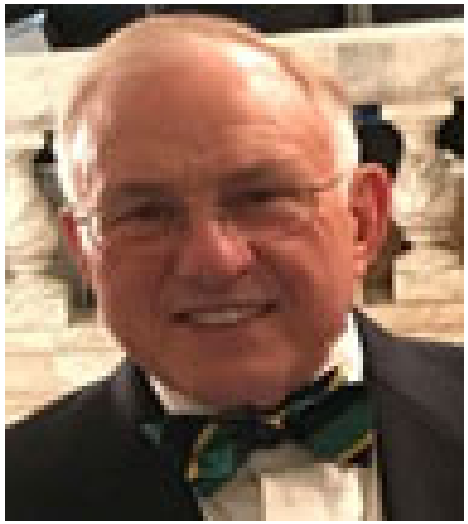
Transparency in Food Quality and Foods for Health



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PIC & PC

General Questions

Name a non-nutritious food in a super market?
Alternately, name a (most) nutritious food?

Name an un-healthy food in a super market?
Alternatively, name a (most) healthy food.

Do you believe/trust health claims?

When can a food/foods become unhealthy?

Can nutritional status be improved above normal, supercharged?

I like questions

Transparency

You and I Wish

Transitions of topics

Take home messages-A must

1. One word answer to the question that will appear on slide # 65

2. One word answer as to what we must do now and in the future to have transparency will appear on slide # 75

3. Information on my last slide that will cost you $10,000

And hopefully some interesting facts-transparency in my remarks

Know My Audience-You
Suppliers to The Food Industry

Food Scientist, Foods Engineers, knowledge of foods, food components, chemicals

To help process a food; processing aids, etc.
To provide for consumers "wants"
To provide and improve the quality of foods.

Can you (we) improve the health quality of foods?

Today's Previous Topics

- Clean Label
- Increase in plant based foods
- Food flavorings and colorings
- Supply chain regularity and the FDA
- GMO Foods and non-GMO Foods

With transparency for quality

Purpose Today-Objectives

- Inform in a conversation - Relax
- Encourage you to ask questions
- Address the key words-topics in my title:
  - Transparency in the quality of foods provided the consumer
  - Difficulty at times in having transparency in statements on foods for health

Quality

A degree of excellence

The standard of compassion

Low quality

Average, common, ordinary, second

Quality

For cheese lovers,

Kraft's Extra Sharp Cheddar might be of better quality compared to Kraft Singles, but a younger person with different taste buds might disagree.

Low quality, average, common, ordinary, second class

Example: A fake cheese spread.

Transparency

- Clear
- Water
- Obvious
- Undisguised
- Unconcealed
- Fact
- Truth

Lack of Transparency

- Bias
- Testimonials
- Magic
- Alternate facts: Lies
- Lack of knowledge
- For Profit

To make a false claim

Lack of Ethics

What do you think about POM Wonderful and POMx supplements to treat, prevent or reduce the risk of heart disease, prostate cancer and/or erectile dysfunction?

Public Statement Using Transparency

Vice president of corporate communications for The Wonderful Company, said in a statement that POM Wonderful is committed to "honest, transparent communication with consumers everywhere,"

"We continue to stand behind our efforts to publicly convey valuable information about the health benefits of POM, as well as the $40 million in peer-reviewed, scientific research we've conducted regarding the power of this amazing fresh fruit," he said.

Antioxidant benefits of POM Wonderful 100% pomegranate juice top red wine, grape and acai juices

Seeram, et.al., 2008. Comparison of Antioxidant Potency of Commonly Consumed Polyphenol-Rich Beverages in the United States J. Ag. Food Chem. 56:1415-1422

Pomegranate juice from the California-grown Wonderful variety of pomegranate is the leader in the healthy beverage category by demonstrating the most complete free radical scavenging activity, greater protection of LDL-cholesterol from oxidation, and the highest polyphenol content compared to red wine and several juices.

Phenolics in Pomegranate Juice

Hydroxybenzoic acids:

Gallic acid, Ellagic acic

Hydroxycinnamic acids:

Chlorogenic acid, Caffeic acid, Ferulic acid

Flavonl-3-ols:

Catechin, Epicatechin

Dihydrochalcones:

Phloridzin

Flavonols:

Quercetin, Flavanol

Glycosides:

Rutin

The Food Scientists-Engineers Code, Quality in/for Product Development

- Taste
- Taste
- Texture and color
- Convenience
- Safety
- Nutrition
- Cost

Prior to 2000

Creativity

in all

You do it!

The food industry does prove quality foods

Just look!

Quality travel-log


Quality


Quality


Quality


Quality
2/$5.50
CANDY
CREAMERS
COFFEE - TEA
9


Quality

Quality


Quality


Quality

Quality


Quality
SALE Fresh Value!
$5.99


Quality

Quality and Organic


FUJI APPLES
$1.49/lb
RED DELICIOUS APPLES
$1.49/lb
Quality


Quality
TONY'S
Fresh Market
$6.29
$8.99
$9.29
$6.99
$10.99
$4.99
$6.49
EVERYDAY LOW PRICE!!
$4.99
U.S.D.A. CHOICE
THIN CUT CHARCOAL STEAK


GREEK
IMPORTED COOKIES
4
OIL - VINEGAR
JAR OLIVES
ITALIAN CONDIMENTS
4/$5.00
Quality


Quality
Fanta
ORANGE
Coca-Cola
KICKSTART
pepsi
POP
SELTZER - TONIC


Organic Foods
3
POLISH FOODS
Quality


Quality


PARSLEY
59¢ EA
CARROTS
1.99 EA
BEETS
$1.99 EA
ASPARAGUS
$3.99 LB
ARTICHOKES
$1.99 EA
KALE
$1.49 EA
SPINACH
99¢ EA
ESCAROLE
99¢ EA
ENDIVE
99¢ EA
Quality


Quality
Quality


Quality


Quality

Quality


Quality
6.99
5.49
5.99
6.49
$4.99
$5.49
$3.99
MINI SUB BUNS
DELI


Quality


POPCORN - NUTS
CHIPS - SALSA
POP
SELTZER - TONIC
10
CANDY
Quality


Quality

The Food Scientist-Engineer Code, Quality in/for Product Development

- Taste
- Taste
- Texture and color
- Convenience
- **Safety**
- Nutrition
- Cost

After 2000 - Today

Creativity in all

HEALTH

What are distractions to the food industry and consumer regarding food quality? 3-Examples

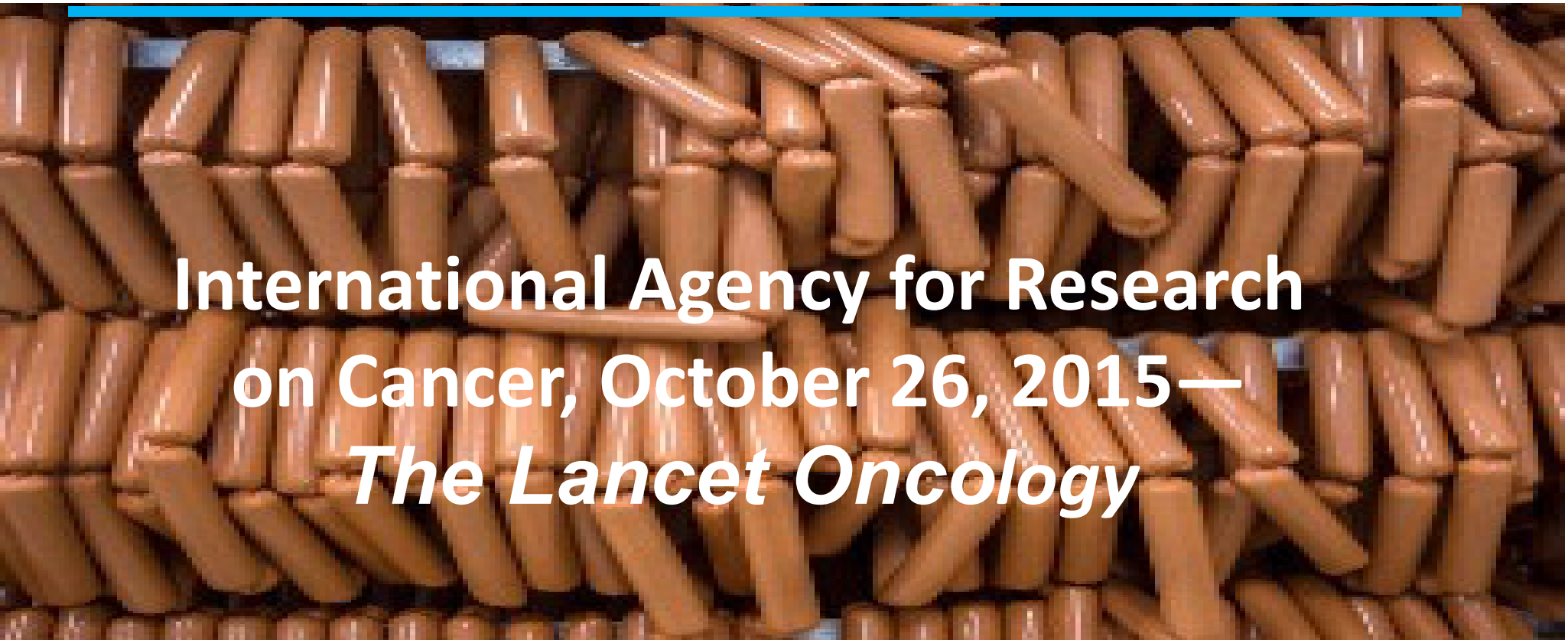
Safety concerns leading to poor health-illness

The FDA found traces of Monsanto's controversial chemical glyphosate in common grocery items

Reported in The Guardian Aug 16, 2018

200 million pound used annually; tolerable limit 5.0 ppm

World Health Organization Says Processed Meat Causes Cancer



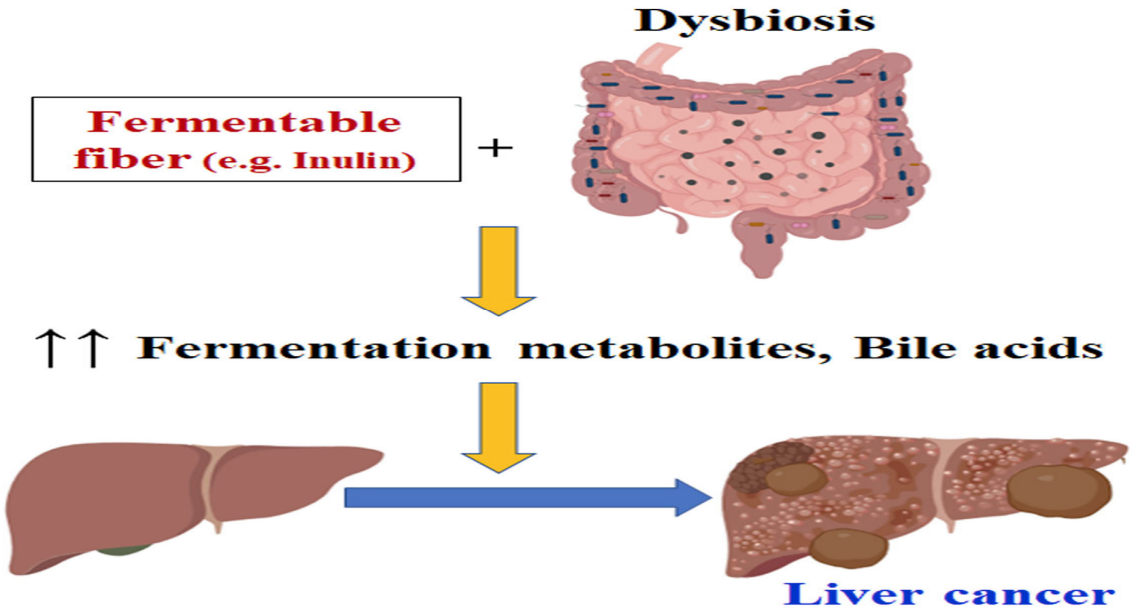
FDA Approved Non-Digestible Carbohydrates as Dietary Fiber

- Mixed plant cell wall fibers
- Arabinoxylan
- Alginate
- Inulin and inulin-type fructans
- High amylose starch (resistant starch 2)
- Galactooligosaccharide
- Polydextrose
- Resistant maltodextrin/dextrin.

May, 2018

Dysregulated Microbial Fermentation of Soluble Fiber Induces Cholestatic Liver Cancer

Vishal Singh and 19 additional authors, Cell, 175:679-694 – Oct 18, 2018



"Thus, its benefits notwithstanding, enrichment of foods with fermentable fiber should be approached with great caution as it may increase risk of HCC"

A positive note on food quality and a clean label.

An example

FDA Definitions

Foods:

1) Articles used for food or drink for man or other animals
2) Chewing gum, and
3) Articles used for components of any such article."

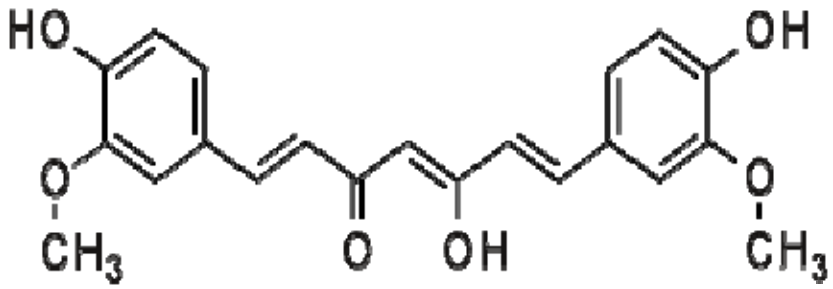
Supplements:

1) Intended to supplement the diet
2) Contains one or more dietary ingredients (including vitamins, minerals, herbs or other botanicals, amino acids, and certain other substances) or their constituents
3) Intended to be taken by mouth
4) Is labeled as being a dietary supplement.

Drugs:

Articles (other than food) intended to affect the structure or any function of the body of man or other animals."

Curcumin



Curcumin

- Considered a false lead in drug assays; thus unfounded belief if is of value
- Chemical instability
- Water insolubility
- Low bioavailability
- Limited tissue distribution, which is good
- Quantitatively removed in the feces, unchanged
- Would be highly toxic if absorbed , bind with protein-enzymes

You – People Want to Believe

Foods and Health

When it comes to health and foods, to whom should my comments be addressed?

- You, your interests first
- Family
- Company
- Consumer

Our (IFT) Conundrum(s)

The consumer want to believe statements about foods that can provide for their health and they will give up (some-all) transparency.

The food industry then is in a position to provide the foods that consumers want with possibly less transparent statements or claims.

Are health claims beneficial to the consumer?

Quality Foods and Health

While the Food Industry will continue to provide a wide selection of quality foods that taste good, are nutritious, safe, convenient, and at reasonable costs, it is the total responsibility of the consumer to educate themselves to consume foods for their health and well being.

1st Question

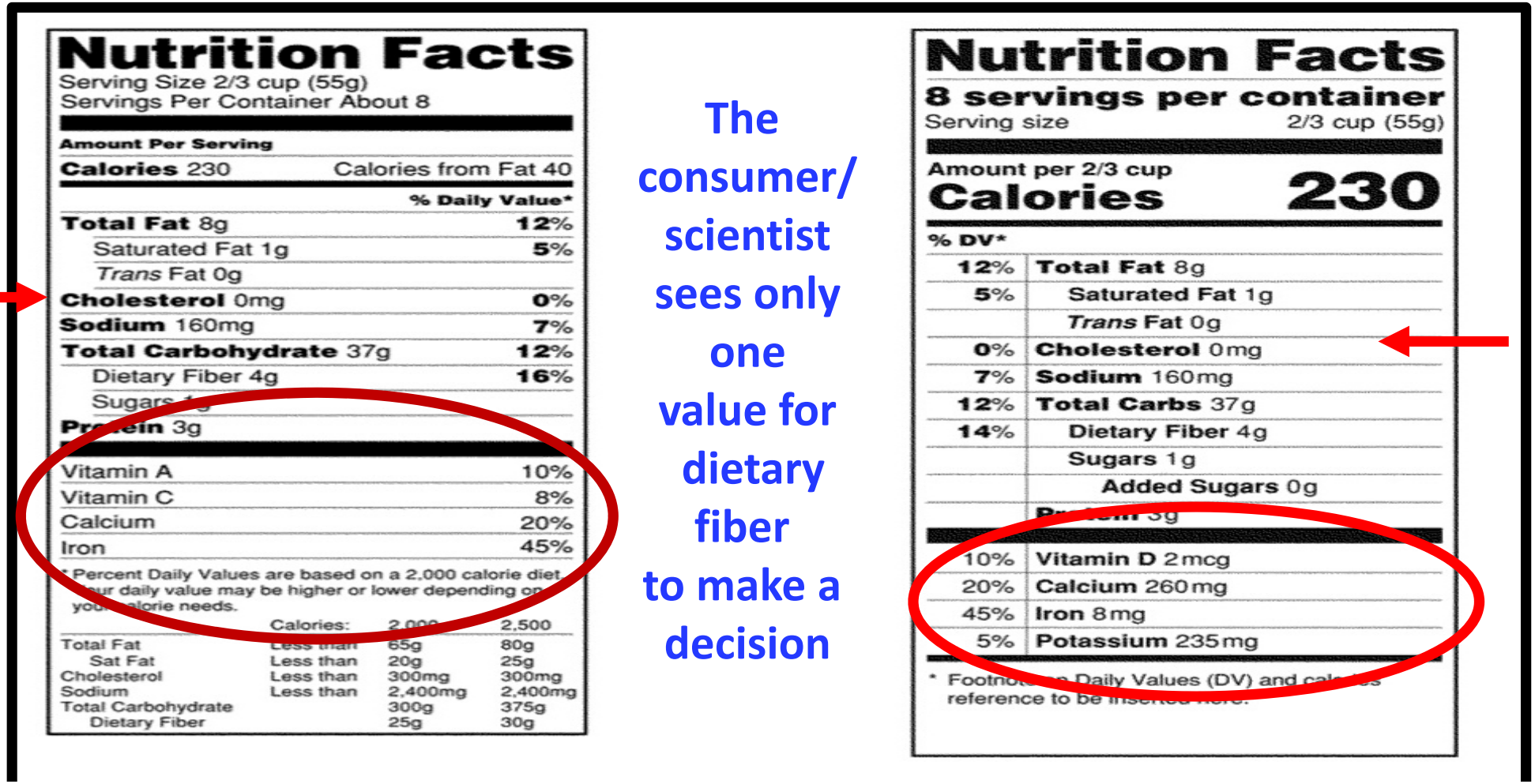
What is the single most important component of foods, which can be measured, having the greatest influence on HEALTH?

Calories

Terms Associated with FOOD QUALITY, NUTRITION & HEALTH

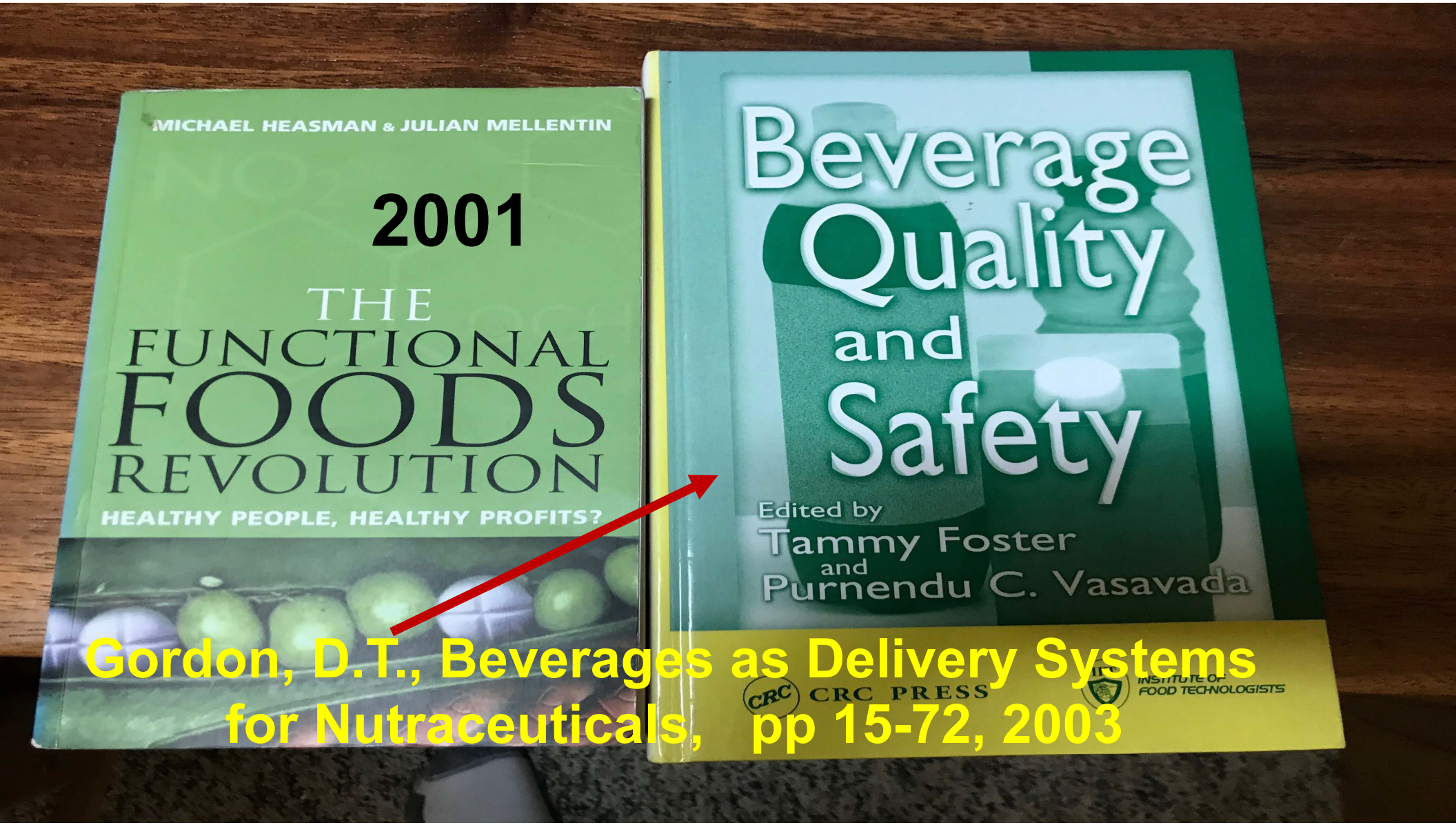
Food Quality	Nutrition Quality	Health Quality
Taste		Antioxidants
Taste	Food	Glycemic Index
Taste	Label	Whole Grains
Texture		Gluten Free
Convivence		No Cholesterol
Safety		No Sugar
Cost		No Preservatives
Nutrition		Organic
Natural		Non GMO
Fresh		Anti-Inflammatory
		Dietary Fiber
		Immune Enhancement

Current and Proposed Food Label



Terms Associated with FOOD QUALITY, NUTRITION & HEALTH

Food Quality	Nutrition Quality	Health Quality
Taste		Antioxidants
Taste	Food	Glycemic Index
Taste	Label	Whole Grains
Texture		Gluten Free
Convivence		No Cholesterol
Safety	Where is the	No Sugar
Cost	transparency,	No Preservatives
Nutrition	truth, facts?	Organic
Natural		Non GMO
Fresh		Anti-Inflammatory
		Dietary Fiber
		Immune Enhancement


MICHAEL HEASMAN & JULIAN MELLENTIN
2001
THE FUNCTIONAL FOODS REVOLUTION
HEALTHY PEOPLE, HEALTHY PROFITS?
Beverage Quality and Safety
Edited by
Tammy Foster
and
Purnendu C. Vasavada
CRC PRESS
INSTITUTE OF FOOD TECHNOLOGISTS
Gordon, D.T., Beverages as Delivery Systems for Nutraceuticals, pp 15-72, 2003

Functional Foods: 9- Classes of Nutraceuticals (not essential yet)

- Additives, sugar & fat substitutes > 100
- Botanicals, Herbs, Spicies > 1,000
- Carbohydrates > 1,000 plus, plus
- Elements B, Cr, V, Li
- Lipids > 1,000, plus
- Nitrogen compounds > 1,000 (proteins)
- Phenolics > 7,000
- Probiotics > 100
- Sulfur compounds > 10

Functional Foods and Nutraceuticals

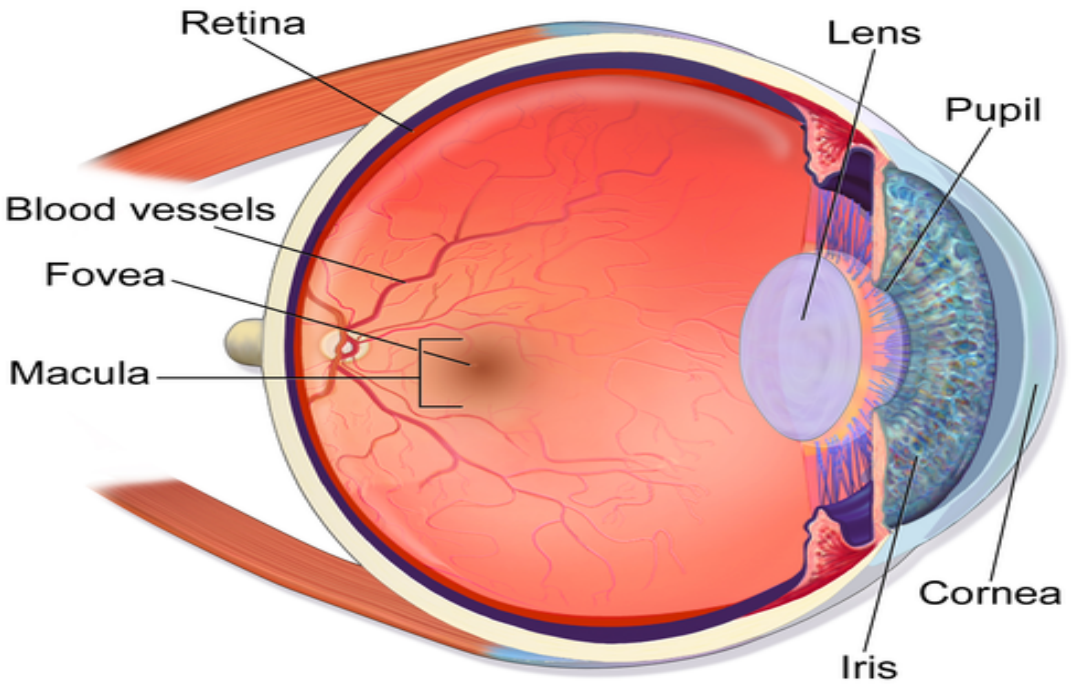
9-Categories of Nutraceutical Compounds

Additives - - 100 + Artificial Sweeteners and colors
Botanicals-Herbs-Species - -1,0000 +
Carbohydrates - - 1,000 + Dietary Fiber
Elements - - 4
Lipids - - 1,000 + Carotenoids: Lutein & Zeaxanthin for Macula
Lycopene for Prostate Cancer
Fish oils for Heart Disease

Nitrogen compounds - - 1,000 + (proteins)
Phenolics - - 7,000 +
Probiotics - - 100 + ***Bifidobacterium sp, Lactobacillus sp***
Sulfur compounds - - 10 +

The retina is the third and inner coat of the eye which is a light-sensitive layer of tissue and associated with the Macula

Macula, yellow in color, blocks blue and UV light, our own sunglasses; mainly zeaxanthin



Eye Anatomy

Zeaxanthin:
- **Paprika**
- **Corn**
- **Egg yolk**

Lutein:
- **Green veggies**
- **Corn**
- **Durum wheat**

Macular Degeneration

Two large, five-year clinical trials — the Age-Related Eye Disease Study (AREDS; 2001) and a follow-up study called AREDS2 (2013) — have shown nutritional supplements containing antioxidant vitamins and multivitamins that also contain lutein and zeaxanthin can reduce the risk of dry AMD progressing to sight-threatening wet AMD.

2nd Question

What is the most important thing we can all do to promote transparency, truth, facts and understanding in the health quality and benefits of foods?

Educate

The Present & Future of Nutrition and Health

My Signature

- Variety
- Moderation
- Exercise
- Manage Stress

$10,000

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I like questions

Transparency

Questions? canoe1@centurytel.net

Weight Management and Inflammation