



The BIG Sugar Revolution

Sugar reformulation & reduction with Nucane™
A/Professor David Kannar
11 July 2018

**THE NEXT
BIG THING**

Agenda

- Global Obesity & Diabetes Crisis
- Food & Beverage Industry Responses?
- Role of Sugar – Cause or Cure?
- Launch of unrefined Raw sugar - Nucane™
- How does Nucane™ work?
- Food Reformulations – “Less is More”

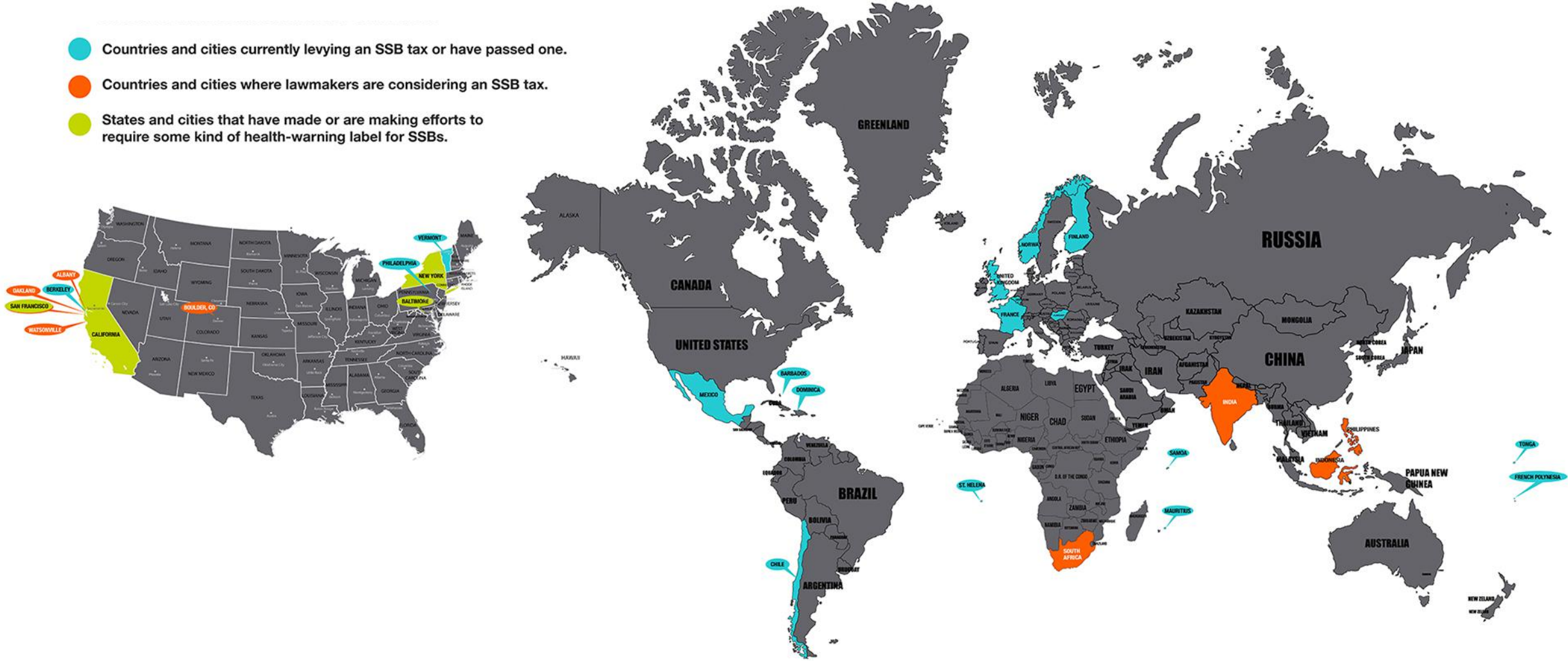




THE WORLD URGENTLY requires solutions to the pandemic of obesity.

Sugar Taxes Implemented in 28 Countries

- Countries and cities currently levying an SSB tax or have passed one.
- Countries and cities where lawmakers are considering an SSB tax.
- States and cities that have made or are making efforts to require some kind of health-warning label for SSBs.



*Accurate at time of publication. SSB = Sugar Sweetened Beverages.
Source: Cecil AM., "A sip becomes a drag", CrossFit Journal, 2016, accessed on 15 May 18 - http://library.crossfit.com/free/pdf/CFJ_2016_07_Soda-Cecil9.pdf

Essential poll

The Guardian Essential Report

Paul Karp

@Paul_Karp

Tue 16 Jan 2018 04:00 AEDT



2,688

This article is over 4 months old

Most Australians want sugar tax on drinks – Guardian Essential poll

Bill Shorten's approval rating slumps but Labor maintains its 53% to 47% two-party preferred lead



▲ The Guardian Essential poll found 53% of the 1,038 respondents were in favour of a sugar tax on drinks, compared with 38% opposed. Photograph: Richard Levine/Corbis via Getty Images

A majority of Australians support a tax on sugar-sweetened drinks, a new poll has found.

The Guardian **Essential poll**, released on Tuesday, found 53% of the 1,038 respondents were in favour of a sugar tax on drinks, compared with 38% opposed and 10% with no opinion.

... and growing pressure to reduce sugar levels as well

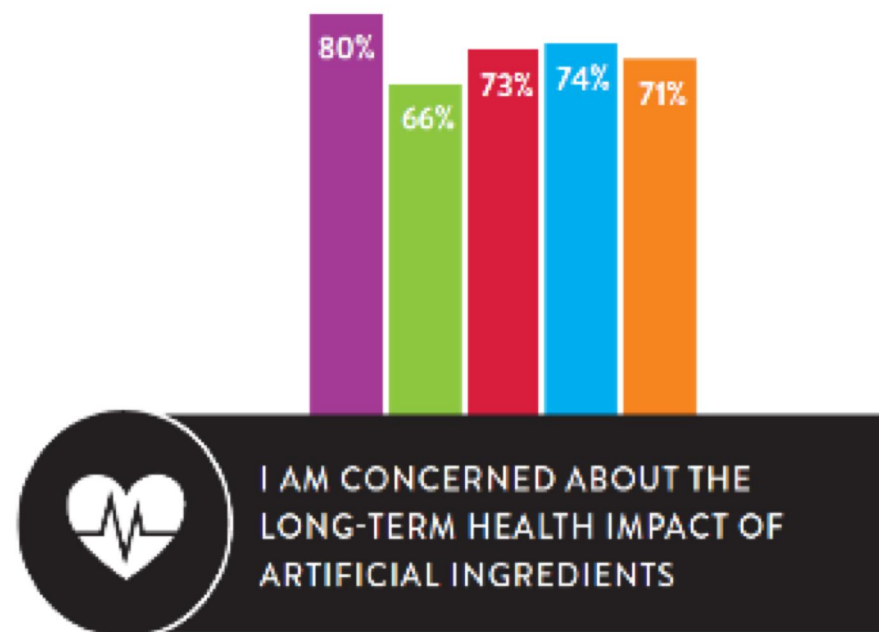
Source: Karp P., 2018, "Most Australians want sugar tax on drinks – Guardian Essential poll", The Guardian (Australia edition), accessed on 15 May 18 - www.theguardian.com/australia-news/2018/jan/16/most-australians-want-sugar-tax-on-drinks-guardian-essential-poll

Consumers want more natural choices

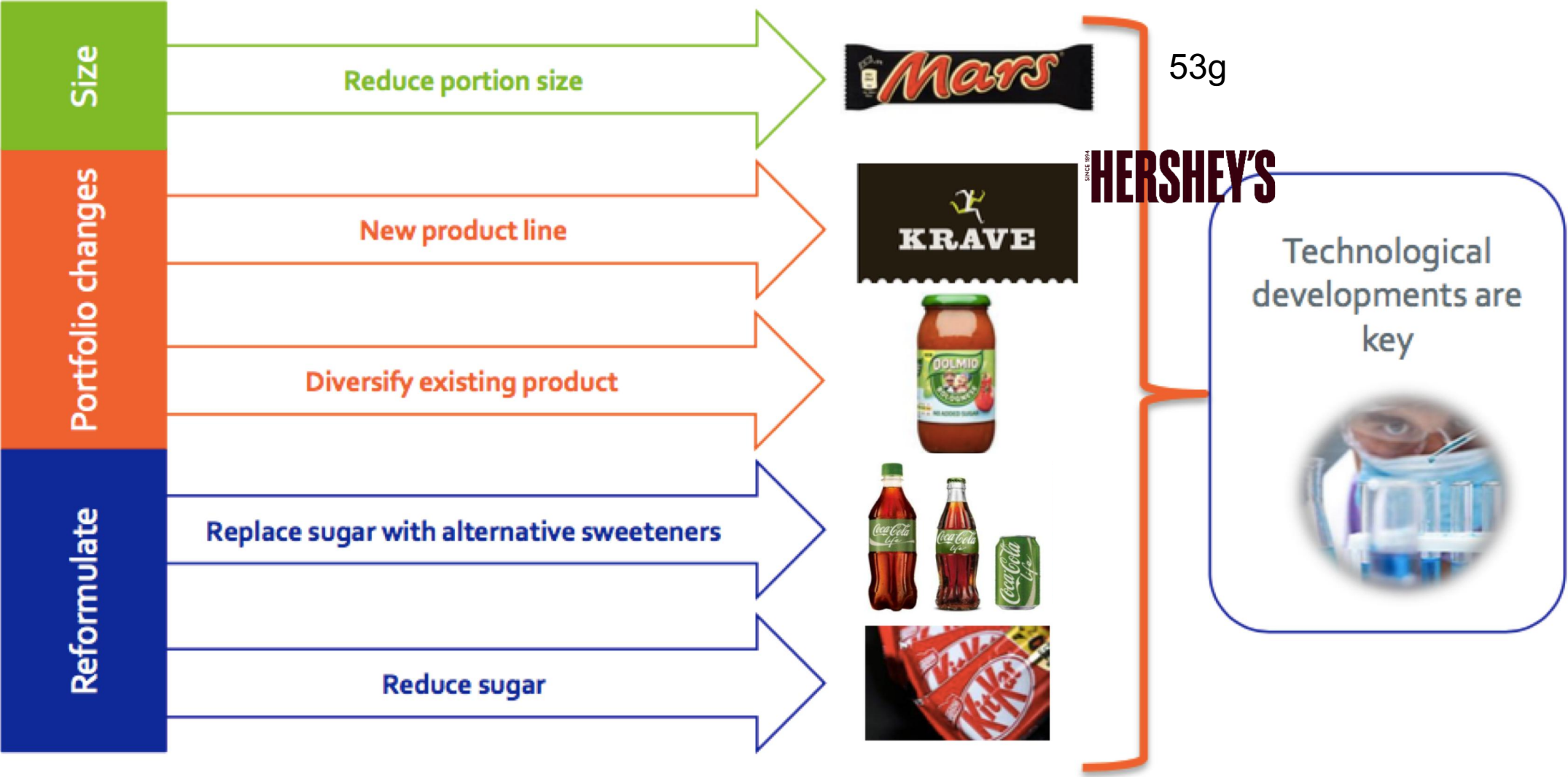
SIMPLY IRRESISTIBLE: CONSUMERS WANT STRAIGHTFORWARD SUSTENANCE

PERCENTAGE WHO STRONGLY OR SOMEWHAT AGREE WITH STATEMENT

● ASIA-PACIFIC ● EUROPE ● AFRICA/MIDDLE EAST ● LATIN AMERICA ● NORTH AMERICA



Brands are looking for solutions



Sugar replacement may not always be healthier

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BIOLOGY

Artificial Sweeteners May Change Our Gut Bacteria in Dangerous Ways

Substances such as saccharin may alter the type of bacteria inside us, could lead to obesity

Artificial sweetener sucralose worsens gut inflammation in mice with Crohn's disease

[Download PDF Copy](#)

March 15, 2018

In a study that has implications for humans with inflammatory diseases, researchers from Case Western Reserve University School of Medicine and colleagues have found that, given over a six-week period, the artificial sweetener sucralose, known by the brand name Splenda, worsens gut inflammation in mice with Crohn's-like disease, but had no substantive effect on those without the condition. Crohn's disease is an inflammatory

WELL GOOD

GOOD SWEAT GOOD LOOKS GOOD ADVICE GOOD FOOD GOOD

NOT-SO-SPLENDID SPLENDA MIGHT TRIGGER INFLAMMATORY SYMPTOMS IN CROHN'S DISEASE PATIENTS

GOOD ADVICE
by TEHRENE FIRMAN, MARCH 20, 2018

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Over-refined foods are linked to the crisis

Top 5 Inflammatory Foods

PositiveMed



Anti Inflammatory Foods FOR YOUR DIET



Garlic. A recognised anti-inflammatory food

- Nutrient profile of unprocessed garlic.
- 62-68% Water
- 26-30% Carbohydrates (Sugar)
- 1.5-2.1% Protein: 0.6-1.9% Amino Acids
- 0.1-0.2% Lipids: 1.5% Fibre
- 0.6-1.3% Nitrogen compounds
- 0.23-0.37% Sulfur compounds
- 0.7% Vitamins A, B1, B2, C & Nicotinamide
- 0.015% Minerals Mg, Zn, Boron, Cobalt, Ca, CU, Sn & Mb



Less processed sugarcane has proven health benefits...

"Scientific research has been confirming that Non Centrifugal Sugars has multiple health effects. Forty-six academic publications have been identified which reports them."

Source: Jaffe. Health effects of Non Centrifugal Sugars (NCS). 2012

Researched health effects include reducing risk of diabetes and obesity.

Source: Ranilla et al. 2008



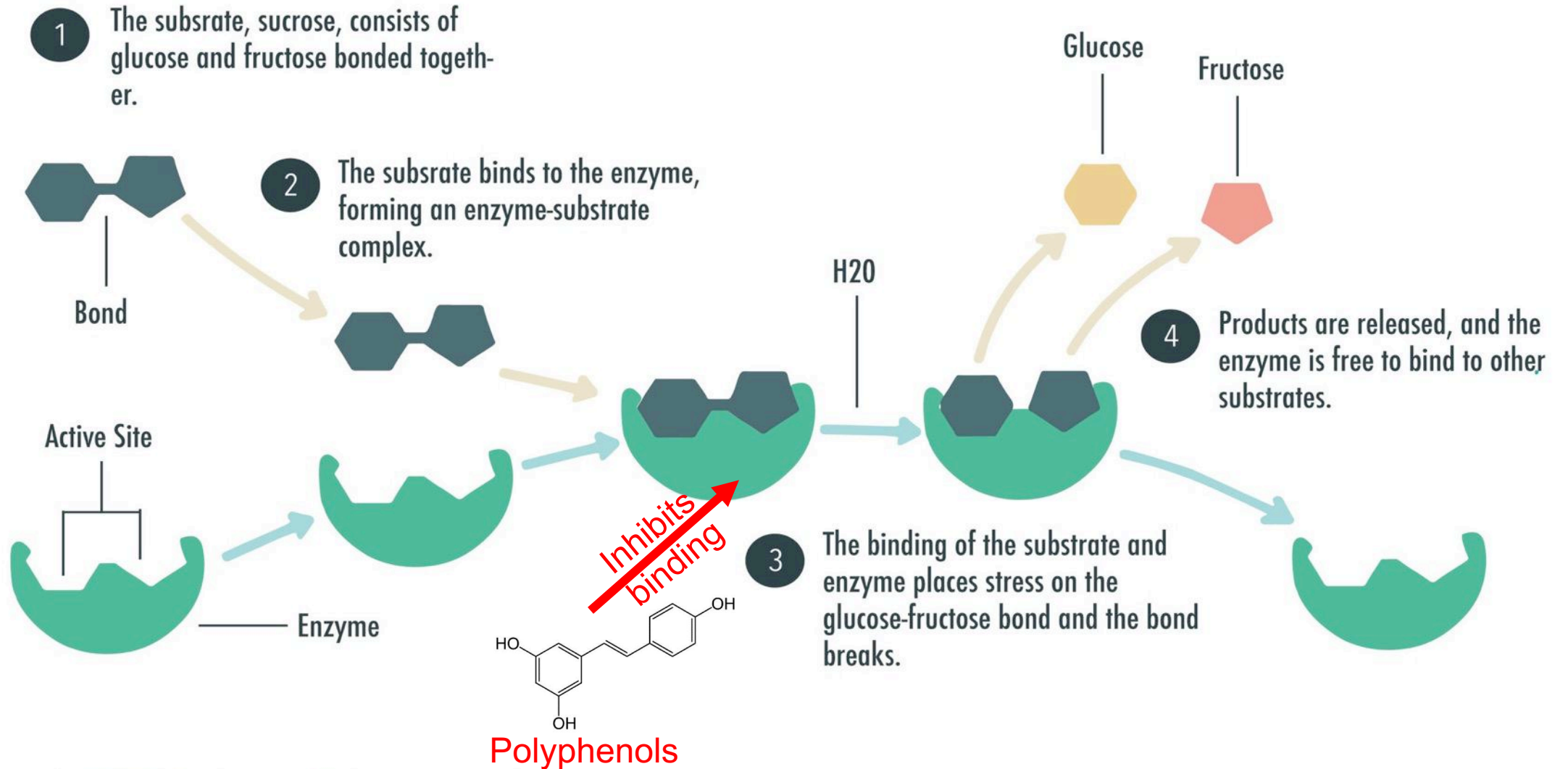
Jaggery.
Common in India/S Asia

Why are brands not using Non Centrifugal Sugars?

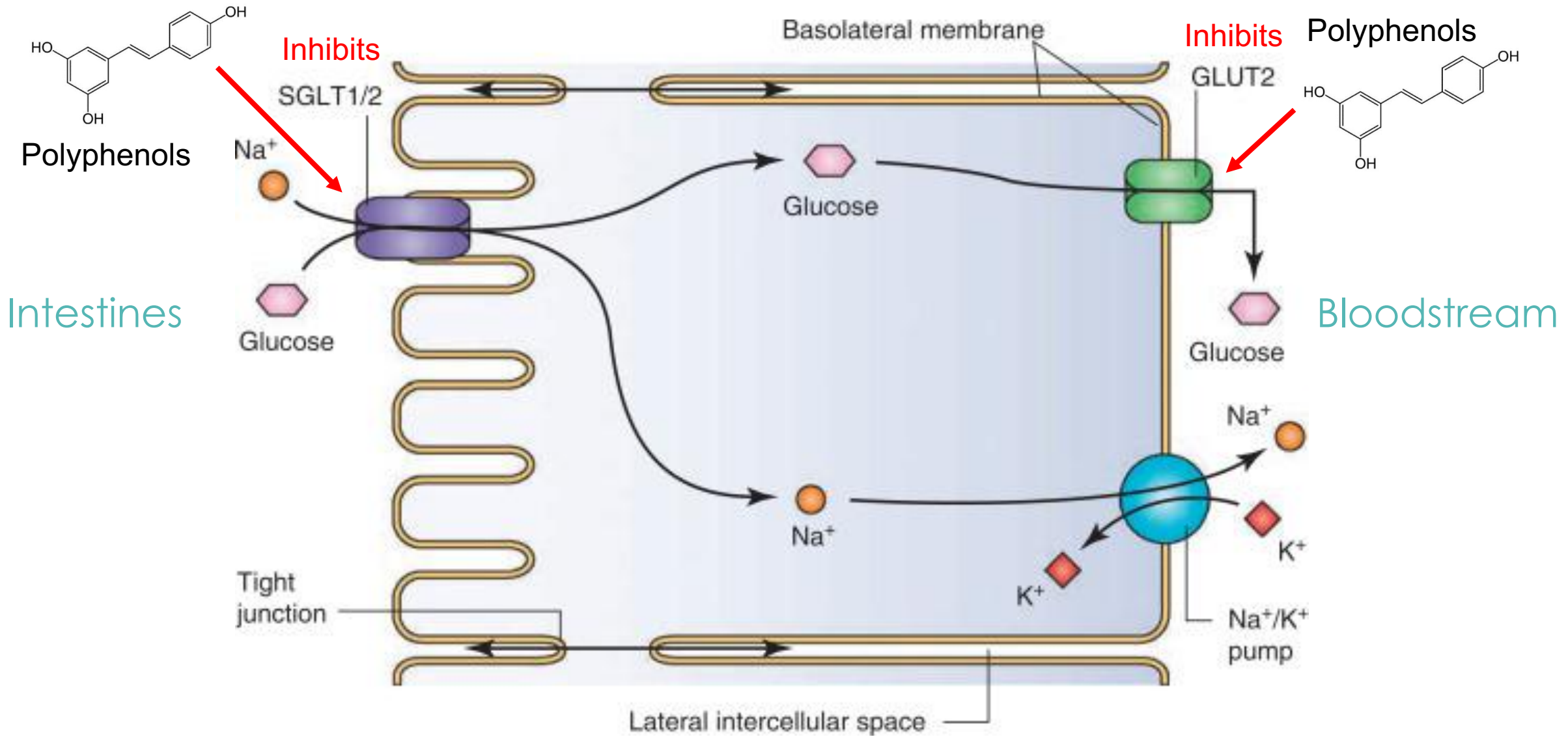
- Not made anywhere in industrial quantities. Only white refined sugar is industrial
- They are hygroscopic
- Has natural variability in taste, ICUMSA and nutrient profile
- They are handmade and up to USD\$30,000/tonne
- Not a one for one swap in recipes
- Sugar also functions as a:
 - Filler
 - Gold Standard Sweetener
 - Binder
 - Preservative



Mechanism of action: slows metabolism of sucrose



Mechanism of action: slows transport of glucose



Source: Kwon et al. 2007 & Song et al. 2002

Sugar Reformulation



Industry is committed to change

- Global Food companies have all announced commitments to UN SDG 3
- Sugar solutions are a key and public element of this.
- CEOs have re-dedicated their organizations and resources to creating innovation and finding solutions.



Companies Publically Committed to UN SDG Goal Three: "Ensure Healthy Lives and Promote Well Being For All At All Ages"



Unilever



Nestlé



PEPSICO

Mondelēz
International

Kellogg's

The Coca-Cola Company

MARS
incorporated



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BIG ISSUES



THE AUSTRALIAN BUSINESS REVIEW

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MELBOURNE AND
BRISBANE

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COMPANIES

Food engineers hit the sweet spot with Nucane



Sunshine Sugar chief executive Chris Connors: 'I can see us in Australia leading the way on this and the world following'.
Picture: Natalie Grono

Nucane™ is going to have a place in the world sugar market. There is no doubt about that."

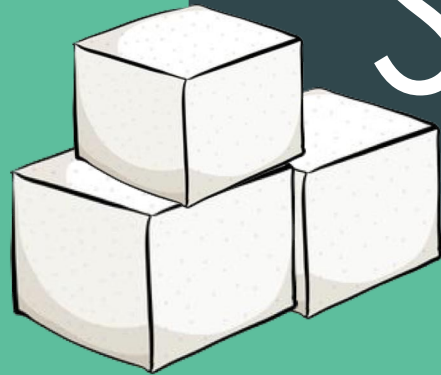
Chris Connors
CEO of Sunshine Sugar

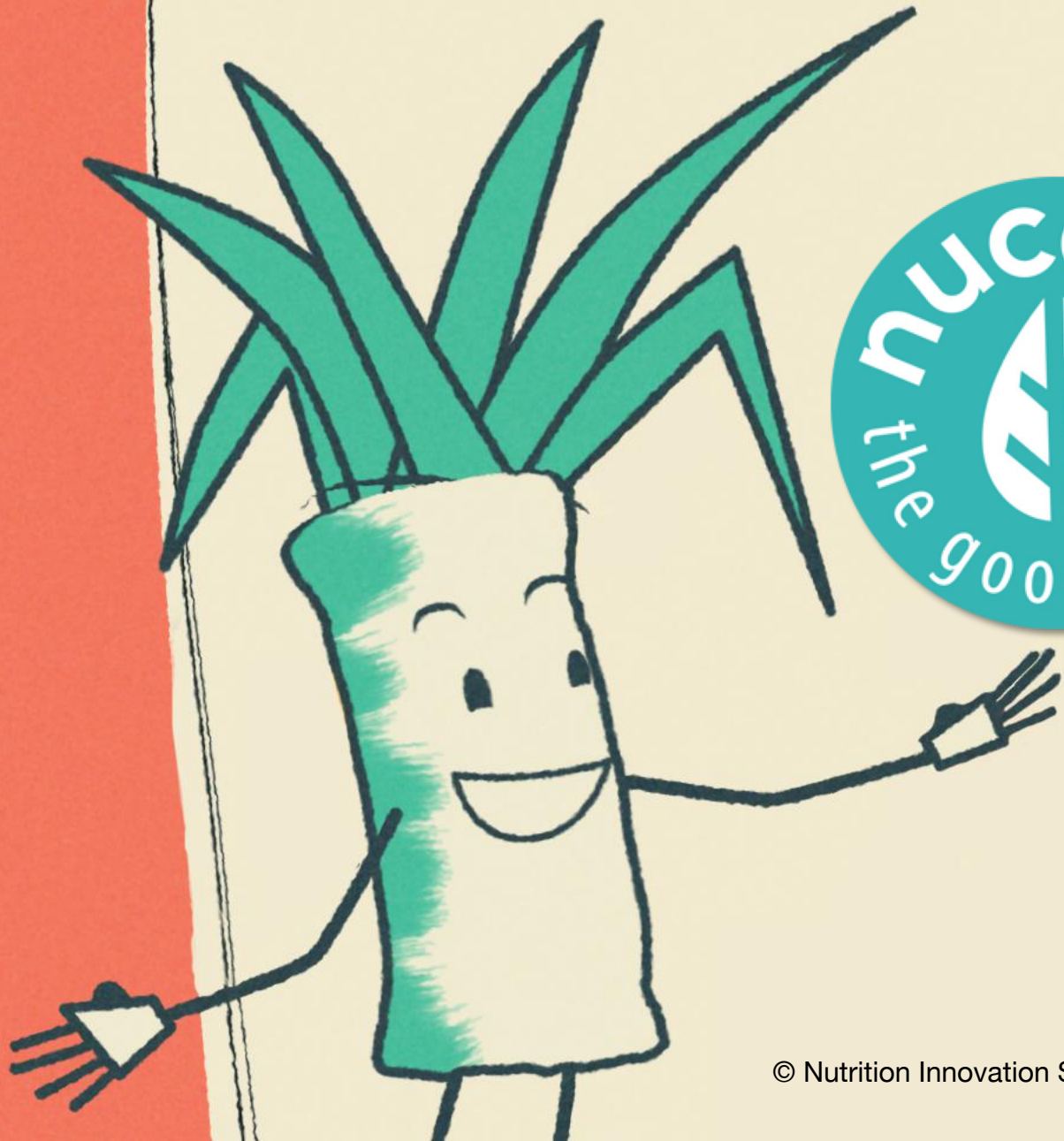


SUGAR

is the problem -- but sugar can also be the

SOLUTION.





JOIN US.

- Sample & trial Nucane™

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paul.antonello@manildra.com.au