia. The sheer number of procedures, coupled with the increasing sophistication of surgical techniques, makes the use of advanced anesthesia technology especially important in optimizing patient safety and surgical outcomes. In addition to keeping anesthesia professionals advised of the patient's vital signs, the LOC monitor provides important information about the adequacy of anesthetic depth in the form of electrical activity in the brain.

Using EEG signals to measure LOC provides an accurate depiction of a patient's response to anesthesia. This is because cells in the brain communicate with each other by producing electrical signals; electroencephalography is the measurement of the electrical activity of the brain. An added advantage of analyzing EEG signals to monitor LOC is that it can facilitate the

titration of anesthetic and sedative drugs, thereby helping to minimize the potential risk of under-medication — or the more common occurrence of over-medication — a patient.

Technology

The SNAP II™ LOC monitor, developed by Everest Medical and later acquired and sold by Stryker Corporation, was designed to meet these surgical needs and provide anesthesia professionals with an efficient and reliable tool to enhance the clinical judgment of a patient's LOC and return to consciousness. Used in over 250,000 procedures, the Snap II monitor is intended to supplement the multiple modalities traditionally used to assess LOC, including the observation of clinical signs, anesthetic agent analysis, and conventional monitoring of hemodynamic and respiratory systems.

The Snap LOC monitor utilizes a unique, patented algorithm and database system that collects high- and low-frequency EEG signals and compares them to other patients that have undergone surgery. The device uses the information provided by the algorithm and historical database to determine a probability projection of a patient's LOC. Simultaneously, the algorithm reduces signal contamination by eliminating EEG bands (beta waves as low as 20 Hz and up to 50 Hz) that are prone to electrical interference.

"Incorporating high-frequency EEG signals makes the SNAP II™ a better predictor of a patient's return to consciousness."

Belluscura acquired an exclusive license to the Snap II LOC device including related trade secrets, know-how and patented technology in 2016, but decided not to launch the product due to its high manufacturing and retail cost of several thousand dollars.

After speaking with anesthesiologists and other physicians while reviewing the competitive landscape of the global anesthesia monitoring market (estimated to be \$1.29bn),^{xxiii} Belluscura concluded that it could significantly improve healthcare by updating the Snap II. More specifically, by integrating the latest digital hardware technology and mobile app technology, we developed the Snap 3™. A next generation LOC platform that will cost an estimated 1/10th the cost of the Snap II and have potential application far beyond the original Snap II.

By moving an FDA cleared device to a significantly lower cost of hardware combined with a readily available display and processor such as a Samsung® or Apple® tablet, we open up the possibility of numerous new software applications being developed to utilize the Snap 3 EEG monitor.

Product Pipeline

1. Snap 3™ Level of Conscious Monitor: Anticipated commercial launch 2020.
2. Snap III Postoperative Sleep Device: Commercial Launch Anticipated 2019/2020.

III. MARKETS AND MARKETING

OXYGEN MARKET

The oxygen market is multi-billion dollar market that includes both industrial and medical applications. The medical oxygen market can be further broken down to hospital and patient/home applications.

Within the non-hospital based patient uses there is a stationary and a portable market, typically referred to as the global oxygen cylinder market. In 2018, the global cylinder market was valued at \$2.68bn growing at 9.8 CAGR. The X-PLO₂R is part of the portable oxygen market valued at \$1.4-1.6bn.

Oxygen Cylinders Market Report, 2024

2.1.1 Business trends

TABLE 2. Global oxygen cylinders market, 2013 – 2024 (USD Million)

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	CAGR
1,467.1	1,611.1	1,866.0	2,128.7	2,399.8	2,680.1	2,970.5	3,271.7	3,584.8	3,910.9	4,251.0	4,606.5	9.8%

Source: OECD, CDC, CIA, WSA, Annual Reports, Investor Presentations, Primary Interviews, Global Market Insights

Oxygen cylinders market was valued at USD 2,128.7 million in 2016 and is expected to reach USD 4,606.5 million in 2024, growing at a CAGR of 9.8 percent. Increasing geriatric population base which is at higher risk of acquiring respiratory disorders such as COPD, asthma and pulmonary will drive oxygen cylinders market growth. Furthermore, growing exposure to dust and smoke particles produced as a result of various manufacturing processes along with increase in smoking incidence has increased the risk of acquiring respiratory disorders. Growing demand for adventure sports such as scuba diving and mountaineering requiring a constant oxygen supply will further boost industry expansion.

2.1.2 Product trends

TABLE 3. Global oxygen cylinders market, by product, 2013 - 2024 (USD Million)

Segment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	CAGR
Portable	777.2	853.7	989.1	1,128.6	1,272.7	1,421.8	1,576.2	1,736.6	1,903.3	2,077.0	2,258.2	2,447.7	9.8%
Fixed	689.9	757.4	876.9	1,000.1	1,127.1	1,258.3	1,394.2	1,535.1	1,681.5	1,833.9	1,992.8	2,158.8	9.7%
Total	1,467.1	1,611.1	1,866.0	2,128.7	2,399.8	2,680.1	2,970.5	3,271.7	3,584.8	3,910.9	4,251.0	4,606.5	9.8%

Source: OECD, CDC, CIA, WSA, Annual Reports, Investor Presentations, Primary Interviews, Global Market Insights

Portable oxygen cylinders accounted for the largest market share in 2016 and are poised to grow at the fastest rate over the forecast timeframe owing to increased convenience and mobility provided by these devices.

3.4.1.3 Growing demand for adventure sports

Demand for oxygen cylinders is increasing with the growing number of adventure sports. Oxygen cylinders are made available for travelers with breathing problems. It is used extensively for raising individual's oxygen level at high altitude. Low oxygen can cause acute mountain sickness with symptoms of drunken gait, dizziness, disorientation, etc. Oxygen at high altitude is low and should supplement using portable oxygen cylinders. Tourists with disabilities have higher opportunities than before to travel the world with the help of hi-tech support and creative planning. An estimate by the Society for Accessible Travel and Hospital (SATH), the Open Doors Organization, and the TIA indicates that currently disabled tourists spend nearly USD 3.3 million every year on travel.

3.4.1.4 Exposure to dust particles and increasing number of cigarette smokers

The people in emerging nations are facing higher risks of respiratory disorders due to increased production of dust and smoke in different industrial and occupational sectors.

NON-MEDICAL OXYGEN CYLINDER USES:

- New markets beyond traditional COPD continue to grow
- Construction sites in high altitudes:
 - Oxygen was needed in the building of the Qinghai-Tibet railway tunnel which was 5000m above sea levels. Many workers had issues with mountain sickness and shortness of breath
- Oxygen Bars
 - using oxygen concentrators deliver 90-92% oxygen at 3 liters per minute
 - Aromatherapy (O₂ passed through flavored water to add aromas)
 - Nasal cannulas are used to breathe in this oxygen
- 3 main areas of recreational use oxygen
 - Basic oxygen concentrators that are marketed as beauty products
 - Oxygen concentration levels up to 90%
 - Skin rejuvenation, improve hair health, overall health
- Oxygen Cans (ex. Boost, Rocket Oxygen, O+, etc.)
 - Usually 22 oz. Oxygen Cans of 95% pure oxygen
 - Stress & fatigue, enhance sports performance, hangover remedy
 - Oxygen delivered through the trigger and a face mask

3.4.1.3 Growing demand for adventure sports

Demand for oxygen cylinders is increasing with the growing number of adventure sports. Oxygen cylinders are made available for travelers with breathing problems. It is used extensively for raising individual's oxygen level at high altitude. Low oxygen can cause acute mountain sickness with symptoms of drunken gait, dizziness, disorientation, etc. Oxygen at high altitude is low and should supplement using portable oxygen cylinders. Tourists with disabilities have higher opportunities than before to travel the world with the help of hi-tech support and creative planning. An estimate by the Society for Accessible Travel and Hospital (SATH), the Open Doors Organization, and the TIA indicates that currently disabled tourists spend nearly USD 3.3 million every year on travel.

3.4.1.4 Exposure to dust particles and increasing number of cigarette smokers

The people in emerging nations are facing higher risks of respiratory disorders due to increased production of dust and smoke in different industrial and occupational sectors.

MARKETING PLAN – X-PLO₂R

MARKETING EXECUTIVE SUMMARY

We want to inspire people to stay active and enjoy time with family and friends. We want to achieve this through innovative design and technology that will lower the cost not only to the consumer, but also for insurance companies.

The X-PLO₂R portable oxygen concentrator, the first product in the X-PLO₂R portfolio, is centered on people who have been prescribed supplemental oxygen and wish to continue living an active life.

The global increase of people with COPD and other respiratory diseases are a direct market driver accelerated by an increasingly aging population. It is now well understood that staying active improves health outcomes and the advantages of these oxygen concentrators are that they are portable, easy to use and are affordable.

There are two types of oxygen delivery systems providing supplemental oxygen therapy. Continuous Flow concentrators deliver a constant flow of oxygen and are almost exclusively used at home. Pulse Dose concentrators deliver an equivalent level of oxygen, but in pulses, as and when required by the patient.

A pulse dose system is the most commonly used portable oxygen concentrator because of their lighter weight and portability, giving the patients more flexibility and freedom.

A few companies dominate the portable oxygen concentrator market sector. Inogen has taken over the market leadership position with improved technology and innovative marketing.

However, when launched, X-PLO₂R will be the Lightest, most Energy Efficient and only Modular Oxygen Concentrator on the market.

COMPETITORS IN THE PORTABLE OXYGEN CONCENTRATOR MARKET

The competition for the growing oxygen market is very strong. Sales figures for the Oxygen and POC market continue to grow (as talked about in other section) and companies are investing more each year into marketing and new technology. Inogen is the market leader in both market shares and technology. Other players include ResMed, Philips Respironics, GCE, Caire Medical, Invacare and Precision Medical all of which are significantly behind Inogen.

As the market leader, Inogen sells their products direct to consumers and through distributors. Their annual spend is roughly \$35 million a year on marketing to include print and digital advertising. Extensive web presence includes major search engine marketing efforts and an established robust website. Many of the other players in the POC market have announced plans to increase their marketing budgets and sell direct in addition to selling through distributors.

COMPANY & PRODUCT ANALYSIS:

The portable oxygen concentrator market offers huge opportunities for Belluscura, particularly with launching a 'best in class' product. It will also contain some challenges, but the company believes it can meet these successfully.

The SWOT analysis below presents a thumbnail sketch of the company's position in the marketplace.

In developing the company's first Portable Oxygen Concentrator (POC), Belluscura has built some impressive strengths while looking forward to new opportunities. Belluscura will introduce the new POC, X-PLO₂R, using penetration pricing, extensive advertising, and expanded distribution in order to increase our revenues and growth rate. Belluscura will have to guard against marketing myopia (the failure to recognize the scope of its business) and quality slippages. As the company finalizes plans for the X-PLO₂R, its management will also have to guard against competitors who attempt to duplicate the technology.

SWOT Analysis:

Strengths

- The lightest 3L Modular POC on the market,
- Nearest 5L competitor weights 50% more than the X-PLO₂R 5L.
- Only modular POC in the world.

- Innovative technology to compete in the POC market.
- Produces at least 37% more oxygen by weight than competition
- IP Protection

Weaknesses

- Experience in distribution channels for POC market.
- Limited resource for marketing & advertising.
- Lack of buying power restricts price elasticity.
- We are not yet known in the POC market.

Opportunities

- Large market: Market growing faster than competitive products technology.
- To take advantage of the demand for consumer replaceable cartridge and create a demand for innovative products that only Belluscura has: Modularity.
- Partnering with reputable on-line distributors that have far more marketing and sales channels.
- Introduce modularity into the market place and thus gain market share from non-market leaders in the first 12-24 months.

Threats

- Competitor wanting to purchase the X-PLO₂R from Belluscura.
- On-line distributors not adding the X-PLO₂R to their portfolio early on.
- Being unprepared for product launch. Initial poor service or product quality with on-line distributors could discourage them from purchasing the X-PLO₂R.

MARKETING STRATEGIES

Product:

The X-PLO₂R will be the only modular upgradeable portable oxygen concentrator in the world that will allow the user to increase from an entry-level 3 liters of oxygen to 5 liters (5L) when a higher level of supplemental oxygen is prescribed. The patient can use the same X-PLO₂R concentrator unit and simply upgrade the oxygen cartridge for much less cost than purchasing a new device, saving between \$2,400 and \$3,200.

The consumer-replaceable rechargeable lithium ion battery can last up to 5 hours. Along with the modular, consumer replaceable 3L or 5L oxygen cartridge, the easy to use control buttons and LED screen enable patients who need supplemental oxygen to be treated without sacrificing their lifestyle and activities.

Price:

X-PLO₂R will be priced with the consumer and competition in mind. Consumers will have the options to purchase their POC using cash, credit or financing the unit as well as in the future Medicare or Private Insurance.

The company believes that we have product quality and feature advantages. Having the lightest, quietest, most energy efficient and only modular POC in the world at a price lower than the competition, we will gain market acceptance quickly. Our margins will increase as volume grows and we can implement purchasing power. The overall goal is to offer the X-PLO₂R 10% less than the competition.

Not only is the X-PLO₂R technology modular, our pricing and packaging can be modular too. This allows the patient to purchase just one POC that they can easily modify as their prescription or lifestyle changes.

Example of Modular X-PLOR Packages:

POC Unit	4Cell Battery	8Cell Battery	3L Sieve	5L Sieve	Carrying Bag	Lifetime Warranty
----------	---------------	---------------	----------	----------	--------------	-------------------

X-PLO₂R™ - 3L Oxygen Concentrator

Combo 1	3L Lite	1	1	-	1	-	1	-
Combo 2		1	1	-	1	-	1	1
Combo 3		1	2	-	1	-	1	-
Combo 4	Freedom 3	1	2	-	1	-	1	1
Combo 5		1	-	1	1	-	1	-
Combo 6		1	-	1	1	-	1	1
Combo 7		1	1	1	1	-	1	1
Combo 8	Explorer 3	1	3	-	1	-	1	1
Combo 9	Expedition 3	1	2	1	1	-	1	1
Combo 10		1	-	2	1	-	1	1

X-PLO₂R™ - 5L Oxygen Concentrator

Combo 11	Lite 5	1	1	-	-	1	1	-
Combo 12		1	1	-	-	1	1	1
Combo 13		1	2	-	-	1	1	-
Combo 14	Freedom 5	1	2	-	-	1	1	1
Combo 15		1	-	1	-	1	1	-
Combo 16		1	-	1	-	1	1	1
Combo 17		1	1	1	-	1	1	1
Combo 18	Explorer 5	1	3	-	-	1	1	1
Combo 19	Expedition 5	1	2	1	-	1	1	1
Combo 20		1	-	2	-	1	1	1

Distribution:

There are two paths consumers will be able to purchase the X-PLO₂R. Utilizing both paths allow Belluscura to reach those patients quickly and build brand awareness in a growing oxygen market.

Engaging with on-line Oxygen Distributors and Respiratory Care Providers

Belluscura will market the X-PLO₂R through a network of on-line oxygen distributors who's focus is on patients needing supplemental oxygen. Each distributor has an on-line presence and focus their resources and marketing funds towards those customers that will search on-line for their oxygen concentrator.

Communicating with each distributor will be calculated based on FDA clearance. Efforts will include but not limited to:

- Introduction of Belluscura
- Product introduction and training.
- Understanding each distributor's business and customer needs.
- Customizing promotions and pricing to best benefit the distributors and Belluscura.
- MAP Pricing to ensure value and consistency across marketplace

Engaging with on-line Oxygen Distributors and Respiratory Care Providers will:

- Help build awareness of Belluscura and the X-PLO₂R.
- Provide an instant route to market.
- Allow access to the distributor established customer base
- Harness existing web platforms, and piggy back on their already well-developed marketing.
- Utilize their sales and marketing expertise for the oxygen market on-line
- Provide instant sales and customer care teams that can address any specific issues, problems, and challenges that customers have when deciding on a POC that is best for them.

Partnering with on-line distributors also allows Belluscura to gain advance purchase commitments and reduce the amount of storage space needed. Distributors also have established and reliable logistics which means they can move products quickly and cost effectively. This means the X-PLO₂R can reach a much wider consumer audience, increasing sales but limiting the amount of funds required with storage and staffing.

There are number of DME companies, on-line retailers and distributors from state-to-state that promote home and portable oxygen concentrators. Belluscura has identified the top producing national on-line distributors to partner with and become authorized X-PLO₂R providers.

- 1st Class Medical
- Vitality Medical
- Oxygen Concentrator Store

- Main Clinic Supply
- CPAP USA
- OxiMedical
- Portable Oxygen Solutions
- Sleep Direct
- Lincare
- American Home Patient
- RoTECH Healthcare
- AeroCare

Benefits for each distributor include:

- Strong profit margins due to early market acceptance.
- Distributors will be able to streamline product offering by reducing the number of competitive POC they stock
- Providing the only modular POC in the world
- Providing the lightest and quietest 5L POC
- Cost-efficient packaging and shipping

We are confident that the distributors will want to promote and sell the X-PLO₂R because it will be a 'best in class' product.

[REDACTED]

Engaging with the Customer Directly

Alongside the distributor route, Belluscura will be selling the X-PLO₂R direct to the consumer.

For years, the road from factory to home generally followed a strictly defined route of POC's being sold through on-line distributors, not direct. Consumers who tried to purchase direct were pointed towards the appropriate outlet, authorized distributors or retainers.

However, in recent years, the POC market has begun selling direct to the consumer.

Purchasing a new POC is much different than buying a car or phone. Consumers can test drive a car or hold a new phone in their hands before they purchase it, but most POC customers will not handle their POC until it arrives in the mail or from their DME provider. There is no brand loyalty as it is not a recurring or choice product.

Today’s shoppers are accustomed to enhanced access. They want to be able to chat directly with a brand’s support team prior to making a purchase, ensuring they receive the most knowledgeable answers to their pre-purchase research questions. This ensures they know enough about the X-PLOR to appreciate its value.

Marketing and selling direct also mitigates the risk of image dilution from third parties (on-line distributors) who don’t have as much reason to champion your product. Direct marketing will allow Belluscura to build a brand that is tailored to a specific group of customers with tailored messages.

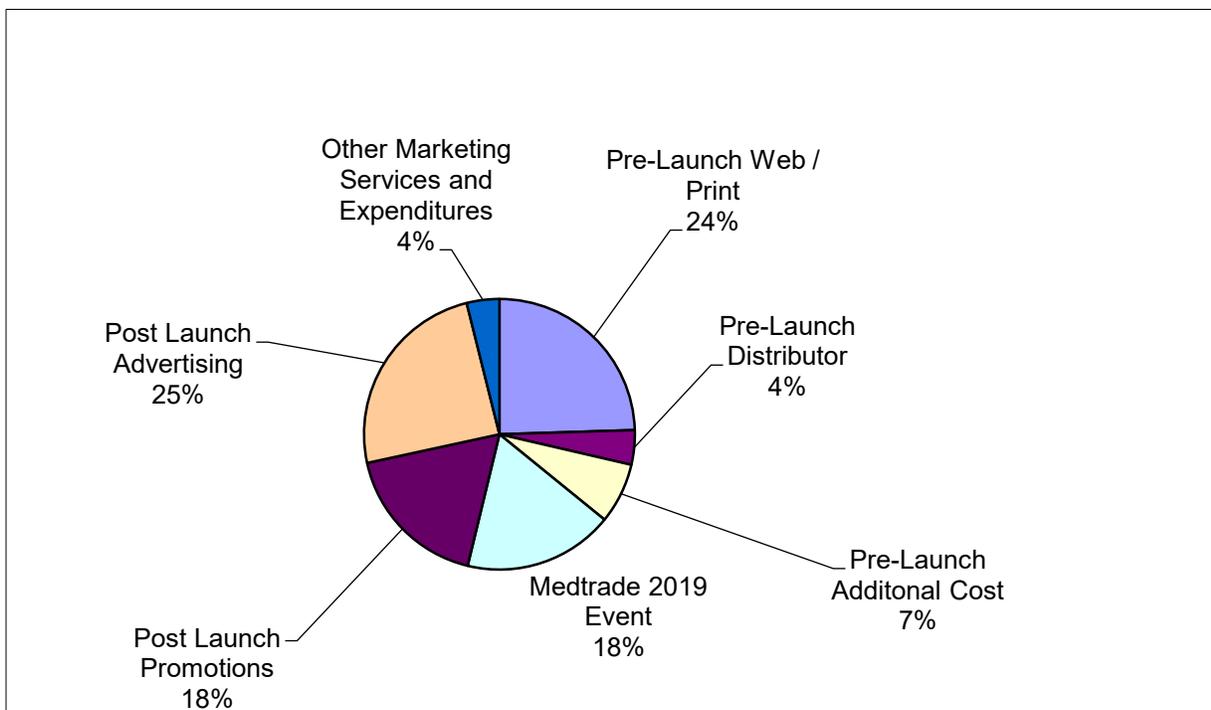
Consumers like to buy brands where they interact directly with the brand owner. Consumers feel more comfortable dealing directly with brands because there’s no wiggle room. The more accessible Belluscura is to its consumer, the more likely they are to become not just buyers, but advocates in the community and on-line reviews.

Promotion:

Consumers will not know our brand; therefore, we will have to advertise more aggressively to achieve brand awareness.

Our market share goal is 1% within the first 18 months, setting an advertising budget of [REDACTED] This will achieve an advertising voice/market index considerably higher than our competitors that do not sell direct.

Estimated Pre-Launch and Post Launch Budget %



Belluscura will utilize a variety of digital and print media platforms to support successful pre and post launch efforts, including:

- Customer focused product website
- Targeted Print and On-line ads
- Social media campaigns
- E-mail campaigns
- E-Commerce store
- National and local trade shows
- Public relations / industry outreach programs
- Product training video and promotional video
- Product Brochure and Photography

The role of each of the above will be to foster a relationship with each customer. Each customer touch point will be:

- Centered around the customer needs
- Offering resources to educate and support the customer
- Provide a positive user experience
- Building our brand as an innovator and industry thought leader.

Pre-Launch Focus:

To ensure that we have a successful launch we will expand the sales and marketing team, including adding the following.

- Customer Service team to include a customer care manager and additional representatives.

Daily responsibilities to include:

- Answer all customer calls
- Take Orders
- Gather customer feedback
- Follow-up with customers once they purchase
- Returns / Complaints
- Updating CRM System
- Building an In-House Sales Team to include a sales manager and in-house sales representatives. Daily responsibilities to include:
 - Work with Distributors
 - Make Daily Sales Calls
 - Communicate with healthcare providers
 - Gather customer feedback
 - Gain competitor information from customers and distributors
 - Update CRM System
- Senior Marketing Manager responsible for the execution of the following:

MyX-PLOR.com website will be the central component of our digital presence. It is how our consumers can most easily find and connect with the X-PLO₂R brand. The key goal for the website will be to engage with the customer so that they become buyers. The website will:

 - Make Product information visible and easy to understand.
 - Provide educational resources on COPD and other related topics including the benefit of oxygen therapy.

- Use Video to teach and educate the consumer about the X-PLO₂R.
- Offer easy to purchase options utilizing an e-commerce store.
- Insure that content is optimized to easily found by on-line search engines.

The other key elements that will support the launch of the X-PLO₂R include:

E-mail Marketing:

- Target those buyers that are most likely to need supplemental oxygen.
- Build excitement and urgency through value added offers and a clear call to action.

Social Media Presence:

- Social media will allow the X-PLO₂R brand to be available 24/7. POC buyers use social media to stay connected with what is new and learn about best practices.
- Social media will allow Belluscura to stay connected with current customers and reach new targeted consumers.
- A platform to provide live product training and demonstrations.

Web Traffic Generation / Paid Advertising:

- PPC (Pay Per Click)
- Facebook Ads
- Industry Sites Digital Ads

Medtrade Feb & Oct 2019

Post-Launch Focus:

Customer Service team will continue to support sales and marketing efforts by:

- Answer all customer calls
- Take Orders
- Gather customer feedback
- Follow-up with customers once they purchase
- Returns / Complaints
- Updating CRM System

Inside Sales Team will be instrumental in helping the company meet its sales goals. Daily responsibilities to include:

- Work with Distributors
- Make Daily Sales Calls
- Communicate with healthcare providers
- Gather customer feedback
- Gain competitor information from customers and distributors
- Update CRM System

The website will continue to be the central component of our digital outreach. The website will:

- Make Product information visible and easy to understand.
- Gain customer information by offering a Free Information Kit, thus building our customer data base.
- Launch the GO X-PLO₂R Blog that will offer fresh content but also aid in the search engine optimization.
- Provide educational resources on COPD and other related topics including the benefit of oxygen therapy.
- Use Video to teach and educate the consumer about the X-PLO₂R.
- Offer easy to purchase options utilizing an e-commerce store.
- Expand awareness and acceptance through customer feedback and testimonials

The other key elements that will support the launch of the X-PLO₂R include:

E-mail Marketing:

- Build the customer data base to stay connected with current customers by providing relevant content consistently
- Build excitement and urgency through value added offers and a clear call to action.
- Target those buyers that are most likely to need supplemental oxygen.

Social Media Presence:

- Social media will allow the X-PLO₂R brand to be available 24/7. POC buyers use social media to stay connected with what is new and learn about best practices.
- Social media will allow Belluscura to stay connected with current customers and reach new targeted consumers.
- Enables consumers to provide valuable feedback and testimonials.
- A platform to provide live product training and demonstrations.

Web Traffic Generation / Paid Advertising:

- PPC (Pay Per Click)
- Pre-Roll Ads
- Facebook Ads
- Industry Sites Digital Ads

Post Launch efforts will also include:

- Ongoing media efforts
- Efforts to gain Medicare and Private Insurance coverage
- International Launch
- Gathering customer Feedback and insights to continue refining our messaging and products.

ANESTHESIOLOGY/LEVEL OF CONSCIOUSNESS MARKET

Background:

The number of surgical procedures worldwide continues to grow driven by population growth and other factors such as obesity, low physical activity levels, dietary habits, smoking, and alcohol. Current estimates place the number of surgical procedures annually at greater than 230 million^{xxiv}; the majority in the areas of general, orthopaedic/trauma and obstetric/gynaecological surgery.

The global anesthesia monitoring devices market was valued at \$820.9 Million in 2014 and is projected to reach \$1.616bn by 2020, at a CAGR of 12.0% from 2015 to 2020.^{xxv}

The plan with the Snap 3 device will be to complete the prototype and then work with a distributor to complete and launch the product. The Snap II has an FDA 510k clearance.

SLEEP MARKET

Global Smart Sleep Tracking Device Market is Anticipated to Reach \$4.3 Billion by the end of 2024.^{xxvi} Of course, this is a market based primarily on the sale of smart watches. We envision the Snap 3 having consumer/retail potential but are focused on the clinical market at the moment.

Significant opportunity appears to exist in the sleep analysis market such as for diagnosing/evaluating sleep apnea, insomnia treatments, and other disruptive illnesses or treatments.

The initial sleep work will be in comparing results of the Snap 3 with various smart watches.

IV. OPERATING/BUSINESS STRATEGY

General Strategy

The general strategy of Belluscure is improve healthcare through innovation. More specifically, we are using our collective years of experience to identify, license and develop proprietary technology platforms that can be applied across a broad range of treatment possibilities. By developing a platform technology, we diversify the risk of competition copying a single product.

For example, our first product to be commercialized will be the X-LPO₂R portable oxygen concentrator. The portable oxygen market is a rapidly \$1.6bn market. We designed the product not simply as a new oxygen concentrator, but as a stepping stone to additional respiratory and non-respiratory markets. Platform opportunities include stationary concentrators, recreational concentrators, wound care, portable ozone generators, drug delivery, portable lung devices, and oxygen enriched organ transplant carriers.

Each new platform technology will be identified and developed with same broad-based potential.

Product Strategy – X-PLO₂R

Competitive Advantages:

- **Patents:**

• Pat/App No.	File Date	Title
US 9,199,055	10/21/2014	ULTRA RAPID CYCLE PORTABLE OXYGEN CONCENTRATOR
US 8,894,751	11/24/2009	ULTRA RAPID CYCLE PORTABLE OXYGEN CONCENTRATOR
US 8,888,902	8/15/2012	PORTABLE OXYGEN ENRICHMENT DEVICE AND METHOD OF USE
US 8,500,852	4/30/2007	SORPTION METHOD, DEVICE, AND SYSTEM
US 7,291,271	12/09/2003	MESO-FREQUENCY TRAVELING ELECTRO-KINETIC CONTINUOUS ADSORPTION SYSTEM
PCT/US2017/023990	3/24/2017	POSITIVE AIRWAY PRESSURE SYSTEM WITH INTEGRATED OXYGEN
US XX/XXX,XXX	xx/yy/2018	BATTERY
PCT/US2018/035642	06/06/2017	CONFIGURABLE OXYGEN CONCENTRATOR AND RELATED METHOD
9,839,757	10/06/2015	ULTRA RAPID CYCLE PORTABLE OXYGEN CONCENTRATOR
US 15/715,600	9/26/2017	ULTRA RAPID CYCLE PORTABLE OXYGEN CONCENTRATOR
US 9,492,781	10/17/2014	PORTABLE OXYGEN ENRICHMENT DEVICE AND METHOD OF USE
US 9,993,765	8/26/2016	PORTABLE OXYGEN ENRICHMENT DEVICE AND METHOD OF USE

- **Key patented competitive features:**

- Ultra-rapid oxygen processing – faster processing of oxygen in zeolite cartridges allows for smaller cartridges and smaller compressor
- Consumer replaceable zeolite cartridges – Novel, award winning patent will transform market by allowing customers to easily replace expired cartridges. No need to return unit to manufacturer and no need for “loaner” POC during repair. Significant savings for consumer and distributor.
- Modularity – Allows customer to start out with lightweight unit and upgrade as disease progresses for about 25% the cost of a new bigger unit.

- **Key Sales/Marketing Points**

- 5 L (upgraded) unit will be the lightest in the world
 - 3L unit will weigh approximately the same as leading 3L, but will have modularity and be priced slightly less
- Leading competitors are 40-70% heavier

- X-LPO₂R generates from 50-100% more concentrated O₂ per pound than competition
- Quiet < 40dba
- Efficient: as efficient or better than competition
- Consumer replaceable sieve cartridges. When purity drops below 87% (all cartridges eventually lose efficiency), order new cartridges, pop out old ones and pop in new ones.
- Modularity allows customers to upgrade from a smaller, lighter 3L to a slightly larger 5L for 75% less than buying a new concentrator.

Operations Plan/Strategy



V. Management and Organization

Corporate Structure

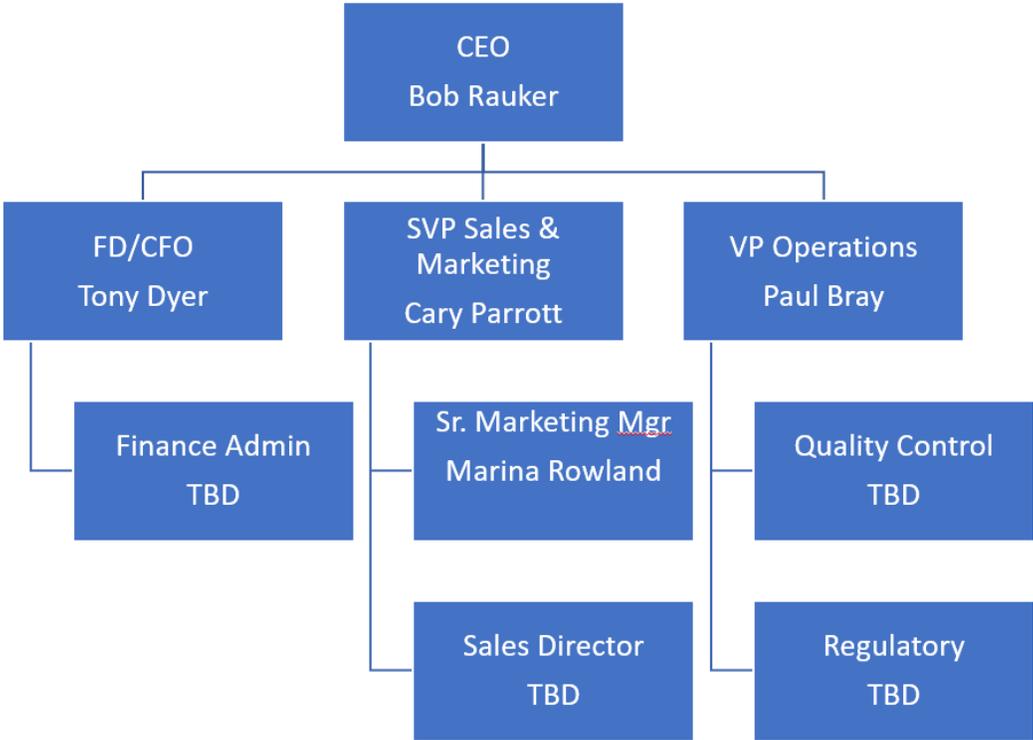
Belluscura plc is an English company founded in December 2015. It is a public company with no publicly traded shares. The three largest shareholders are TekCapital, David Poutney and Nigel Wray, collectively owning approximately 64% of the company.

Belluscura LLC is a wholly-owned single member Delaware LLC. It is contemplated for US fundraising purposes that Belluscura LLC will be converted into a C Corporation so that it can issue shares, have a BOD, etc. Belluscura plc would remain a shareholder in Belluscura, Inc.

Organizational Structure

Belluscura

Organizational Chart October 2018



Board Members

Robert “Bob” Rauker, CEO, is a senior management executive with a demonstrable track record in the medical device sector. Over his extensive career Bob has been involved in the valuation, acquisition and sale of multiple medical devices. Bob served as Head of Medical Device & Life Sciences Group for Acacia Research Group in the role of Senior Vice President, where he built the medical device business to \$30 million in revenue. Previously he served as global chief IP counsel for Synthes Inc. now DePuy Synthes and Boston Scientific Endoscopy, both multi-billion dollar companies, where he managed the medical products acquisition and licensing transactions along with other senior management roles. Bob has a bachelor’s degree in mechanical engineering and an MBA from the University of Massachusetts and a juris doctorate from the New Hampshire School of Law. Additionally, he is a registered patent attorney, a named inventor on 14 US patents and pending applications in the medical device sector.

Tony Dyer, CFO, has over ten years’ experience in acting as a public company chief financial officer. Between 2004 and 2017 he led the finance function and played a key strategic role in Gattaca plc becoming one of the UK’s leading engineering and technology recruiters growing from one office, 40 staff and revenues of £30 million in 1996 to 14 offices in ten countries, 800 staff and global revenues of £650 million in 2017, 30 per cent. of which was generated outside the UK. Tony was a core member of the team that completed the over-subscribed fundraising and admission to trading on AIM of Gattaca plc (then Matchtech Group plc). He also led the successful £60 million acquisition and integration of AIM quoted Networkers International plc.

Executive Management

Cary Parrott, Sr. VP Sales and Marketing, has over fifteen years’ sales experience in the medical device industry running sales teams and delivering marketing and sales plans to a variety of customer types including surgeons, operating room management, pharmacy management and c-suite. He has a broad-based background in medical products including extensive experience with start-up companies and launching new products, having served in various management positions with top medical companies such as Ethicon, Inc., ZymoGenetics, HemCon Medical Technologies, Inc. and Marine Polymer Technologies, Inc.

Raymond “Paul” Bray, after completing his bachelor of science degree in engineering physics at Cornell University, started his professional career with a commission in the United States Air Force. He served for over seven years as a navigator on the KC-135A air refueling tanker and as a bioenvironmental engineer in the Biomedical Sciences Corps. He resigned from the military to attend graduate school at Texas Tech University, where he obtained a PhD in chemical engineering. Over the last 20 years, his experience has included engineering and quality management roles in the semiconductor, electronics, building materials, and medical device industries. Since 2010, Paul has been a manufacturing engineer in the neuromodulation

division of St. Jude Medical; a consultant with Maetrics while providing support to Johnson & Johnson; and a manufacturing and quality engineer at Apollo Endosurgery. He is a co-inventor of the deep brain stimulation lead with segmented electrodes (US patent 9,370,653 B2). Paul joined Belluscura in 2018 and brought his expertise in product development, supporting regulatory submissions, setting up manufacturing lines, and launching new products.

Chief Science Advisor

Our lead advisor, **Dr. Patrick J. Strollo, Jr.** MD, FACP, FCCP, FAASM, has been advising Belluscura on the development of the X-PLO₂R since the project started in 2017. Dr. Strollo is Vice Chair for Veterans Affairs, Department of Medicine Pittsburgh, Vice President Medical Service Line VA Pittsburgh Health System, and Professor of Medicine and Clinical and Translational Science. Dr. Strollo received a Bachelor of Science in Chemistry from Washington College, a Master of Science in Biomedical Sciences from Wagner College and his MD from the Uniformed Services University of Health Sciences. Dr. Strollo has authored or jointly authored over 100 publications in the respiratory field. His accomplishments include the Air Force Achievement Medal, Meritorious Service Medal, Best Doctors in America, Castle Connolly's Top Doctors and an Excellence in Education Award.

Key Research and Development Partners

Separation Design Group

Waynesburg, PA

EPEC Engineered Technologies

New Bedford, MA

Powercast Corporation

Pittsburg, PA

R & Q Solutions

Pittsburgh, PA

Intertek Corporation

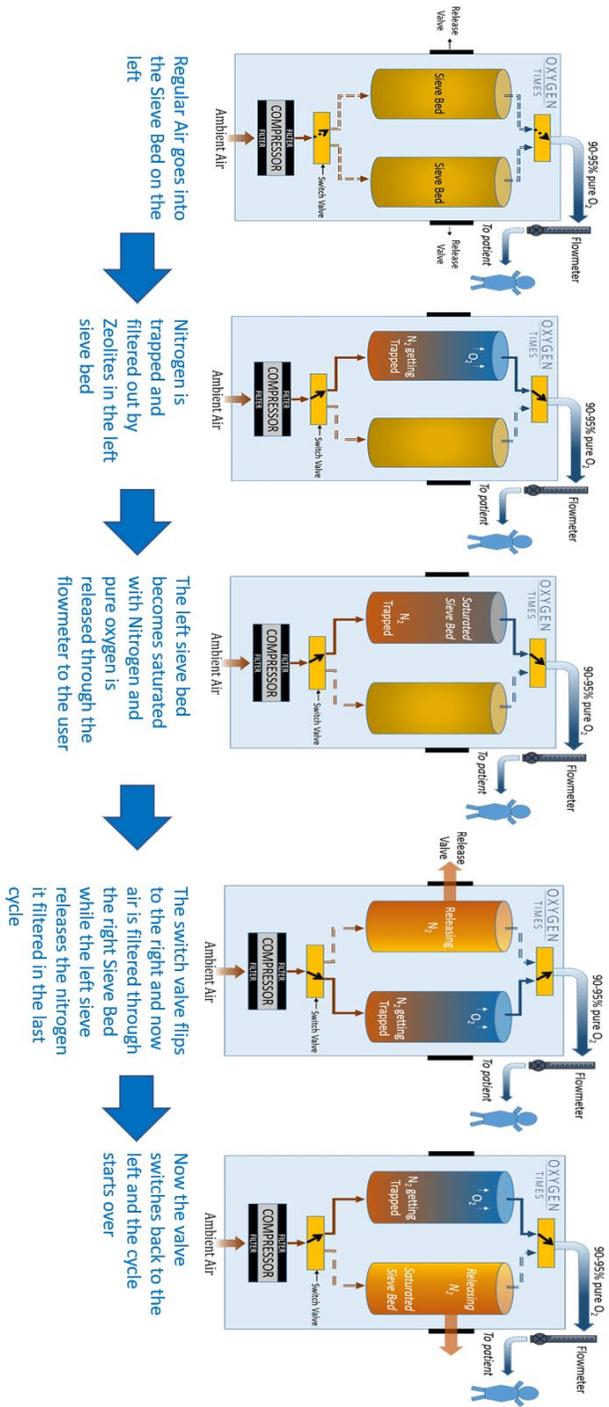
Boston, MA

VI. Financial Information

- a. Latest Filing
- b. Simplified P&L

APPENDIX

How Oxygen Concentrators Work? ^{xxvii}



- ⁱ World Health Organisation – Chronic Obstructive Pulmonary Disease (COPD) – 1 December 2017
- ⁱⁱ Journal of Respiratory and Critical Care Medicine – February 2017
- ⁱⁱⁱ The Projected Epidemic of Chronic Obstructive Pulmonary Disease Hospitalizations over the Next Fifteen Years, Khakban, Amir et al, Am J Respir Crit Care Med Vol 195, Iss 3, pp 287–291, Feb 1, 2017
- ^{iv} CDC reports annual financial cost of COPD to be \$36 billion in the United States. CHEST July 2014
- ^v Global Market Insights: Oxygen Cylinders Market Size By Product, By Industry Analysis Report, Application Potential, Price Trends, and Competitive Market Share & Forecast, 2017 –2024
- ^{vi} An Economic Evaluation of the Impact, Cost, and Medicare Policy Implications of Chronic Nonhealing Wounds, Nussbaum, Samuel et al, Value in Health 21 (2018) 27-32
- ^{vii} Id.
- ^{viii} www.prnewswire.com/news-releases/global-wound-healing-market-to-reach-over-us-350-billion-by-2025-says-tmr-676809663.html
- ^{ix} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4698133/>
- ^x Activity of ozonated water and ozone against Staphylococcus aureus and Pseudomonas aeruginosa biofilms, Bialoszewski, Dariusz et al, Med Sci Monit, 2011; 17(11): BR 339-344
- ^{xi} Anti-Inflammatory effects of ozonated water in an experimental mouse model, Azuma, Kazuo et al, Biomedical Reports 2: 671-674 2014
- ^{xii} Effectiveness of a short-term treatment of oxygen-ozone therapy into healing in a posttraumatic wound, Agosti, Irene Degli et al, Case Reports in Medicine, Vol 2016, Article ID 9528572
- ^{xiii} The Safety and Anti-Tumor Effects of Ozonated Water in Vivo, Kuroda, Kohei et al, Int. J. Mol. Sci. 2015, 16, 25108-120.
- ^{xiv} Aerosol Therapy in Patients Receiving Noninvasive Positive Pressure Ventilation, Dhand, Rajiv, Journal of Aerosol Medicine and Pulmonary Drug Delivery, Vol. 25, No. 2 2012
- ^{xv} Id.
- ^{xvi} Delivering Oxygen during Nebulization to Infants and Toddlers, Singh Tomar, RP, Med J Armed Forces India, 2004 Apr. 60(2) 179-80.
- ^{xvii} Topical Antimicrobial Therapy for Treating Chronic Wounds, Lipsky, Benjamin, Clinical Practice 15 November 2009
- ^{xviii} Id.
- ^{xix} European Respiratory Review 2014 23: 379-389; DOI: 10.1183/09059180.00005514
- ^{xx} Sebel, P. S., Bowdle, T. A., Ghoneim, M. M., Rampil, I. J., Padilla, R. E., Gan, T. J. et al. (2004). The incidence of awareness during anesthesia: a multicenter United States study. Anesth. Analg., 99, 833-9, table.
- ^{xxi} JCAHO (2004). Preventing, and managing the impact of, anesthesia awareness. JCAHO Sentinel Event Alert.
- ^{xxii} Id.
- ^{xxiii} https://www.marketsandmarkets.com/Market-Reports/anesthesia-monitoring-devices-market-57663369.html?gclid=EAlaIqobChMI77PXj4O72AIVx7rACh0tMQkREAAYASAAEgLVovD_BwE
- ^{xxiv} The Lancet: Estimate of the global volume of surgery in 2012: an assessment supporting improved health outcomes
- ^{xxv} <https://www.marketsandmarkets.com/PressReleases/anesthesia-monitoring-devices.asp>
- ^{xxvi} <https://www.einpresswire.com/article/411717294/global-smart-sleep-tracking-device-market-is-anticipated-to-reach-usd-4-297-1-million-by-the-end-of-2024>
- ^{xxvii} <http://www.oxygentimes.com/learn/how-oxygen-concentrators-work.php>