Empowering collagen targeting for prognosis of fibrotic conditions.





3Helix as a platform diagnostic company



Innovative research reagent for detection of collagen damage

Strengthening IP portfolio with market disrupting products while subsequently developing strong partnerships with world leading companies for commercialization

2022

Clinic histopathology providing best in class prognostic ability in liver fibrosis (NAFLD, NASH)

Analytic specific reagent to allow for fast market access

Focused on paired biopsy research and collaboration with clinical laboratories.

Platform fibrotic prognostic within multi-disease states

Clinical histopathology AND Non-Invasive approaches serum testing and medical imaging





2030



Targeting impactful markets of IPF, kidney fibrosis, AMD, Keloids and cardiac fibrosis in addition to fibrotic liver diseases.

Liver Fibrosis market is **GROWING**





Estes, C. 2018

NASH Therapeutics are finishing clinical trials and are coming to market.



- OCALIVA (OCA)
- NDA Filed
- \$78,000/year current cost
 - \$20,000 predicted
- 23% respond to treatment







16 Million NASH patients in the USA * \$20,000 **\$320 Billion Annual Cost for treatable market**



VK2809 Phase II

Madrigal Pharmaceuticals

Resmetirom Phase III lacksquare



Aramchol Phase III/IV

Stratification of patient population is needed to reduce unnecessary therapeutic intervention.

- Progression of NAFL and NASH is variable patient to patient.
- Prediction of the progression can modify the disease intervention and treatment.
- No product on the market today is equipped for prognosis of liver fibrosis





Roskilly, A. 2020 suggests progression rates are even smaller making stratification more important.

Singh, S. 2015

5

3Helix seeks to harness the power of damaged collagen as a **Essential Biomarker** for fibrosis



Collagen is constantly being damaged, remodelled and rebuilt Changes in structure affects bioactivity and mechanics Alteration from the norm leads to fibrosis, OA, metastasis and aging However, collagen is stained as a static protein in histopathology





Fibrosis

6

Collagen Hybridizing Peptide (CHP) is a Proprietary Platform Technology to target, bind and detect damaged collagen.

- Short single collagen alpha chain mimetic peptide
- Unique binding mechanism which enables CHPs to be highly specific and sensitive for detection of damaged collagen



"CHP technology has the opportunity to be a vital clinical utility for all human fibrotic diseases" Dr. Alastair Burt (World Renowned Liver Pathologist)





CHP technology has been shown to be a prognostic tool in preliminary liver fibrosis studies





- Metavir staging (standard fibrosis scoring) <u>did not</u> correlate with increased need for transplant.
- 3Helix has partnered with Dr. Alastair Burt and the New Castle Node to perform the clinical trials
- Data expected in multiple liver fibrotic conditions by end of Q1 2021



CHPs allow for the visualization of fibrotic tissue in terms of active remodeling.

- Fibrotic scarring is an over • production of collagen
- Increased MMP ulletproduction making the fibrotic scar a very dynamic process
- Lung fibrosis mouse ulletmodel with fast progression of fibrotic scarring





CHP platform can bind Total Collagen allowing for normalization between patient data

- By normalizing the amount of damaged collagen to total collagen the clinician will be provided with an entire picture of the collagen dynamics within the fibrotic scar
- CHPs have increase sensitivity when compared to Masson's Trichrome and H&E staining, additional benefits include
 - Ease of Use
 - More applicable to automated image analysis









Biopsy is still considered the gold standard in liver fibrosis diagnosis. Non-invasive \bullet

- - •
 - •
- ${\bullet}$

 - tools
 - •

Biopsy (\$\$)

- •
- •
- •

3Helix is not competing in the non-invasive market but looking to improve the current gold standard of liver biopsy.





Serum Testing (\$)

ELF, OWL, FibroTest and HepaScore

None are considered as reliable as biopsies nor have usurped biopsy as the leading diagnosis tool

Imaging Methods

• MRI Elastography (\$\$\$), MRI PDFF (Perspectum) prognostic (\$\$\$), and Transient Elastography (FibroScan) (\$)

• Considered to be the best non-invasive

Need additional equipment

Have inherent unreliability in readings especially for FibroScan

350,000 liver biopsies are performed annually in the USA

Benchmark Test which all tests are measured against

All liver and gastrointestinal societies view biopsy as the gold standard

CHP Prognostic

3Helix's Revenue will be driven through fibrotic diagnostic platform

- Market Penetration of liver biopsy testing
 - .1% 2021
 - .4% 2022
 - 1.76% 2023
 - 7.41% 2024
- Successful SBIR Phase I and II grants suggests future funding through other grants including the Catalyze program.
- Our mid-term future involves cosmetic active ingredients and noninvasive medical device as licensing opportunities

		Sho	ort Term	Re
\$16,000,000				
\$14,000,000				
\$12,000,000				
\$10,000,000				
\$8,000,000				
\$6,000,000				
\$4,000,000				
\$2,000,000				
\$- 				
2020	2021		2022	
	2020)	2021	L
SBIR Grant	\$ 576,753	\$	622,596	\$
RUO	\$ 86,664	\$	236,334	\$
ELISA Collagen	\$ -	\$	26,563	\$
Cosmetics	\$ -	\$	5,000	\$
ASR Pathology	\$ -	\$	162,500	\$
Totals	\$ 663,417	\$	1,052,992	





1,236,541 \$3,965,714 \$13,862,787

With a strong IP portfolio and a platform technology that is useful in many markets, out-licensing is already a part of our business strategy

- Two patents exclusively licenced from JHU
 - Method
 - Composition of CHPs
- One patent exclusively licenced from UofU
 - Notice of Allowance 2020
- 3Helix has finished one provisional application and is working on another
- 1 sublicence agreement







Peptide, 5-Conjugate

ser quide www.3helix



3Helix BIO300

Collagen H Peptide, Bk Conjugate

300 ug User guide a www.3helix



3Helix is developing the CHP platform not only for liver fibrosis but other large markets of IPF, kidney fibrosis, bone marrow fibrosis and cardiac fibrosis



- Coming market as an analytic specific reagent ASR we allow the same product to be applied to multiple disease states with minimal time to market
- Fibrosis can occur in many different organs, all of which have needs for prognostic test.



Further development of damaged collagen as a biomarker; a non-invasive serological test for liver fibrosis diagnostic.

- CHP ELISA kit for detection of damaged collagen in biological fluids
 - Non-invasive
 - Increased market share
 - Part of a multi biomarker \bullet diagnostic
- Prototype ELISA kits have been published
- **CRO** for commercial lacksquareproduction has been established





Kessler, L. 2020.

CHP platform can be useful in many different sectors. We are exploring those areas with a varied collaboration portfolio.

Sector	Timeline	Partners
Diagnostics And Medical imaging	2021/2022	LABORATORIES
Cosmetic Products	2021/2022	Undisclosed activing redient distrib
Research	Current Market	Chondrey
Therapeutics	2028	boom wersity of Cape Tokh
	<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>	Diagnostics And Medical imaging2021/2022Cosmetic Products2021/2022ResearchCurrent Market



R&D Pipeline of unique products with strong IP and current revenue stream.



Post-MI (day 7)





Active Ingredient Cosmetic

Increase collagen production through mechanical stimulation of fibroblasts by providing triple helical binding sites

RUO Histology

3Helix offers a histopathology line with new products in development including an In Vivo Probe, Auto Staining Probe and **ELISA Kit instrument**

Medical Imaging

3Helix is exploring multiple disease states such as AMD, IPF and cardiac fibrosis where biopsies are not used clinically in high frequency.



Strong company leadership with a history of success in diagnostics and collagen markets.



Noah Nasser (Chairman of Board)

- Multiple Biotech VC • **Rounds and Exits**
- Decades in collagen ٠ diagnostics space
- Current CEO of • Serimmune



Michael Fugman (Board Member)

- Decades of CFO experience
- Multiple Angel **Rounds for Biotech**
- Current VP of PearTree Canada



Alastair Burt (Consultant)

- MD, FRC Path
- Editor of • MacSween's Pathology of Liver
- Current Director of the MRC Molecular Pathology Node

Scientific Advisor and co-Founder: Michael Yu Chief Scientific Officer and co-Founder: Yang Li





Mike Kirkness (CEO and President)

- PhD in collagen ۲ mechanics
- Multiple start up ventures

Use of Proceeds from Series A will carry 3Helix to 2023, end of burn, with an expectation of profits in 2024.



Increase our team size from 4 to ~ 15

New Head Quarters (15%)

3Helix has been accepted into an incubator for 2021 as a flagship

Research and Development (28%)

Increased in house capacity and clinical research studies are the

Empowering collagen targeting for diagnosis and treatment of human conditions.

Stay Connected

To learn more about 3Helix, our proprietary CHP technology or partnership opportunities, please contact us.



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