ESENSE-LAB INVESTOR PRESENTATION

Life sciences company **eSense-Lab Ltd ("eSense" or the "Company")**, (ASX:ESE), is pleased to release its Investor Presentation to the market, a copy of which is attached.

A copy of the Investor Presentation is also available on the Investor Center page of the eSense-Lab website https://www.esense-lab.com/investor-center

About eSense-Lab

eSense - Lab (ASX: ESE) is a life sciences company specialising in the commercialisation of the phytochemical profiling of plants. The Company combines genetics, mRNA, protein expression and phytochemical profiles to generate a comprehensive model of rare or high value plants. eSense – Lab can then use this model to 'reverse engineer' a terpene profile, which is a naturally occurring formulation of different individual terpenes which together, exactly replicate the flavour, fragrance and other desired characteristics of the targeted plant, at a more sustainable and cheaper cost. The Company's initial focus is on the cannabis plant.

To learn more about eSense – Lab, visit www.esense-lab.com

Investor Relations
F T I Consulting
Level 2, 2 Kings Park Rd
West Perth WA 6005
+61 (0)8 9485 8888
Elodie.Castagna@fticonsulting.com / Steve.Suleski@fticonsulting.com
www.fticonsulting.com

creating
the virtual plant

Highly Scalable
Diverse Applications
Sustainability
Innovative

eSense-Lab
A DROP OF NATURE'S ESSENCE

eSense-Lab
A DROP OF NATURE'S ESSENCE

corporate overview

Who we are

An emerging Life Sciences Company

- Commercialising proprietary plant profiling technology.

- That can be used to "reverse engineer" a comprehensive model of rare or high value plants.

- And reconstruct the valuable components using alternate natural sources, in a more cost effective and sustainable way.

Corporate Snapshot

- Listed on the ASX in February 2017 following an Initial Public Offer that raised [A$3.5m] **(ASX: ESE).**

- Current market capitalisation around [A$12.5m], Net cash of [A$4.1m].

- Headquartered in Israel, with global target markets.

- Experienced Israeli and Australian Board of Directors.

What we do

Plant profiling technology
"The Virtual Plant"

- Combine genetics, mRNA, protein expression and phytochemical profiles to generate a comprehensive model of targeted plants.

- This model is then used to 'reverse engineer' and reconstruct the terpene profile of that plant, using alternate natural sources.

- Terpenes are naturally occurring compounds (classified as phytochemicals) which account for the flavour and fragrance of plants. Each plant has its own unique terpene profile.

- The reconstructed terpene profile exactly replicates the flavour, fragrance and other desired characteristics of the targeted plant.

What we solve
the market need

Significantly Reduce Costs

- The cost of production for 1 litre of a specific terpene extract can be as high as US$700,000

- Esense Lab can reproduce specific terpene extracts at a fraction of the cost (2-10%) depending on the plant

Improved supply and quality

- Can source target terpenes from more common plants

- Accuracy in replicating a target compound

- Consistency of products compared to conventional production

- Standardised products with fewer impurities

Sustainability

- ake the essence of rare plants accessible and affordable to the broader market

- Providing sustainable alternative natural sources to the consumption of natural occurring resources, reducing the commercial pressure on wild populations of rare plants

How we do it
Cracking the plant code

Current
Raw Plant Source

Chemical Profiling
Only >0.1 % detection ability

End Product
3-15 terpenes

eSense 'virtual plants'
Hundreds of Organic Sources

Comprehensive Profiling
>0.001 % detection ability (100x better)

eSense End Product Profile
40-100 terpenes
plus other vital constituents

Cheaper
Sustainability
Superior Quality
Legal
Patented

market
opportunity

Our target plant

Initial Focus Plant
Legal Cannabis and
Para-Cannabis Industries

- Cannabis is a very high value plant market due to high regulatory requirements, limited supply, and many medical and industrial applications.

- Estimated US retail sales of medical and recreational cannabis in 2016 of between $3.5 billion and $4.3 billion (year-on-year growth of 17% to 26%). This is forecast to reach $11 billion in 2020, posting double-digit growth each year[13].

- Esense Lab's replicated terpene profiles have the targeted characteristics of cannabis plants, however are not manufactured from the cannabis plant, do not contain any cannabinoids, and are not considered subject to the same regulatory regimes governing cannabis sourced products.

Future Focus Plants

- Ginseng

- Saffron

- Other medicinal plants or spices

Disrupting the legal cannabis market

Esense Lab aims to make cannabis phytochemical profiles available as a scalable and commercially viable solution for cannabis related product manufacturers for the first time ever, servicing the growing legal cannabis and para-cannabis industries around the world.

The Terpene profile accounts for about 0.5-3% of the plant, making it virtually impossible to produce in large scale due to the cost of raw material (cannabis). Approximately 33 kilograms of raw cannabis plant is required to produce 1L of Terpenes.

The cost to produce one litre of terpene would range from **US$200,000 - $700,000** - too expensive for most applications.

Esense Lab

- Has released a **highly disruptive** product line of **reverse engineered** cannabis terpene profiles at a fraction of the cost (2-10%) depending on the plant.

- Can produce more than **100 litres per day** of commercial ready terpene profiles from a **single production facility.**

E-liquids
A promising
initial application

The **Global E-Liquid Market** is poised to reach approximately **$32.8 billion by the year 2021**[10], and expected to grow to over **$50 billion in 2025**, equivalent to around 10% of the actual tobacco market[16].

In the United States the E-liquid market continues to grow rapidly with more than US$2 billion retail sales in 2015, and estimated to reach $10 billion by 2017[15]. The US is also the largest revenue generating market for e-cigarettes and vaporisers globally, creating an exponential surge in demand for E-liquids[16].
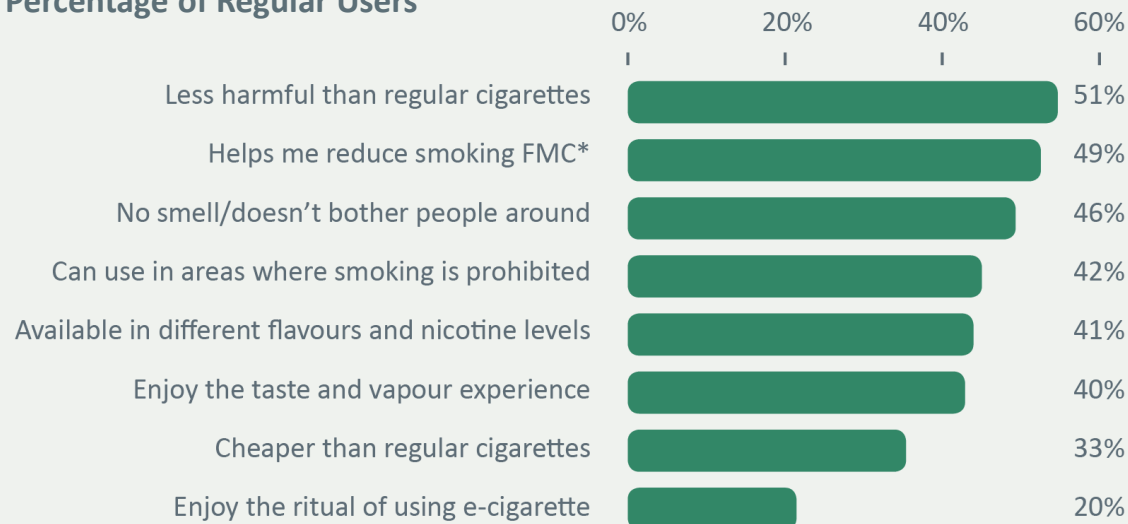
Percentage of Regular Users

Driver	Percentage
Less harmful than regular cigarettes	51%
Helps me reduce smoking FMC*	49%
No smell/doesn't bother people around	46%
Can use in areas where smoking is prohibited	42%
Available in different flavours and nicotine levels	41%
Enjoy the taste and vapour experience	40%
Cheaper than regular cigarettes	33%
Enjoy the ritual of using e-cigarette	20%

Fig1. Drivers behind regular e-cigarettes use (% of regular users) 2015.

E-liquids
A promising
initial application

Between 2013 and 2015 the number of e-cigarette users almost doubled, growing from 0.9% of adults to 1.7% total usage across the seven countries in figure 2. E-liquids could also surpass consumption of conventional cigarettes in the US by 2023.
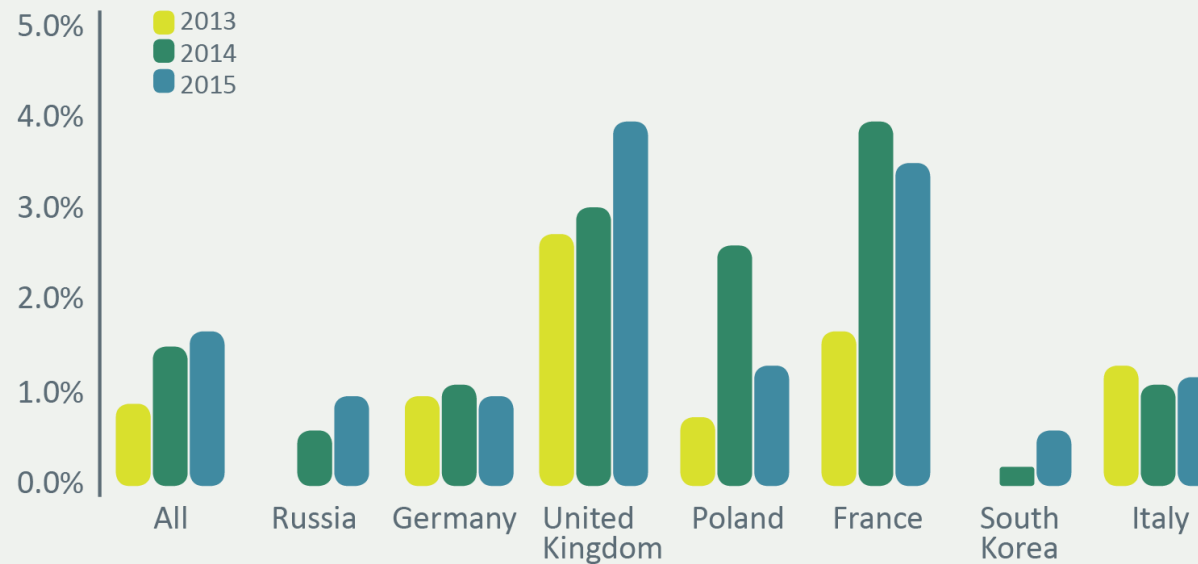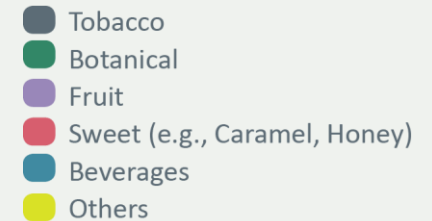
Percentage of Adults

Fig2. E-cigarette users as a percentage of adults, 2013-2015.

E-liquids
A promising
initial application

In Europe, the e-liquid market is expected to grow over to $11 billion by 2025, at a double digit CAGR from 2015 to 2025. The market will witness a staggering growth until 2017, by when most of the regulatory and policy framework will fall into place.

The growth rate will significantly increase thereafter, with significant revenue generation from evolving markets of the U.K., Germany, and Russia.

For the European territories, figure 3 demonstrates that flavoured, botanical, and other E-liquids represent the majority of those used by consumers, and more so than tobacco based E-liquids.
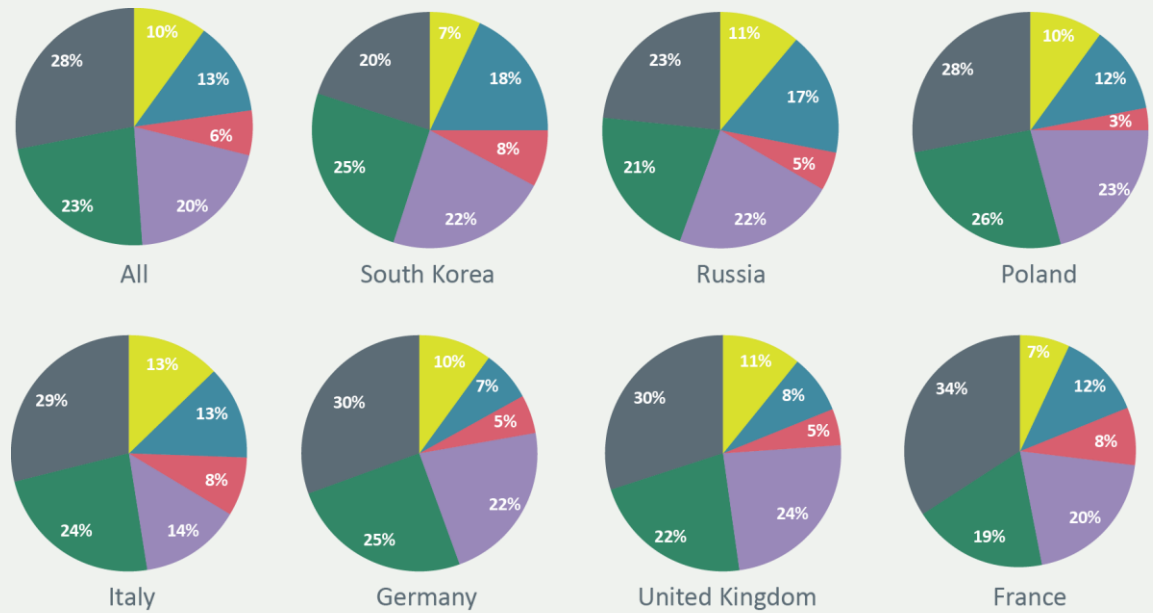
Percentage of e-cigarette Users

Legend:
- Tobacco
- Botanical
- Fruit
- Sweet (e.g., Caramel, Honey)
- Beverages
- Others

All
- Tobacco 28%
- Botanical 23%
- Fruit 20%
- Sweet 6%
- Beverages 13%
- Others 10%

South Korea
- Tobacco 20%
- Botanical 25%
- Fruit 22%
- Sweet 8%
- Beverages 18%
- Others 7%

Russia
- Tobacco 23%
- Botanical 21%
- Fruit 22%
- Sweet 5%
- Beverages 17%
- Others 11%

Poland
- Tobacco 28%
- Botanical 26%
- Fruit 23%
- Sweet 3%
- Beverages 12%
- Others 10%

Italy
- Tobacco 29%
- Botanical 24%
- Fruit 14%
- Sweet 8%
- Beverages 13%
- Others 13%

Germany
- Tobacco 30%
- Botanical 25%
- Fruit 22%
- Sweet 5%
- Beverages 7%
- Others 10%

United Kingdom
- Tobacco 30%
- Botanical 22%
- Fruit 24%
- Sweet 5%
- Beverages 8%
- Others 11%

France
- Tobacco 34%
- Botanical 19%
- Fruit 20%
- Sweet 8%
- Beverages 12%
- Others 7%

Fig3. Most often used E-cigarette flavour (% of regular users) 2015

Other attractive cannabis applications

Medical Cannabis

Retail sales of medical and recreational cannabis reached $6.7 billion in 2016 in the US, highlighting a year-on-year growth of 30%.

Total annual retail sales of medical and recreational cannabis is forecast to reach $11 billion in 2020, posting double-digit growth each year[13]. Esense Lab can provide strain-specific terpene profiles.

Additives – energy, alcohol, edibles

Esense Lab terpenes can be used in the same way food additives are used enabling almost endless applications.

The opportunity now exists for infused product manufactures, from alcohol to edible products, to build brand loyalty of the scale of Coca-Cola and the likes.

Pharma

Esense Lab has an opportunity to joint venture with pharmaceutical companies, supplying profiles for the development of patented drugs.

The Company's ability to reconstruct any given profile makes it an ideal producer of profiles 'on demand', customized to serve as 'control' in all clinical experiments. This may allow patient-specific, tailored compositions as personalised medicine.

eSense-Lab
A DROP OF NATURE'S ESSENCE

commercialisation

Cannabis terpene profiles are market ready

Esense Lab has introduced the world's first 100% natural reverse engineered cannabis terpene profiles.

10 formulations currently available including 5 of the world's most popular cannabis strains.

Currently Esense Lab has:
- 10 formulations being sold
- 20 are under late stage development for commercialisation

	eSense-Lab Reverse **Engineered** Terpene Profiles	**Cannabis Derived** Terpene Profiles
Commercially Viable	✓	✗
Scalable	✓	✗
100% Consistent	✓	✗
100% Legal	✓	✗
100% Natural	✓	✓

Current market applications for our terpene profiles

E-Liquids and energy drinks, alcohol and other liquid applications:

- Esense Lab terpenes can be used in the same way food additives are used enabling almost endless cannabis related applications, ranging from cannabis e-liquids and alcohol to cannabis scented business cards and more.

- Esense Lab has already obtained **first sales from Allor Vaporizers**, a US electronic vaporizer company, for the supply of E-liquids comprising the Company's reconstructed cannabis terpene profiles. The order valued at US$470,000 (approx. 50L delivery) is expected to be fulfilled by April 2017.

Topicals (Creams and lotion etc.)

- Esense Lab terpenes enable the creation of 100% legal cannabis scented topicals.

- Similar to the cosmetic industry, the fragrance of a topical takes an important part in the end user experience, but most cannabis topicals do not have the fragrance of cannabis because they are made using pure THC and CBD. Esense Lab enables to add the fragrance to topical products containing THC/CBD (as collaboration).

What is THC and CBD?
THC and CBD are the two main active ingredients (phytocannabinoids) in the cannabis plant.

THC is psychoactive and CBD non-psychoactive.

Current market applications for our terpene profiles
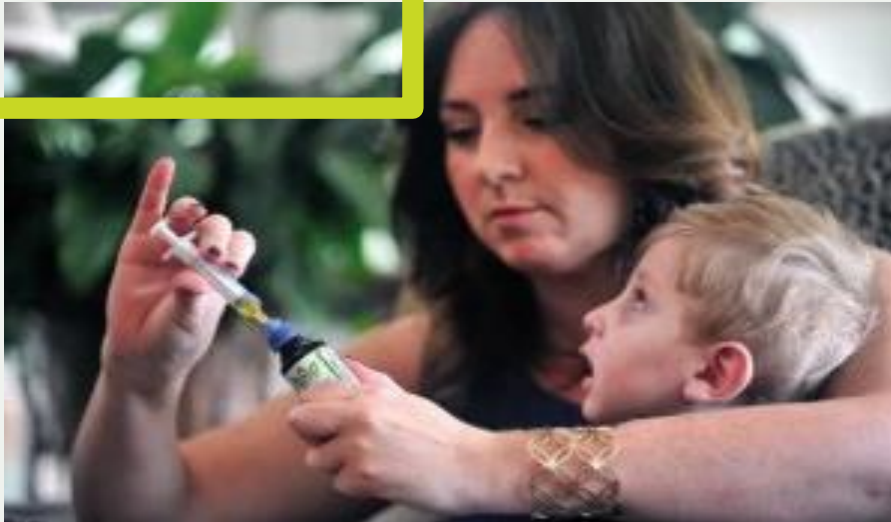
Cannabis Concentrates (Oil)

- Cannabis oil is high grade hash (almost pure THC) made using advanced extraction technologies and is one of the fastest growing smoking trends in the U.S.

- During the process of extracting cannabis oil, most if not all the terpenes are lost due to use of high pressure, heat etc. resulting in a final product that is almost pure THC and has no flavour, no fragrance and an inferior effect.

- Esense Lab enables the re-introduction of these terpenes to extracts.

Cannabis Edibles (Food products containing THC/CBD)

- Most edibles are made using cannabis extracts that lack the dimension of strains and provide a inferior effect.

- Additionally, in countries where cannabis is illegal, Esense Lab terpenes enable the creation of 100% legal cannabis flavoured and scented edibles worldwide.

Cannabis Medicine

- While some strains are better for treating some medical symptoms than others, cannabis medicine today is only based on THC/CBD dosage and lacks the dimension of strains (phytochemical polymorphism), resulting in inferior effect.

- Esense Lab could potentially be used to introduce this dimension to future cannabis medicine.

![eSense-Lab logo — A DROP OF NATURE'S ESSENCE]

our competitive advantage

Esense Lab versus our competitors

Esense Lab Advantage:
Patents (PCT) lodged

- Patents surrounding the extraction of, analysis of and preparations consisting of phytochemicals.
- Patents on the actual formulation of the analysed plant ("strain") based products.
- Patents on the actual formulations of cannabis "strains" with the other active chemical groups of extra-cannabis origin (nicotine, caffeine etc.).

eSense-Lab
A DROP OF NATURE'S ESSENCE

Benefit	eSense-Lab	Competitors
Detection Level	>0.001%	>0.1%
Profiling	Chemical, Genetics, mRNA and Proteomics	Chemical only
Detection Capabilities	Polar and non-Polar phytochemicals	Non-Polar phytochemicals
Focus only on Terpenes	No	Yes
End Product	30-100 terpenes	3-15 terpenes
Post processing of 'ingredients'	Yes	No
Medical grade	Yes	No
Pre-Clinical collaborations	Yes	No
Clinical collaborations	Yes	No

Our strengths

Proprietary Intellectual Property

- Patents (PCT) filed.
- Proprietary IP and Trade Secrets.
- Our team has 40 years of combined experience in the Cannabis field.

Superior Products

- 100% Cannabinoid free.
- 100% Natural and Organic and Kosher.
- Food Graded by the country of origin (meeting international WHO regulations).
- 100% Legal (none of the Raw materials on our end products are regulated substances).
- Shippable across the World.

Total focus on Quality
(from single substrates level, through to validation and certification of end products)

- Quality controlled manufacturing process (Strict ISO 2000:9001).
- Meet requirements under the Good Manufacturing Practice Requirements, and The Ministry of Health monitored Nutritional supplement.
- Service lab, certified by the Israeli Ministry of Health.
- Use the most sophisticated and innovative software available in the market.
- In-House pre-formulation and formulation enables control of all aspects in real-time.
- Ensures faster development time, broad spectrum of products and highest quality results.

Our strengths

Research Capability

- We initiate active research with leading academic institutes and Laboratories.
- Abilities to conduct in-Vitro (cell cultures), pre-clinical animal research and human subjects.

Our Expertise and our People

- Specialists in identification and quantification of the various types of phytochemicals in any given plant sample.
- Advanced and validated methods and protocols to meet the specific demands of any plant's profile. We employ:
    - Experts in agronomy.
    - Experts in phytochemical, protein and genetics extraction.
    - Experts in chromatography of plant material using GCMS, HPLC and LCMS.
    - Experts in molecular biology and biochemistry.

Commercially Ready

- Our products have been validated and have existing sales.

eSense-Lab
A DROP OF NATURE'S ESSENCE

key people and summary

Experienced Board of Directors

Mr Haim Cohen
CEO/Director

Mr Cohen has extensive managerial experience across numerous sectors , and a commercial background in both private and government enterprises.

He has a successful track record in business development and marketing, and managed project budgets of up to $4 billion.

Mr Cohen holds a B.A in social science from Bar Ilan University and also represented the Israeli government as chairman of the youth exchange authority in Israel.

Dr Brendan de Kauwe
Chairman

Dr de Kauwe studied a Bachelor of Science in Pharmacology and Physiology and Bachelor of Dental Surgery from the University of Western Australia. He also holds a Post Graduate Diploma in Applied Finance, majoring in Corporate Finance.

Dr de Kauwe is Director of Otsana Capital. Dr de Kauwe's corporate experience, coupled with his extensive technology, science and bio-medical background gives him an integral understanding in the evaluation and execution of projects and assets over a diverse range of sectors. He is currently a Director of Race Oncology Ltd (ASX: RAC) and Ookami Ltd (ASX: OOK).

Mr Ilan Saad
Director

Mr Saad has unique experience and knowledge in distribution companies across a variety of industries including IT, semiconductors and automation.

Mr Saad is CEO of Data Tech, responsible for the company's sales growth, improved margins and new sales channels positioning the company as an industry leader in the Israeli market.

Mr Saad is also the Chairman of Trading for Rapac Communication Group.

Mr Quentin Megson
Director

Mr Megson joined the TFS Group (ASX:TFC) in January 2005 as Chief Financial Officer and Company Secretary and in 2013 was appointed as GM - Human Resources and Communications. In 2015 this role was expanded to GM Operations and Corporate Services.

Prior to joining TFS he was a partner in the tax and business services division of chartered accounting firm - Pitcher Partners. He has been a chartered accountant for over 20 years as well as a member of the Australian Institute of Company Directors and Taxation Institute of Australia.

Advisors and key personnel

Dr Yaron Penn
CTO

Dr Penn holds a Ph.D. in drug addiction and stress related disorders studies from the Weizmann Institute of Science, together with a M.Sc. in Electrophysiology, and a post-doctorate in complex-physics, studying self-entrained neuronal networks. He is a member of the Israeli Society for Neuroscience and the American Biophysical Society.

Dr Penn was co-owner, CEO and CTO of one of the first licensed Israeli medicinal cannabis companies and holds deep knowledge of medicinal cannabis, stretching from genetics, agronomical and pharmaceutical properties, through processing, extraction and chemical analysis of its active compounds and up to national and international regulatory aspects.

He endorsed a national regulatory model through different state agencies, mainly the Ministry of Health, Ministry of Agriculture, the Labor, Welfare and Health Committee, the Israeli anti-drug authority and the police forensic laboratories.
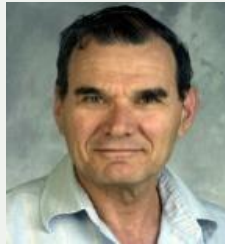
Prof. Zvi Vogel
Chief Scientific Advisor

Dr Vogel performed his M.Sc. studies at the Department of Biochemistry of the Hebrew University and his Ph.D. at the Weizmann Institute of Science. Between 1971 and 1973 he performed his post-doc studies at the National Institutes of Health (Bethesda, MD) in the Laboratory of the Nobel Prize laureate Rd. Marshall Nirenberg.

Between 2001 and 2004 he served as the Chairman of the Department of Neurobiology at the Weizmann Institute. Currently, he is a Professor Emeritus at the Weizmann Institute of science and is serving as the Head of the Adelson Center for the Biology of Addictive Diseases at Tel-Aviv University.

Dr Vogel published more than 170 scientific manuscripts. His Scientific work focuses mainly on the interaction of drugs of abuse with their receptors (e.g., the opioid and cannabinoid receptors). During the last 25 years most of the efforts of his laboratory were devoted to the newly emerging cannabinoid field. Among other findings, his group has recently shown that cannabidiol as well as several other cannabinoids and their derivatives have anti-inflammatory properties and thus inhibit pathogenic T cells and ameliorate the multiple sclerosis-like disease in both animal and tissue culture models.

Steven Wood
Company Secretary

Mr Wood is a Chartered Accountant and an employee of Grange Consulting Group Pty Ltd, which provides a unique range of corporate & financial services to listed and unlisted companies.

Mr Wood has extensive experience private and seed capital raisings as well as successful ASX listings, whilst also providing company secretarial and financial management services to both ASX and unlisted public and private companies.

Summary

What's so special about eSense-Lab?

- First in-kind plant profiling technology
- Has a range of commercial ready products of superior quality and constituents
- Highly scalable, low cost/high volume market opportunities – **producing >100 Litres p/day** (p/plant)
- Unmatched production costs to current peers
- First vertical of commercialisation in one of the most rapidly growing markets world wide
- Strong Intellectual Property position, including PCT stage patents, proprietary IP and Trade Secret
- Highly specialised and expert Board, Management and Key Personnel

Why Invest

First mover advantage

Producing a high demand product with superior quality at a significantly cheaper cost to any other currently available

Intellectual Property

PCT Patents and Proprietary IP

Pathway to Commercialisation

Commercial ready with distribution pending

Market Opportunity

First vertical global market opportunity poised to reach approximately $32.8 billion by the year 2021

eSense-Lab
A DROP OF NATURE'S ESSENCE

appendix/ more information
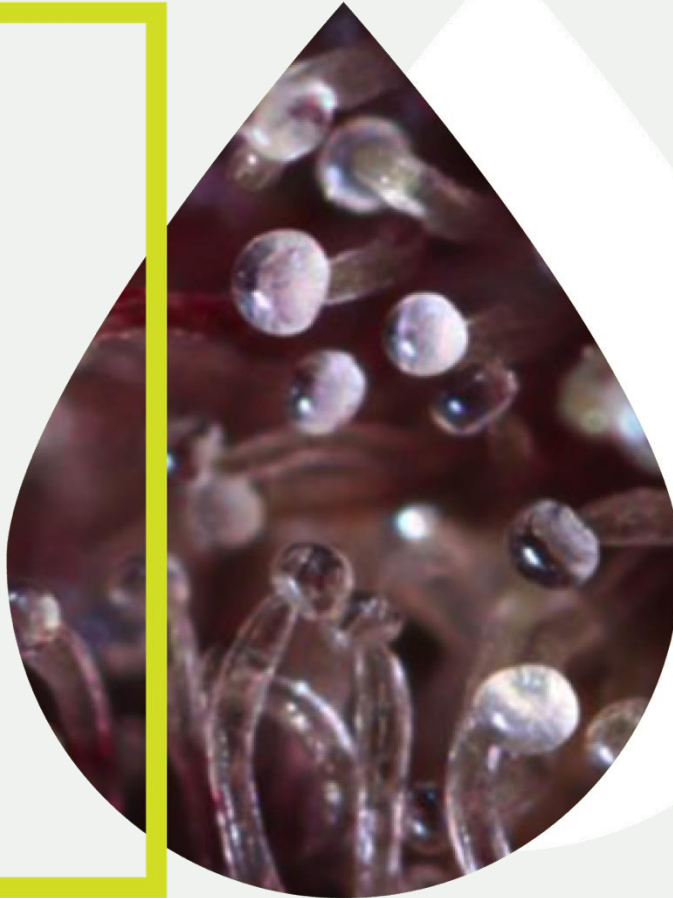
What are terpenes?

- Terpenes (Terpenoids) are naturally occurring chemical compounds (classed as phytochemicals), accounting for flavour and fragrance, synthesised by plants as well as some insects.

- Plants that produce terpenes are known as aromatic plants, and its distinctive flavour and smell is derived from its unique blend of terpenes.

- Terpenes are the major constituents of plant resin and essential oils extracted from such plants. (For example – The terpene 'Limonene' is responsible for the odour of lemons and other citrus fruits).

- Aromatic plants have been used in by cultures throughout the world, not only for perfumery and cooking, but also for medicinal uses.

- Essential oils, composed primarily of terpenes, have a long history of topical and internal medicinal use, and are included in both eastern and western pharmacopeia.

Terpenes and cannabis

Terpenoids share a precursor with phytocannabinoids.

The cannabis plant produces cannabinoids through a convoluted series of chemical reactions that is thought to involve terpenes as 'building blocks'. Cannabinoids are known as terpenophenolic compounds, as they are comprised of terpene blocks attached to phenol (C_6H_6O) groups.

At least 200 terpenes have been identified in Cannabis[14].

The primary terpenes and terpenoids that have been identified in cannabis are; limonene, myrcene, pinene, linalool, eucalyptol, δ-terpinene, ß-caryophyllene, caryophyllene oxide, nerolidol and phytol.

Terpenoids are quite potent, and affect animal and even human behaviour when inhaled from ambient air at serum levels in the single digits ng·mL^{-1} . They display unique therapeutic effects by themselves and may contribute meaningfully to the entourage effects of cannabis-based medicinal extracts[1]

Terpene profiles in cannabis

19-25% **THC CBD** 0.1-0.3%

™

Sour Diesel
Strain Fingerprint™

CBG
0-1%

THCV
0-0.2%

CBC
0-0.5%

CBL
0-0.6%

CBN
0-0.04%

Linalool
0.01-0.1%

a-Pinene
0-0.4%

ß-Caryophyllene
0-0.5%

ß-Myrcene
0.06-0.5%

D-Limonene
0.01-0.6%

Steep Hill Halent™
CANNABIS ANALYTICS AND RESEARCH

©2014 Steep Hill Labs, Inc. All Rights Reserved
www.steephilllab.com
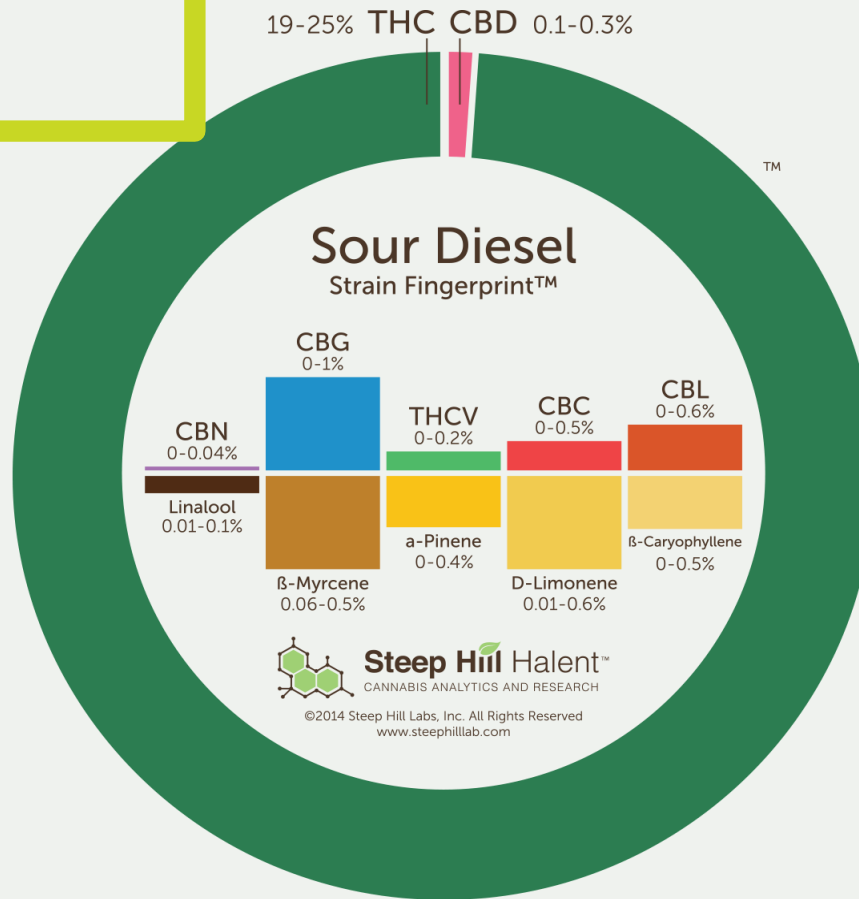
Each cannabis strain contains a unique "terpene profile"[14] - A naturally occurring formulation of different individual terpenes (found also in other plants).

This profile is responsible for the unique flavour and fragrance of the strain, but the most fascinating characteristic of terpenes is their ability to interact synergistically with other compounds (THC and CBD) in cannabis and their role in determining the medical benefits/effects of each cannabis strain.

For example - The terpene *Limonene* is responsible for the odour of lemons in the cannabis strains *"Super Lemon Haze"* and *"Sour Diesel"*, and also for the mood-enhancement effect of the strains.

Terpene profiling is thought to be one of the most accurate ways to discern cannabis strains.

"Terpenes contribute to the entourage effects felt in the body and mind"

Primary terpenes in cannabis

LIMONENE

LINALOOL

MYRCENE

	TERPENE	BENEFIT	AROMA
	Pinene Also found in pine needles	Anti-inflamatory Anti-bacterial Bronchodilator Aids memory	Pine Earth
	Myrcene Also found in hops	Sedative Sleep aid Muscle relaxant	Flowers Pungent Earth
	Limonene Also found in citrus	Treats acid reflux Anti-anxiety Antidepressant	Citrus Fresh spice
	Terpinolene Also found in coriander	Analgesic Pain reduction Digestive aid Stomachic	Pine Herbal Anise Lime
	Linalool Also found in lavender	Anesthetic Anti-convulsive Analgesic Anti-anxiety	Flowers Lavender Citrus Fresh spice
	Terpineol Also found in mugwort	Calming aid Antibacterial Antiviral Immune system	Pleasant lilac Citrus Wood
	Caryophyllene Also found in black pepper	Anti-inflammatory Analgesic Protects cells lining Digestive tract	Citrus Spice
	Humulene Also found in basil	Anti-inflamatory	Robust Herbaceous Earth
	Ocimene Also found in thyme and alfalfa	Decongestant Antiseptic Antiviral Bactrericidal	Citrusy green Wood Tropical fruit

Benefits of terpenes

Terpenoids are Essential Oil (EO) components, previously conceived as the quintessential fifth element, 'life force' or spirit, and form the largest group of plant chemicals, with 15–20 000 fully characterized[2].

Terpenoids are pharmacologically versatile: they are lipophilic, interact with cell membranes, neuronal and muscle ion channels, neurotransmitter receptors, G-protein coupled (odorant) receptors, second messenger systems and enzymes[3].

An immeasurable amount of data exists worldwide from clinical trials and studies conducted on Terpenoids and Essential Oils, with the consensus being that they are generally recognized as safe as attested by the US Food and Drug Administration (FDA) as food additives, or by the Food and Extract Manufacturers Association and other world regulatory bodies[1].

The European Pharmacopoeia acknowledges 28 EOs[4]. One of the most extensively researched EOs and the second most widely distributed terpenoid in nature is *D-limonene*, and is common to the lemon and other citrus EOs[5]. *D-limonene* is also a primary terpene in most Cannabis strain terpene profiles.

Focusing alone on one of the most common terpenes *D-limonene*, it is seen that there is vast research surrounding the medical and physiological effects of citrus EOs. Studies with varying methodology and dosing in citrus oils in mice suggest it to be a powerful anxiolytic agent[6,7], with one EO increasing serotonin in the prefrontal cortex, and dopamine (DA) in hippocampus mediated via 5-HT1A[8].

Compelling confirmatory evidence in humans was provided in a clinical study in which hospitalized depressed patients were exposed to citrus fragrance in ambient air, with subsequent normalization of Hamilton Depression Scores, successful discontinuation of antidepressant medication in 9/12 patients and serum evidence of immune stimulation (CD4/8 ratio normalization)[9].

References

1. E B Russo; Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects; British Journal of Pharmacology (2011) 163 1344–1364.

2. Langenheim JH (1994). Higher plant terpenoids: a phytocentric overview of their ecological roles. J Chem Ecol 20: 1223–1279.

3. Bowles EJ (2003). The Chemistry of Aromatherapeutic Oils, 3rd edn. Allen & Unwin: Crow's Nest, NSW.

4. Pauli A, Schilcher H (2010). In vitro antimicrobial activities of essential oils monographed in the European Pharmacopoeia 6thEdition. In: Baser KHC, Buchbauer G (eds). Handbook of Essential Oils: Science, Technology, and Applications. CRC Press: Boca Raton, FL, pp. 353–548.

5. Noma Y, Asakawa Y (2010). Biotransformation of monoterpenoids by microorganisms, insects, and mammals. In: Baser KHC, Buchbauer G (eds). Handbook of Essential Oils: Science, Technology, and Applications. CRC Press: Boca Raton, FL, pp. 585–736.

6. Carvalho-Freitas MI, Costa M (2002). Anxiolytic and sedative effects of extracts and essential oil from Citrus aurantium L. Biol Pharm Bull 25: 1629–1633.

7. Pultrini Ade M, Galindo LA, Costa M (2006). Effects of the essential oil from Citrus aurantium L. in experimental anxiety models in mice. Life Sci 78: 1720–1725.

8. Komiya M, Takeuchi T, Harada E (2006). Lemon oil vapor causes an anti-stress effect via modulating the 5-HT and DA activities in mice. Behav Brain Res 172: 240–249.

9. Komori T, Fujiwara R, Tanida M, Nomura J, Yokoyama MM (1995). Effects of citrus fragrance on immune function and depressive states. Neuroimmunomodulation 2: 174–180.

10. R&M (2016). Global E-Cigarette and Vaporizer Market Analysis 2016 – Forecast to 2022; (Online).

11. Ernest and Young (2016). E-cigarettes: an emerging category – Report (May 2016).

12. Classic Juice (2015). E-Liquid market is big business in Europe. (Online – November 2015).

13. Marijuana Business Daily (2016). Marijuana Business Fact Book 2016.

14. KC Hyland et al. Quantitation of Terpenes in cannabis products using the Triple Quad 3500 LC-MS/MS system. SCIEX Concord, Canada.

15. P Gardiner (2015). E-cigarettes: The vapor this time? Policy and regulatory sciences program officer, tobacco related disease research program (TRDRP), University of California Office of the President. First 5 California Commission Meeting – April 23, 2015, California.

16. BIS Research 2015. U.S. E-liquid Market: Focus on Type, Origin, and Distribution Channel – Estimation & Forecast, 2015-2025. (2015).

Additional management team

Mr Eran Gilboa
Director

Mr Gilboa has vast experience as the Chief Financial Officer for numerous global companies in the fields of hi-tech, real estate, finance and media.

Moreover Mr Gilboa was responsible for private and public companies in his role as Senior Accountant at Ernst & Young.

Mr Gilboa has a CPA license and also holds a B.A in Economics and Management, specializing in finance, from the College of Management in Israel, and an LLM from Bar Ilan University.

Ms Galit Assaf
Director

Ms Assaf has extensive experience in managerial and directorship roles within Israeli companies and government.

Ms Assaf is currently the Director of global bank transfers with Payoneer, an online payment services company. Ms Assaf is also currently a director and member of the audit and finance committee of Zur Shamir Holdings Ltd . Ms Assaf has also held the position of CFO and chair of the finance committee of the NTA, as Chair of the finance committee for the Port of Hadera, the board of the Jerusalum Development Authority, and a member of the audit committee for KANAT.

Dr Mira Carmeli - Weissberg
Head Scientist

Mira Carmeli- Weissberg did her Ph.D. in organic chemistry at Tel-Aviv University specializing in "Oxygen Transfer Reactions using the HOF•CH3CN Complex".

In 2008 Mira established the Metabolomic unit at "Agricultural Research Organization" (ARO), specializing in identification and quantification of small molecules using a variety of state-of-the-art Mass Spectrometry-based instruments and analysis software.

After 9 years at "ARO" Mira joined "Eldan Electronic Instruments" as Mass Spectrometry Application Specialist, mainly responsible for the implementation of Mass Spectrometry-bases Instruments.

Dr Maya Sapir-Mir
Head of the Bio-Botanic Unit

Dr. Maya Sapir-Mir is a domain expert in plant genetics and metabolic engineering. She has extensive experience in plant genetics, molecular biology, protein biochemistry, and cell biology.

Dr. Sapir-Mir earned an M.Sc. in genetics and breeding at the Faculty of Agriculture, Food and Environmental Quality Sciences and a Ph.D. in plant sciences, both from the Hebrew University of Jerusalem. Furthermore, she has conducted extensive research as part of her post-doctorate work on the agricultural research organization (ARO) .