

Starting & Scaling a Biotech Business



Dr Edward Green
Chief Executive
edward.green@chainbiotech.com
www.chainbiotech.com

Why Start a Company?

Make Money

- Founders
- Shareholders (Employees)

Career Choice

- Continue research interests
- Challenge
- Need a job

Make a Difference

- Societal
- Environmental

Build a Business (Empire)

- Create jobs
- Pay taxes
- Contribute to UK plc

Mechanics of Getting Started

- Idea (do your research/validate)
- Think of a great company name
 - Register web domain
 - Logo
- Incorporate/legal entity
- Address/Premises
- Bank account, credit facility, HMRC (payroll & VAT)
- Promotion
 - Website
 - Social media (Linked In, Twitter)
- Seed funding (F&F)
- People
 - Find a book keeper/accountant
 - Supporter (Chairman)





GreenBiologics

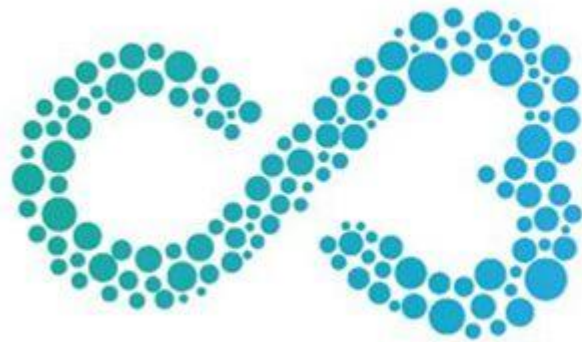
- Develop a more efficient and sustainable fermentation process for production of acetone and butanol (re-commercialise the industrial fermentation process)
- Timely in 2004 (biofuels)
- Focus on higher value commodity chemical/derivatives markets

Building a Renewable Chemical Business



- Retrofitted a 21MGPY corn ethanol plant in Little Falls, Minnesota
- Commenced solvent production in 2017

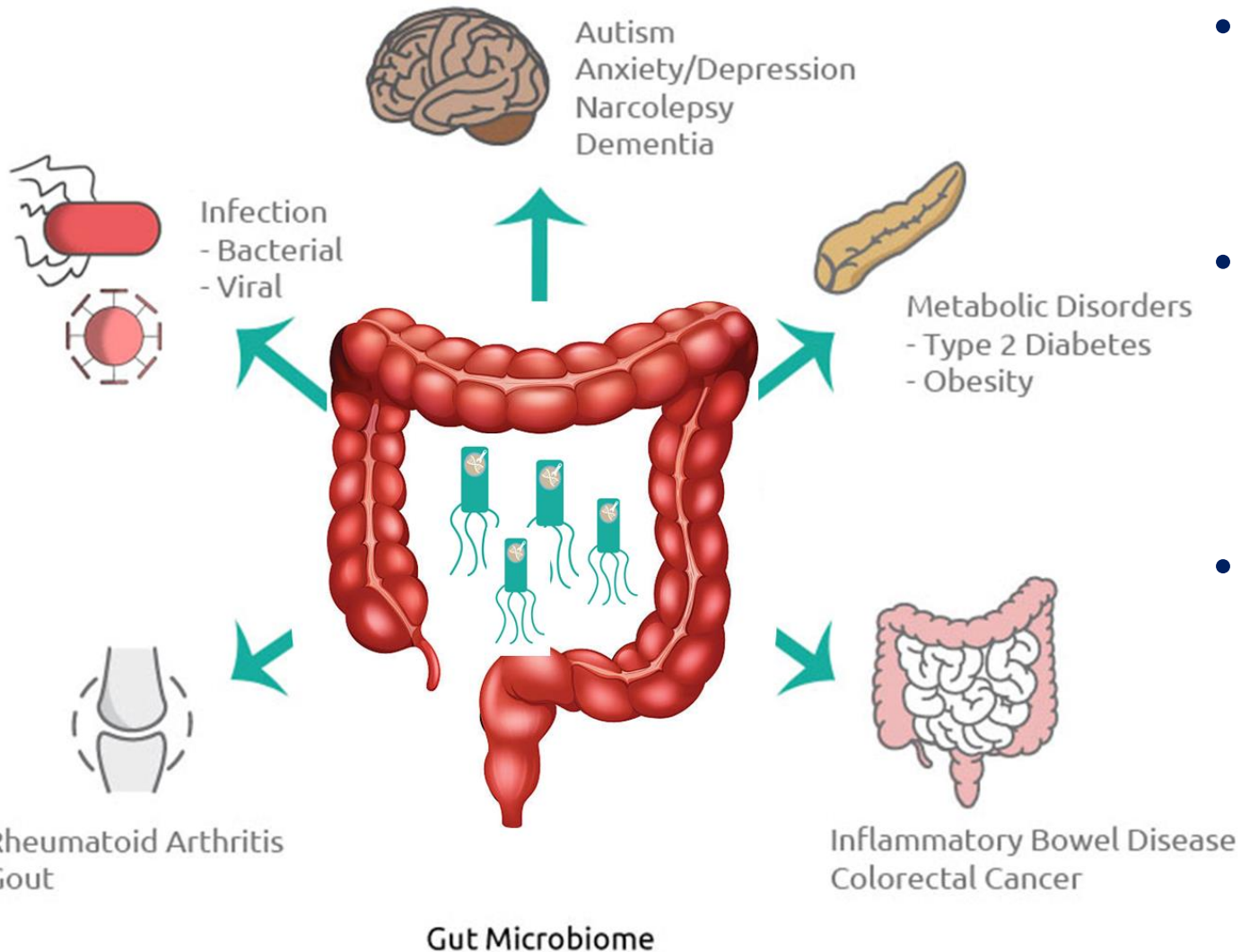




CHAIN biotech

- Use Clostridia to make high value products (focused on health & nutrition)
- Leverage our skills in strain engineering and fermentation
- Timely in 2014 (microbiome)



Building a World Class Microbiome Company



- The gut microbiome offers novel insights & treatments for multiple diseases.
- Microbiome therapeutics sales forecast to reach \$9.3B by 2024 & microbiome companies attracted investments of approx. \$1B over the last 5 yrs.
- CHAIN's vision is to build novel and disruptive biotherapeutics, based on Clostridia, targeting a broad range of diseases:

- **Inflammation**
- **Infection**
- **Cancer**

Different Value Propositions/ Risk Profiles

Company	Aim	Societal Benefits	Technology	Business Model/ Challenge
 <p>GreenBiologics</p>	<p>Cost-competitive chemicals</p> <p>(Industrial biotech)</p>	<p>Reduce dependency on oil & reduced GHG emissions</p> <p>Economic i.e. highly skilled jobs (R&D)</p>	<p>Clostridia strain development</p> <p>High productivity fermentation</p>	<p>Manufacture & product sales</p> <p>Scale-up/manufacturing skills</p> <p><u>Capital intensive</u> with low value products & low margins.</p>
 <p>CHAIN biotech</p>	<p>Better medicines for difficult to treat diseases</p> <p>(Medical biotech)</p>	<p>Improved quality of life for millions of sufferers i.e. IBD & cancer</p> <p>Economic i.e. highly skilled jobs (R&D & manufacture)</p>	<p>Clostridia strain development (engineered)</p> <p>Spore production (fermentation)</p> <p>Clinical development</p>	<p>Partner/licence technology (proven bus model)</p> <p>Clinical Testing</p> <p><u>Regulatory</u> with rigorous testing required (long lead time to market).</p>

Beating The Odds

- Have a bold vision
- Identify a clear need/business opportunity
- Capitalise on your strengths (technical)
- Have drive/passion (persuade others to join)

- Plan, plan, plan (keep simple & retain flexibility)
- Understand the competition (and be differentiated)
- Seek early protection on your ideas/data
- Seek non-dilutive sources of funding
- Closely manage the financials
- Invest in good people (you can work with)



Risky but you should understand the risks and be able to manage