

# Nomad



# Bioscience



inspired by nature & tribal wisdom

## Sweet & Taste Modifying Proteins

# The Threat of unhealthy food

- Our current diet is unhealthy and unsustainable, primarily because it relies on excessive consumption of sugar & artificial sweeteners in our food and drinks
- Sugar is the main cause of obesity, overweight, diabetes, coronary/heart diseases
- Sugar market at US\$75 B/y dwarfs markets of any single medicine
- Global area used for cultivation of sugar cane and sugar beets currently exceeds 31 million hectares (approx. the size of Germany)



# What if

we could replace half of the sugar with natural non-caloric super sweet proteins

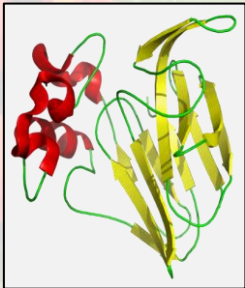
- bringing the sugar consumption to healthy and medically correct levels without changing the sweetness and taste of food and drinks, and without use of artificial sweeteners
- eliminating the main cause of obesity, overweight, diabetes, coronary/heart diseases, etc.
- saving tens of million hectares of the land used for cultivation of sugar cane and sugar beet; stop exploiting of tropical rainforests
- opportunity to build a high value, sustainable, novel food company



# Thaumatins & Brazzeins

intensely sweet non-caloric proteins invented by nature

- evolved by nature and used by **indigenous people** for millennia as a sweetener
- non-caloric proteins (not sugars) thousands of times sweeter on a weight basis than sugar
- Thaumatins approved as sweeteners and taste modifiers and used today but:

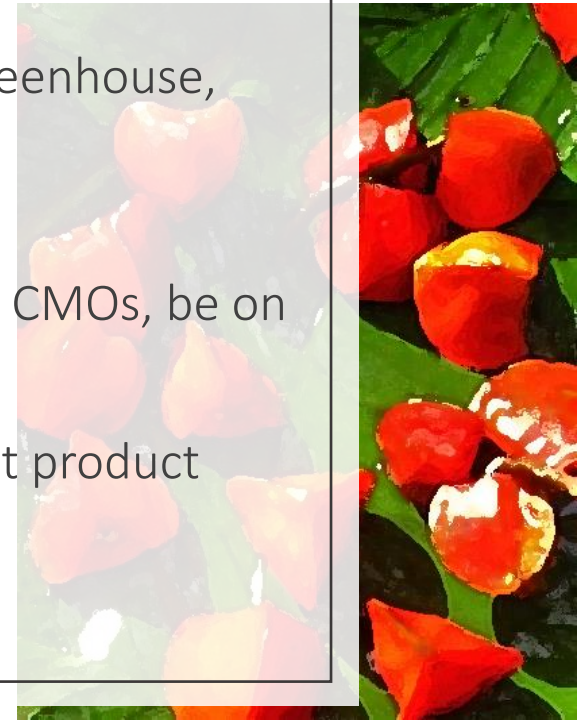


- supply is limited (isolated from katemfe fruits collected in **rainforests** of West Africa)
- problems with supply security
- as a result, marketed products are too expensive to compete with artificial sweeteners or sugar, used in niche markets as taste modifiers

# Strategy

## match between technology and value creation

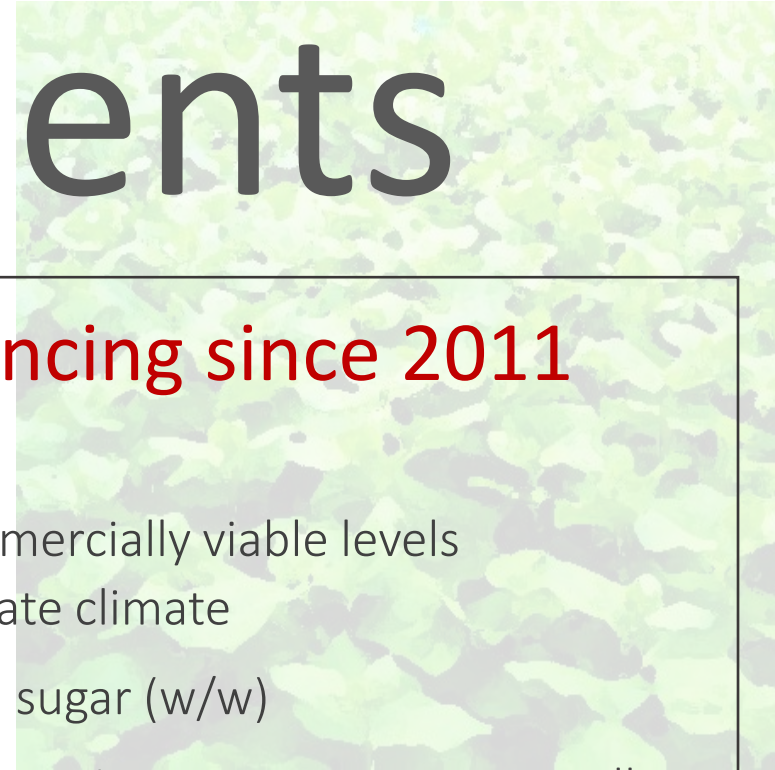
- Develop green plant hosts with economically superior high contents of thaumatin or brazzein
- Develop industrial versions of producer plant cultivation in open field or greenhouse, along with a scalable GMP-certified purification process, secure necessary manufacturing licenses
- Secure long-term commercial agreements with contract plant growers and CMOs, be on the market by Q4 2025 or earlier
- Continue and expand number of potential strategic clients by providing test product samples & negotiating partnership agreements
- Be ready for exit through trade sale or going public



# Achievements

**With 12 million in equity financing since 2011**

- We produce Thaumatin and Brazzein at commercially viable levels in plant hosts that can be cultivated in temperate climate
- Our Thaumatin II is 11.000 times sweeter than sugar (w/w)
- Secured three FDA GRAS registrations for Thaumatin as sweeteners as well as taste modifiers in USA; registration in other countries/regions pending
- Developed a scalable manufacturing process; conducted open field and greenhouse studies; pilot scale production in 2021 - 2024 in Spain
- Filed broad patents that will assure broad exclusivity



# Regulatory

- GRAS ('Generally Recognized As Safe') is regulatory approval path for food additives in USA
- Nomad has received three GRAS regulatory approvals for thaumatin in USA
- Nomad intends to have its thaumatin approved in other important regions/countries: EU, Japan, China, Canada, Australia
- Ongoing efforts to register thaumatin II as taste modifier with FEMA in 2021 and later in *Codex Alimentarius*, FAO/WHO
- We intend to register Brazzein III as GRAS



Product	GRAS GRN	Submission Date	Response Date
Thaumatococcus Sweeteners	000738	10.2017	04.2018 FDA
Thaumatococcus II Sweetener	000910	02.2020	09.2020 FDA
Thaumatococcus II Flavour modifier	000920	04.2020	12.2020 FDA
Thaumatococcus II Sweetener Supplement	000910S	12.2020	02.2022 FDA
Thaumatococcus II Flavour modifier	FEMA 510	11.2021	03.2022 FEMA

# Thaumatococcus

health smart, climate smart food

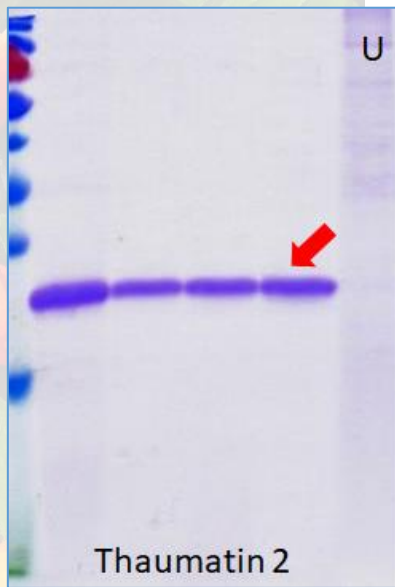
- Natural non-caloric sweetener/ flavor modifier produced in plants
- Sweetest known natural substance: 11,000 times sweeter than sugar (w/w)
- Can replace:  $\geq 35\%$  of sugar without taste changes; 50% - with light lingering aftertaste
- Initial market as taste modifier, can address up to a half of \$76 billion sugar market as sweetener
- Major patents filed; FTO, exclusivity; favorable techno-economics
- Unlimited supply; requires only 0.05% of land used for sugar cane and sugar beets plantings today
- Interest from a world top three soft drink manufacturer, top three food additive company





# Thaumatococcus

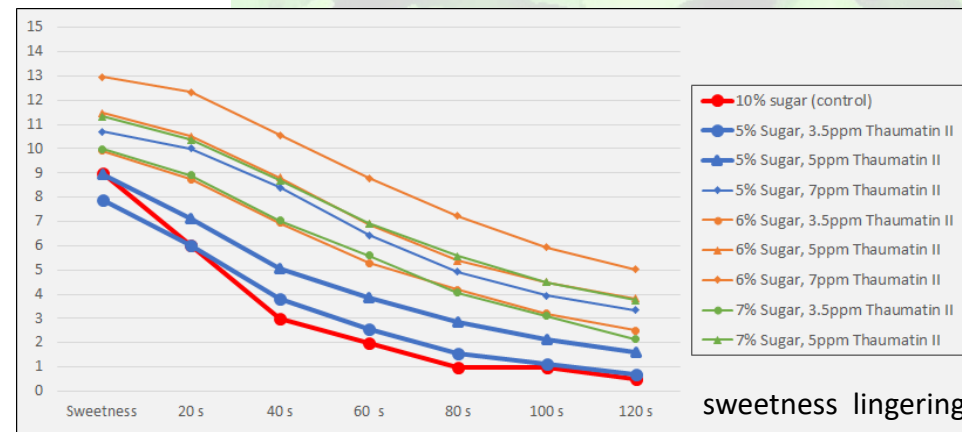
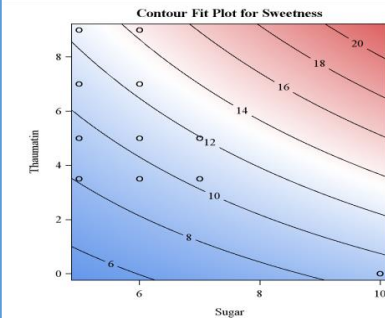
health smart, climate smart food



$$\text{Sweetness} = 1.62 + 0.74 \times \text{Sugar} + 0.25 \times \text{Thaumatococcus II} + 0.11 \times \text{Sugar} \times \text{Thaumatococcus II}$$

Sweetness = 9 (control)  
 $9 = 1.62 + 0.74 \times \text{Sugar} + 0.25 \times \text{Thaumatococcus II} + 0.11 \times \text{Sugar} \times \text{Thaumatococcus II}$

**Example 1: Sugar at 5%**  
 $0.74 \times 5 + 0.25 \times \text{Thaumatococcus II} + 0.11 \times 5 \times \text{Thaumatococcus II} = 7.38$   
 $\text{Thaumatococcus II} = (7.38 - 3.7) / 0.8 = 4.6 \text{ ppm Thaumatococcus II}$



# Pilot Production

Extremadura, Spain, 2023-2024

