



NIRVANA

LIFE SCIENCES

**Focused on developing medical products and regimens
that address addiction.**

Our Mission

- Nirvana was founded with the intent to develop novel therapeutic products derived from psychedelics.
- There is a growing body of research that leads to the conclusion that psychedelic based medicines can offer new approaches to pain management as well as treatment for ailments such as addiction, anxiety and depression.
- We believe that using naturally sourced psychedelics in novel formulations holds the promise of delivering non-addictive solutions that are effective in managing pain and addiction.
- Opioid addiction has become a major health crisis that has a massive cost to our society. Existing approaches to breaking addiction have not been successful.
- A successful approach to break addiction and offering non-addictive pain management products will offer great benefit to society and a successful drug development project for the Company.
- The Company's goal is twofold; to develop psychedelic derived medicines that can break human addictions to Opioids, and non-addictive pain relief that can replace the need for Opioid medicines.
- Our team, consisting of leading researchers from around the globe, aim to develop therapies that have the potential of freeing millions from addiction and saving society billions of dollars annually.

Opioids Addiction has become a global crisis

- For many years, the pharmaceutical Industry has promoted the use of highly addictive pain medications to millions of patients. While these medications have been effective for pain relief, the highly addictive nature of the medications has created a problem with no practical solution.
- The result has been millions of people becoming addicted to opioid medications, some who have turned to street versions of these drugs to manage their pain. The actions of these pharmaceutical companies have a devastating impact on families and communities.
- Current solutions proposing free or lower cost opioids are not a solution, society needs practical methods to break addiction, prevent relapse and replace addictive pain management therapies with non-addictive therapies.
- The US Council of Economic Advisors estimate the cost to the US economy at more than \$500 billion annually, this equates to -almost 4% of GDP.
- In 2021, more that 75,000 Americans died of drug overdose, with around two-thirds of those deaths linked to opioids. The impact can be measured financially, with massive health care and insurance costs as well as the significant costs of law enforcement. It has been estimated that it will require a large investment, as much as \$100 billion, to fully address the crisis.

Four Pillars of Success

Research & Development of IP

Acquired the IP behind these novel formulations
Advancing research on a number of these formulations
Advancing research on 4-PO tryptamine analog

Development of Processes to support production

Acquired a license for the extraction technology
Developing a scalable process for producing inputs

Clinical Trials

Each of these formulations that show promise will be put through pre-clinical trials

Product Development

Developing therapeutic products using novel psychedelic compounds
Targeting a soft-gel format for the addiction focused product

Breakthrough Research

- The Company's Scientific team is taking theories developed by researchers in the 60's and 70's and applying modern approaches to developing novel psychedelics-based medicines.
- Company researchers believe that its novel Psilocybin formulation may also be effective at preventing relapse.
- Nirvana has begun pre-clinical trials into the efficacy of this Psilocybin based formulation as a therapeutic tool to assist addicts break their addiction to opioids.
- Clinical Studies are led by Dr. Massimo Nabissi, of the University of Camerino (Italy), with the support of Dr. Sazzad Hossain.
- Ongoing pre-clinical trials to validate that the Psilocybin based formulation is effective at breaking addiction is the first step.
- This will be followed with further research and development of a variety of psychedelics that may eventually lead to product development.

Therapeutic Products

The Company has identified two target two products for its first phase of development:

First, a one-per-day slow release gel cap that assists transition from opioids to non-addictive pain relief therapies by preventing relapse.

Second, a one-per-day slow release gel cap that delivers non-addictive pain relief.

- The Company has begun development efforts for these products, it is expected that these prototype products and formulations will be entering the next stage of the development process trials in the third quarter of 2022.
- As many of our formulations will be dealing with the treatment or management of opioid addiction or dependency, we have prioritized the development of non-abusive delivery systems. This will be an advance over conventional delivery systems such as tablets or inhalants that can be abused by over consumption and overdosing.
- The medicines produced via this method would be rendered inactive if consumed in any manner other than orally because the formulation must first pass through the gut in order to break the active compound free from its coupled backbone. IV use or insufflation would not be effective at releasing the active thus rendering it safe.

Novel Formulations

- The company has purchased a portfolio of Intellectual Property from researchers with vast experience in the psychedelics space.
- Nirvana's researchers have developed formulations based on psychedelics for aiding patients who are addicted to opioids to transition off these substances, The "Relapse" formulation is the focus of much of the teams attention.
- The Company will take the formulations and enter a standard drug development process. Formulating the active ingredient for safe and standardized use as an oral medication is the key to establishing an overall quality FDA approved medication.
- Also, since psilocybin potency diminishes upon exposure to water and UV light, our novel carriers and encapsulation process utilize both anhydrous carrier liquids and UVA&B resistant gelatins for our precisely dosed Soft gel capsules.
- As legalized medicinal use of psilocin, psilocybin and other naturally derived tryptamines is a new frontier, this leaves open a great deal of opportunity to seize the market on new FDA approved formulations.

Extraction of Natural materials

- Nirvana has prioritized extraction of natural materials to create therapeutic compounds while others have focused on synthetic materials.
- The Company's extraction process development includes large scale extraction, isolation and purification of psilocybin and other active tryptamines from various sources of refined biomass material consisting of both grown fungi and enzymatic de novo crude.
- The process for synthesizing materials such as psilocybin has been around for many years. In fact, our team members were involved with developing many of the routes steps and the streamlining of the synthesis process.
- Producing tryptamines synthetically it is not a cost-effective means of production and will quickly become obsolete once we have perfected our more effective and sustainable routes of tryptamine production.
- The reason that no one has come forward with a viable method of extracting active tryptamines from biomass material like mushrooms or mycelium is because it is not an easy process to streamline and the yields have been poor. Nirvana is planning on growing several genera and species of fungi (including rare and hybrid varieties) with a high standard of quality and batch consistency.
- Using fungi to extract the active tryptamines from the biomass to yield psilocybin and psilocin in the form of pure crystalline isolate, salts, tinctures and high bioavailable water-soluble liquids and dry powders.
- The extraction of psilocybin and other structurally similar substituted tryptamines from fungi followed by their conversion to the metabolic prodrug 4-POpsilocin. This process is a novel method to yield a new psychoactive substituted tryptamine that has a highly desirable effect. The onset is fairly rapid and the duration is roughly 4 hours.
- This novel compound will be ideal for use in a clinical setting due to its short duration and the lack of any apparent body load that's often associated with psilocybin.

Extraction- Synthetic

- The International Centre for Genetic Engineering and Biotechnology of New Delhi, India has been contracted to undertake a research project on a novel process developed by the Company's CSO to assess a process to produce psilocybin materials at scale.
- The project is focussing on strain engineering to achieve a cost- competitive large-scale fermentative production of psilocybin with a purity of >98% in kilogram batch quantities for use as an API”
- For the next stage we are developing a means of adapting this extraction method for large scale pharmaceutical GMP production of clinical grade psilocybin.
- The Company has acquired an exclusive license to a proprietary extraction technology that will support these developments.

PureAI Distillation System

- Nirvana has acquired an exclusive license to the extraction and distillation technology for the Psychedelics market. The Company has purchased its first PureAI machine that will be in the Vancouver Lab facility.
- The Pure AI is a high vacuum fractional distillation system that should allow us to achieve separations of non-tryptamine compounds at a lower temperature than conventional fractional distillation systems.
- The pure AI system will be used to isolate secondary and tertiary compounds that will be used for further research and study and to formulate new medicines.
- These isolated compounds will be studied in formulations clinically and our products formulated with these compounds will set us apart in the market.
- The Pure AI produces compounds that are pure in nature since the technology has the ability of separating pristine compounds from complex mixtures due to incorporating the use of vapor temperature within a static multiple theoretical plate system.
- As only a single compound or component boils at a specific temperature under a high vacuum system, the technology uses this law of physics to separate out pure compounds.

Research Facility

- The company has secured a location in Vancouver to conduct research that is suitable for this development.
- The company received a Section 56 Exemption (research license) from Health Canada.
- The team has extensive experience planning and building similar facilities.
- The facility will be built out to a level 9 Security standard, the 2,500 square foot lab space will facilitate all foreseeable activities as well allowing for scaling and expansion.
- These activities will include research of novel compounds, extraction and purification methods.
- The Company has applied to Health Canada for Dealer's License that will allow for movement of materials between licensees.

Pre-Clinical Research

- The Company began a series of pre-clinical trials in the spring of 2021
- These studies are led by Dr. Massimo Nabissi of the University of Camerino (Italy) with the support of Dr. Sazzad Hossain.
- Dr. Nabissi's ITD Lab was granted special permission from the Italian government to work with these Psilocybin based compounds.
- This research is considering the efficacy of Psilocybin based formulations as a therapeutic tool to break addiction to opioids.
- Reports for this research is expected in the third Quarter of 2022.
- Further research has been planned for a range of formulations under development.

Bruce Clark

Chief Executive Officer

- Mr. Clark leads the Nirvana team, seeking new solutions to one of our society's most confounding issues.
- He sees great potential in the opportunity to development of new approaches to a complex problem which is both a public health and economic issue for our communities.
- Mr.. Clark is a proven innovator who brings 30 years management experience across a variety of industries, including energy, food and beverage manufacturing and life science.
- He possesses broad experience in product development, manufacturing and product distribution and a clear understanding of the regulatory process.
- He has a deep understanding of the public policy issues at play and the importance of collaboration with all levels of government and health professionals through the development process.

Connie Hang, CPA

Chief Financial Officer

- Ms. Hang has over 20 years of finance, accounting, and management experience in a variety of industries, including energy, mining, and health science.
- In the past 12 years Ms. Hang has acted as an advisor, officer and/or director for various public and private companies, which span across Canadian based companies to foreign controlled entities.
- From 1999 to 2009, Ms. Hang worked in professional accounting firms and held senior positions in tax and audit practices.
- Having served over 40 public and private companies, which span across Canadian based companies to foreign controlled entities, she has gained in- depth knowledge of financial and regulatory affairs.
- Her experience in dealing with people from different cultures and disciplines has solidified her ability to understand the needs of stakeholders and communicate complex ideas.
- Ms. Hang is a Member of the Chartered Professional Accountants of Canada and British Columbia and holds a Bachelor of Accounting Science from University of Calgary.

Dr. Sazzad Hossain PhD

Chief Technical Officer

- Dr. Hossain is the former Chief Scientific Officer of InMed Pharmaceuticals Inc., a leading public Canadian bio-pharmaceutical company.
- Previously he worked as Senior Scientist at Biotechnology Research Institute of National Research Council Canada.
- Dr Hossain is a drug discovery leader over 15 years of biotech/pharmaceutical experience with small molecule & biologics in multiple disease indications.
- He has experience in accelerated drug discovery and commercialization process with combined experience in preclinical in vivo pharmacology, DMPK, safety & toxicology.

He has led teams in the strategic design of new natural health products and generated hundreds of millions of dollars in revenue by leading development of multiple successful compounds.

- Dr Hossain holds a PhD in Biology and was a post doctoral Fellow at the Centre for Molecular Medicines and Therapeutics at the University of BC

Michael McCune

Chief Operating Officer

- Mr. McCune is a seasoned entrepreneur and innovator in the extraction space.
- Since 2013, he has applied his passion for science to developing novel processes for producing API's for Cannabis industry. He has built a specialty for at-scale extraction of a wide variety of materials.
- He led the development of a leading-edge distillation system that offers significant operational advantages and automation. He has overseen the development, trials and contract manufacture of this system.
- Michael is recognized as a lead leader in these technologies and has co-authored several Patents. He maintains a global network and has presented at numerous conferences on the topics of Extraction and Cannabis Technologies.

Robert August IV, MSc

Head of Innovation

- Robert is an academically trained medicinal chemist with a focus on ergolines, phenethylamines and tryptamines.
- Robert began his academic career at Loyola University in Baltimore, Maryland. During his undergraduate years, Robert worked as an analytical chemist for Martel Laboratories where he received his state analytical certifications for ICP, GC/MS and LC/MS operations.
- While pursuing a post graduate degree in medicinal chemistry at Johns Hopkins University, Robert turned his focus toward the synthesis of psychoactive and psychedelic compounds, namely ergolines such as LSD and phenethylamines like MDMA and 2CB.
- It is during this time that Robert began to work as a research chemist and, eventually, began to actively pursue working partnerships with other chemists who were researching psychedelic compounds like Dr. David E. Nichols and Nick Sand. Robert was invited to work alongside Ben Alkire (Purdue University) where he went on to cofound Berkeley-Clearlight Research Group.
- While forming BCRG, Robert was given unlimited access to the D.E. Nichols Archive at Purdue University and the vast array of synthesis notes created by Dr. Oberlender during his time as a chemist for the Nichols team.
 - In the years that followed, Robert synthesized numerous novel compounds and research chemicals and became the first person to synthesize 3,4-MDMA Monohydrate HCl as a crystalline solid and as a beta ketone.
 - Robert is a highly respected member of the psychedelic community and an advocate for ending prohibition.

ITD Labs- Dr. Massimo Nabissi

Pre-Clinical Research

- Integrated Therapy Discovery Labs has been contracted to conduct a series of research projects
- ITD is led by Dr Massimo Nabissi, a Professor in the Scientific sector at the University of Camerino, Italy.
- His principal area of research are in molecular and cellular biology focused on human cancers: glioblastoma, multiple myeloma, bladder, prostate and pancreas and prostate.
- Additional area of research includes plant extracts use in inflammation and cancer and diet supplements effects in human health.
- Dr. Nabissi has licensed technologies that he has developed to the Company and will be leading the Pre-Clinical research the formulations.
- Dr. Nabissi holds a PhD in Cellular and Molecular Biology

Dr Naseem Gaur, PhD

Head of Biosynthetic Research.

- Dr. Gaur is the group leader of Integrative Biology-Yeast and Biofuels, at the International Centre for Genetic Engineering and Biotechnology, New Delhi, India.
- Current research interest focuses on developing yeast strains for bio-based chemical production including, bio-alcohols and oleochemicals, Xylo-oligosaccharides, Xylitol and recombinant protein expression. He also maintains a strong interest in the field of human fungal pathogenesis and multidrug resistance.

Dr. Gaur's lab will undertake a research project on a novel process developed by the Company's CSO to assess the ability to produce psilocybin materials at scale.

The project will focus on strain engineering to achieve a cost-competitive large-scale fermentative production of psilocybin with a purity of >98% in kilogram batch quantities for use as an API

- Dr. Gaur previously served as a Research Fellow, National Institutes of Health (NIH) and the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

Sheldon Inwentash, B.Comm., CA., CPA., LL.D.

Chair of Advisory Board

- Mr. Inwentash is the Founder, Chairman and CEO of ThreeD Capital Inc.

- Mr. Inwentash has more than 30 years of investing experience.

He co-founded Visible Genetics, the first commercial pharmacogenomics company, in 1994 and exited in 2001 to Bayer.

Through two decades leading Pinetree Capital, Mr. Inwentash created significant shareholder value through early investments in Queenston Mining (acquired by Osisko Mining Corp. for \$550-million), Aurelian Resources (acquired by Kinross for \$1.2-billion) and Gold Eagle Mines (acquired by Goldcorp for \$1.5-billion) to name a few.

Mr. Inwentash obtained his B.Comm from the University of Toronto and is a Chartered Professional Accountant.

In 2007, he was an Ontario finalist for the Ernst & Young entrepreneur of the year award.

In 2012, Sheldon received an honorary degree, doctor of laws (LL.D) from the University of Toronto for his valuable leadership as an entrepreneur, his philanthropy, and inspirational commitment to making a difference in the lives of children, youth and their families.

Jakson Inwentash, CFA

Advisory Board Member

- Mr. Inwentash is a director and VP Investments at ThreeD, where he focuses on identifying, researching, and meeting with early stage companies in various disruptive industries to invest into.
- Previously, he worked in investment banking for Gravitass Securities Inc. where he conducted due diligence of public and private companies, built marketing materials for clients, and developed financial models.
- Jakson also worked for the Bank of Montreal in several departments within the Wealth Management line of business including ETF Products, Fundamental Equities, Private Banking, and InvestorLine.
- Mr. Inwentash has deep knowledge of the psychedelic markets and trends.

Capitalization Table

POST RTO CAP TABLE

		Date	Price per Share	Amount Raised	Shares Issued	Shares subject to Escrow
Nirvana Life Sciences Inc.	Founders		\$ 0.001	\$ 10,923.00	10,923,000	14,173,000
	Builders		\$ 0.02	\$ 93,000.00	4,650,000	
	Private Placement	Dec-20	\$0.15	\$800,000.00	5,333,333	
	Private Placement	Mar-21	\$0.25	\$1,292,500.00	5,170,000	3,250,000
	Private Placement	Aug-21	\$0.35	\$670,000.00	1,914,286	
Endocan Solutions Inc.					5,200,758	2,450,000
Total					33,191,377	

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