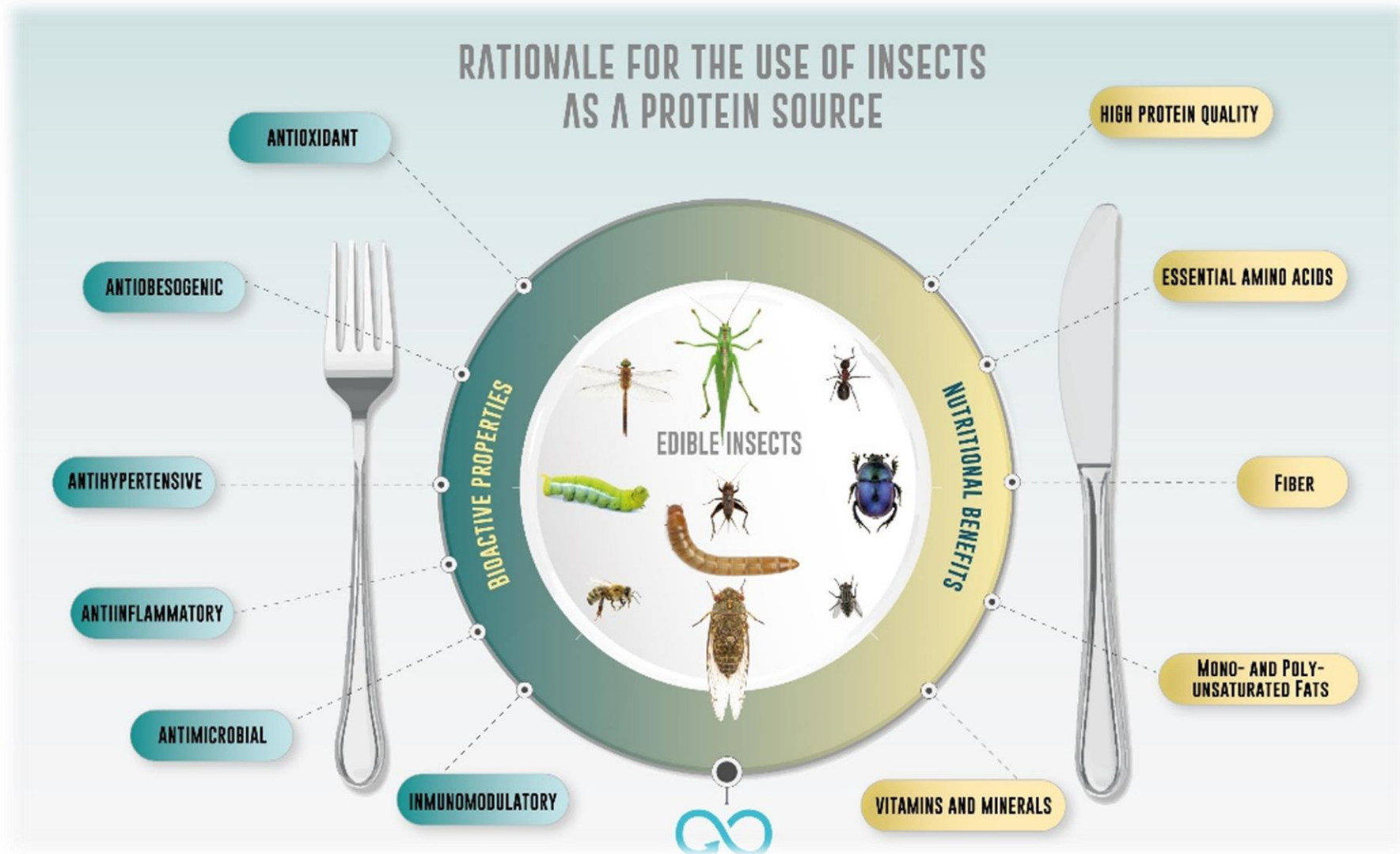


Disclosures

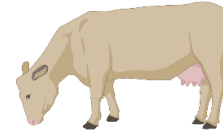
- Member of the North American Coalition for Insect Agriculture
- Editor, special issue: "Insects as Food and Feed: Insights into Safety, Sustainability and Health Benefits", *Foods*.
- U.S. patent on protein extraction from chia seed (*S. hispanica*)

Andrea M. Liceaga, PhD
Director, Sensory Evaluation Laboratory
Protein Chemistry & Bioactive Peptides Lab

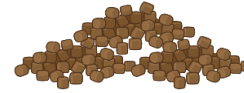


Sustainability

1 KG PROTEIN



2.1 Kg



25 Kg



2.0 L



112 L



15 m²



200 m²



~2.5 KG



~23 KG

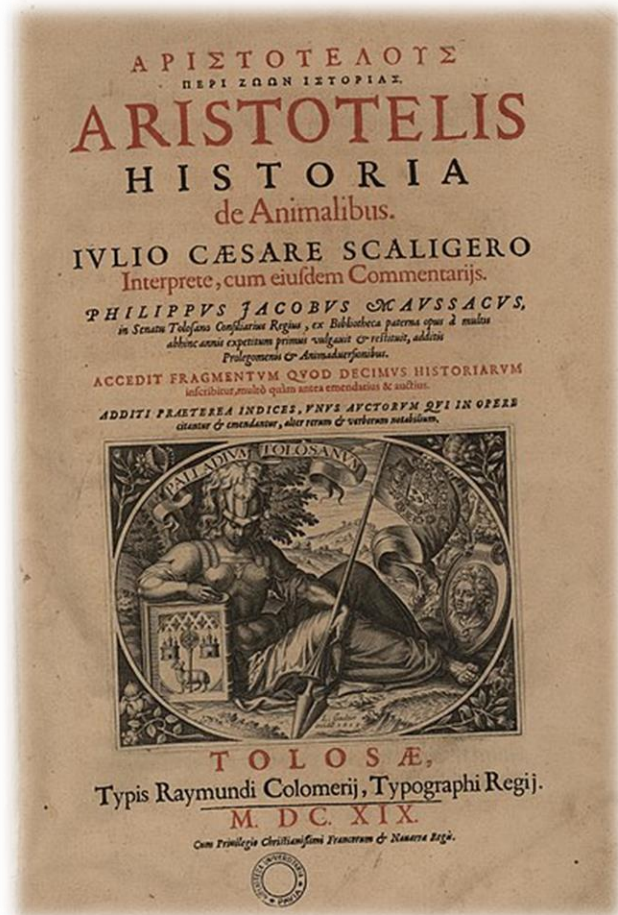


Image Credit: Public Domain, via Wikimedia Commons



Image Credit: Public Domain, via Wikimedia Commons



Mark 1:6

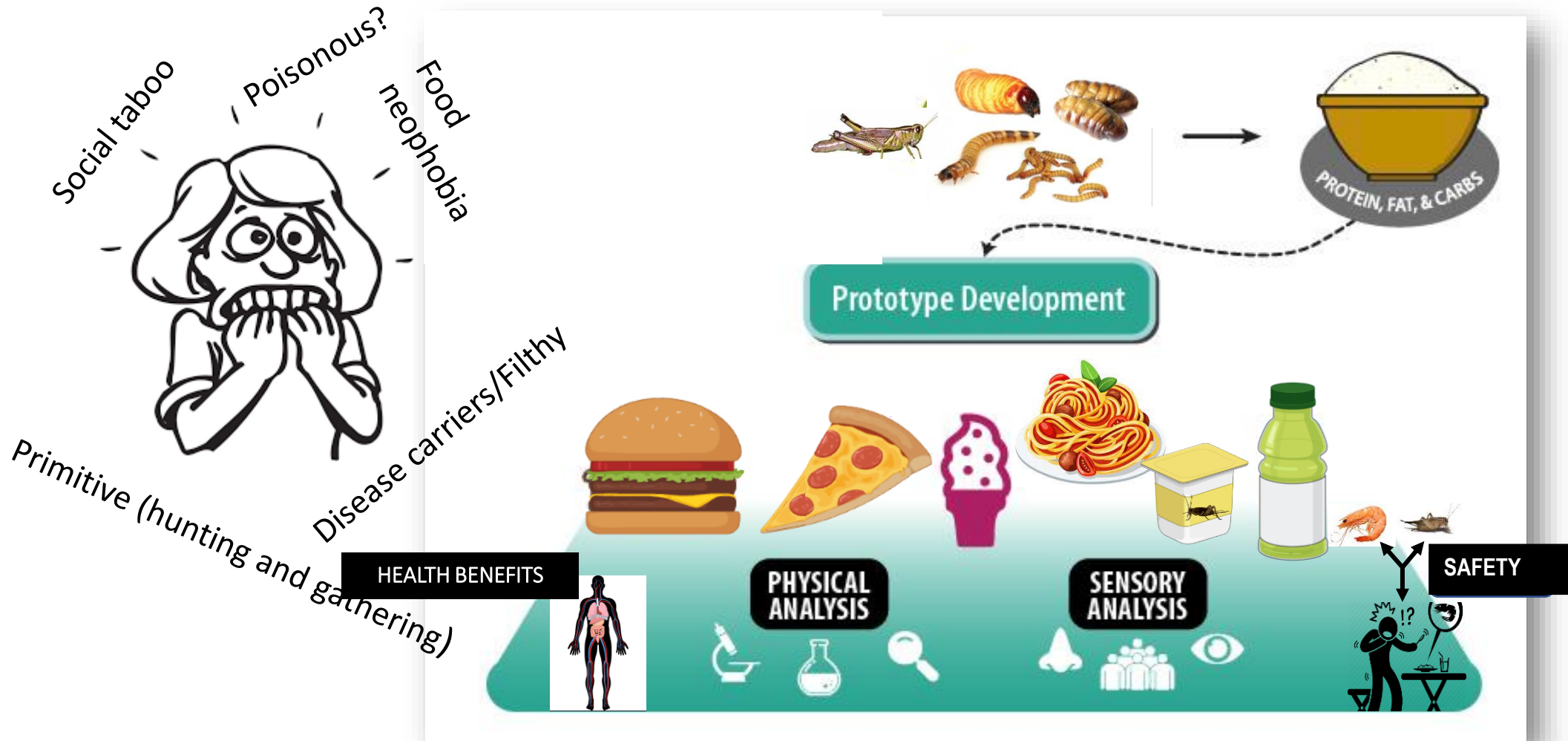
King James Version

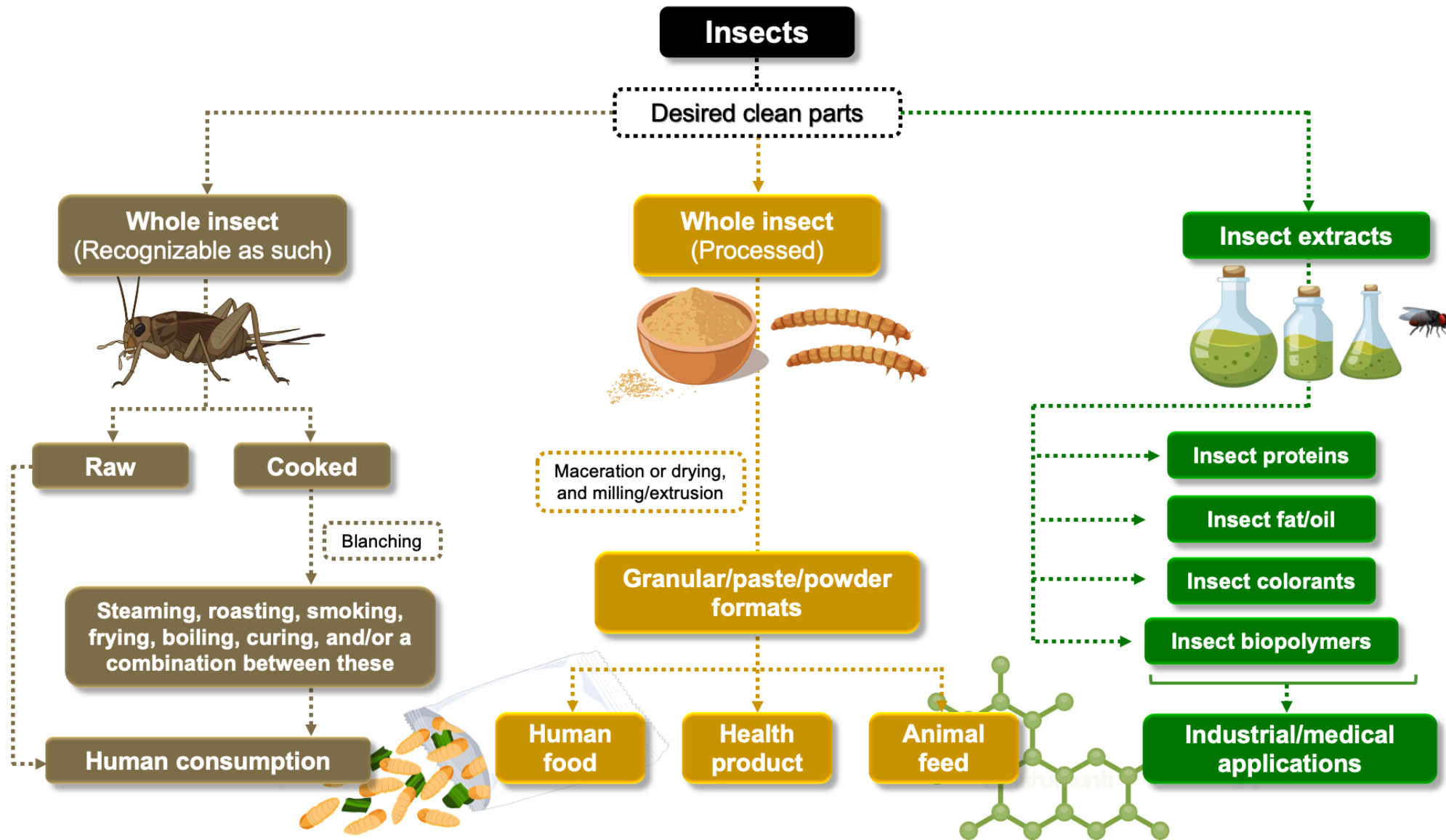
And John was clothed with camel's hair, and with a girdle of a skin about his loins; and he did eat locusts and wild honey;

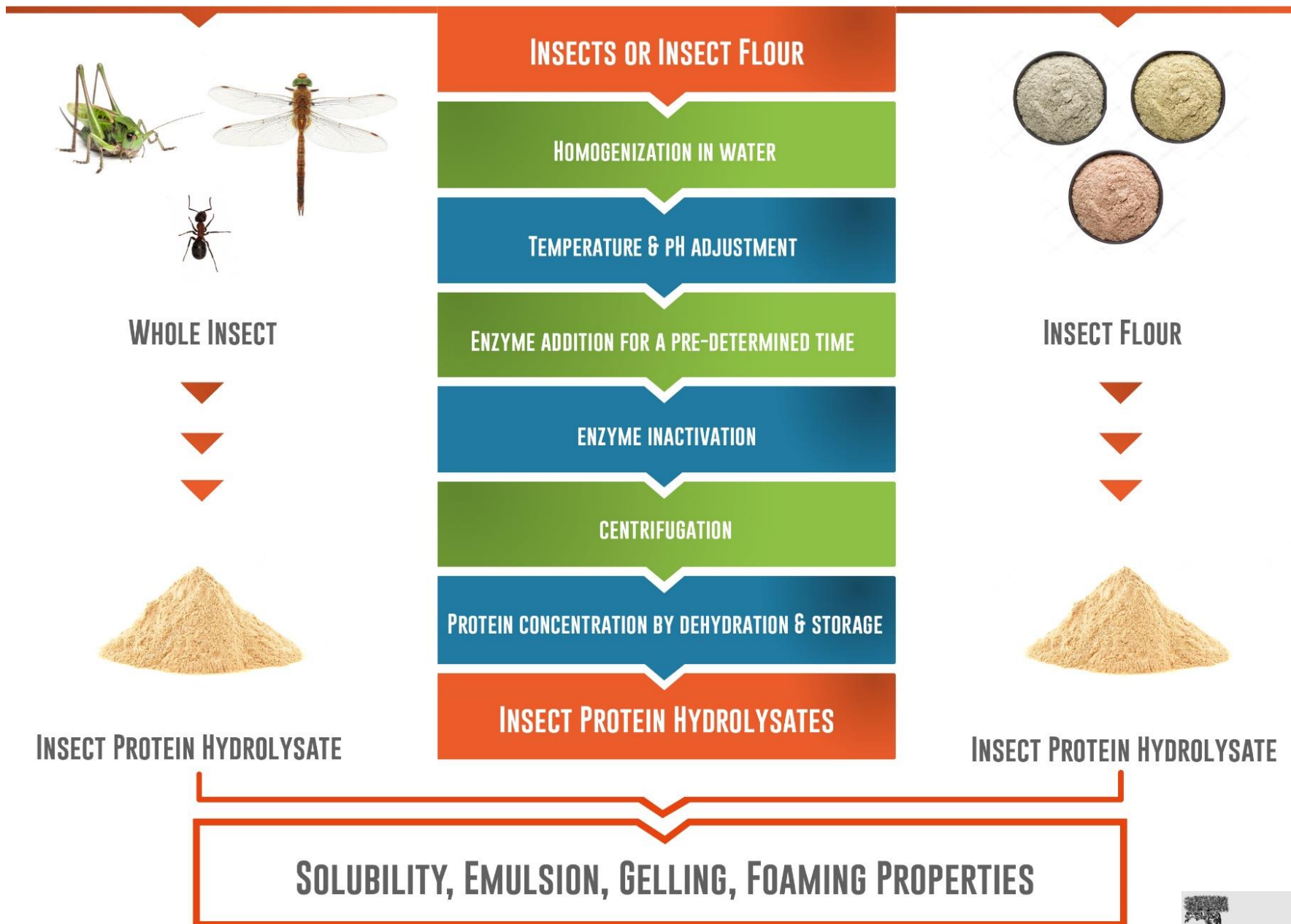


Over 2 billion
people eat
insects
worldwide!

Challenges & considerations for using insects as food







Available online at www.sciencedirect.com

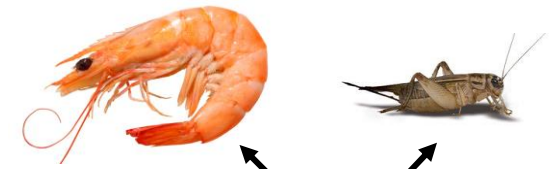
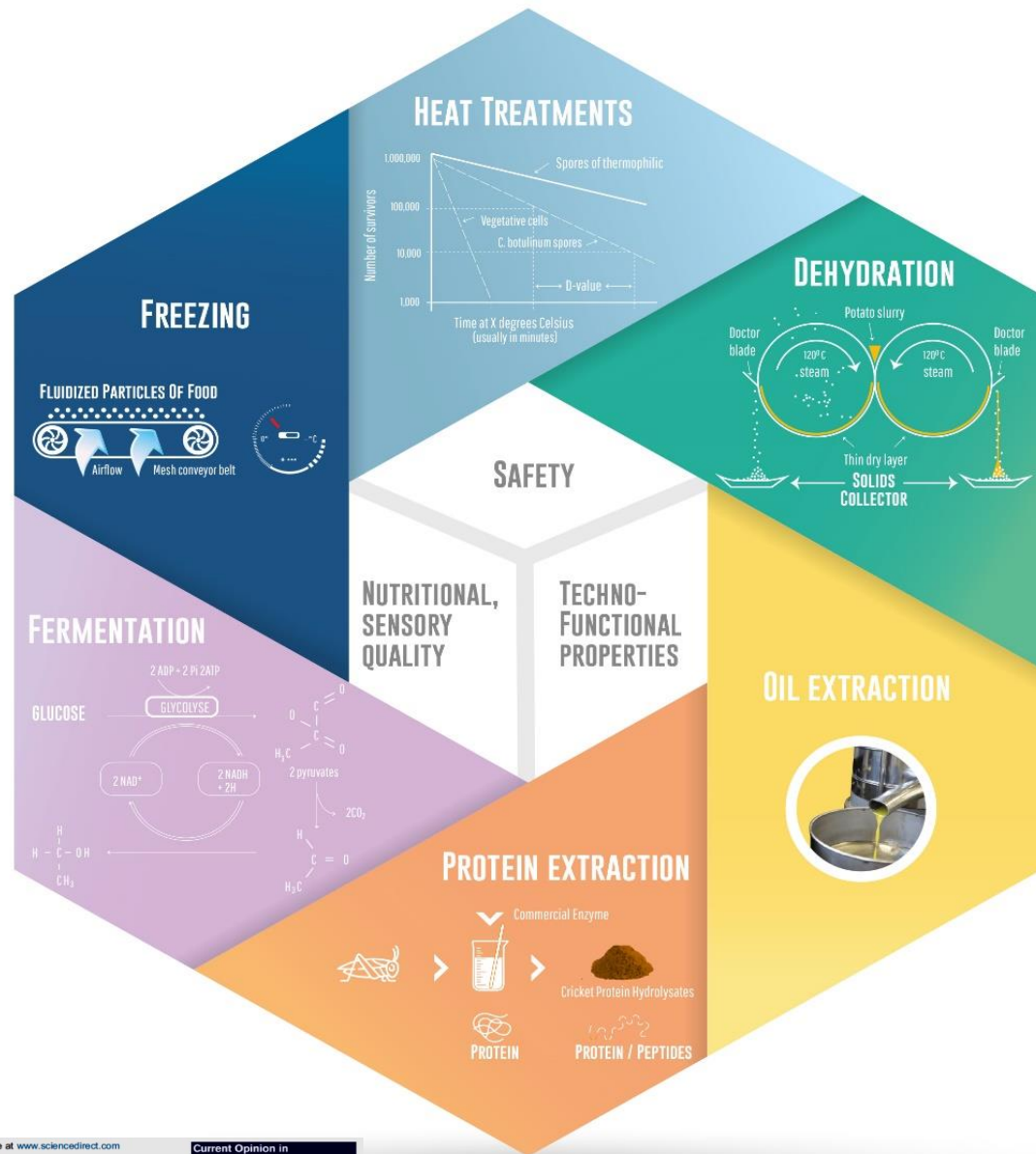
ScienceDirect

Current Opinion in
Insect Science

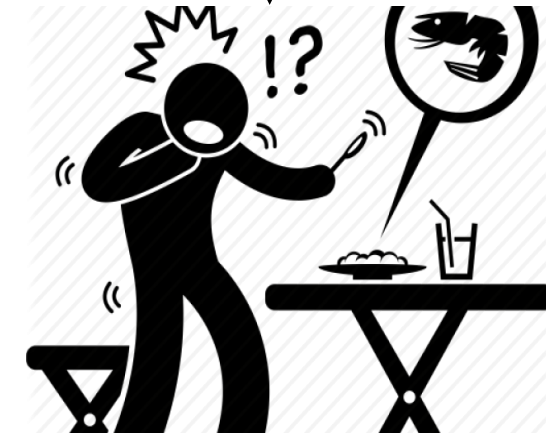
Processing insects for use in the food and feed industry
Andrea M Liceaga



COMMON PROCESSING METHODS FOR INSECT FOOD AND FEED



Arthropods



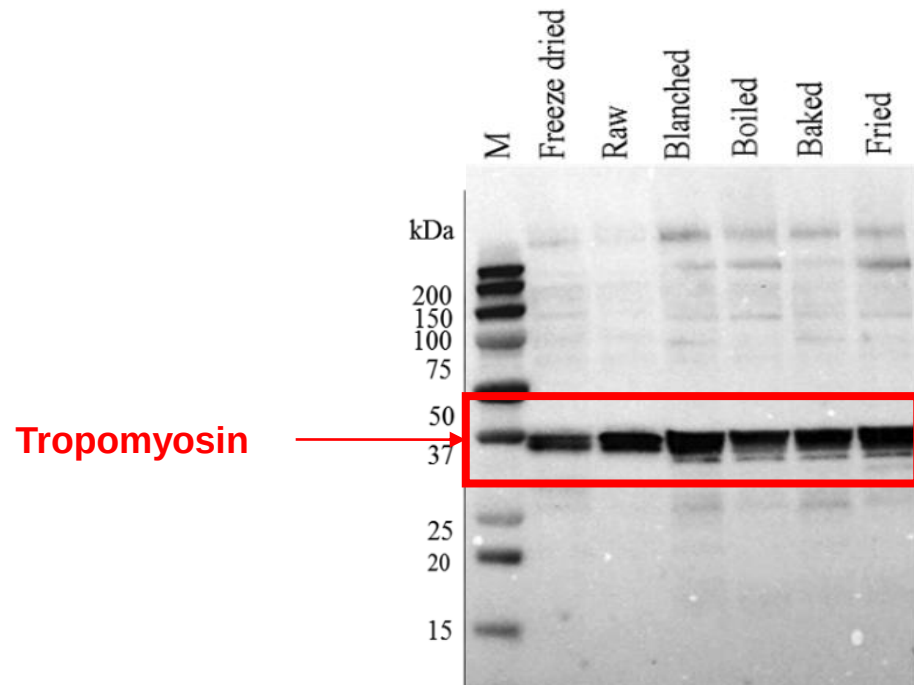
INGREDIENTS

Raw Almonds, Dates, Coconut,
Honey, Cricket Flour,
Raw Cacao Nibs, Raw Cacao Powder,
Vanilla Extract, Sea Salt

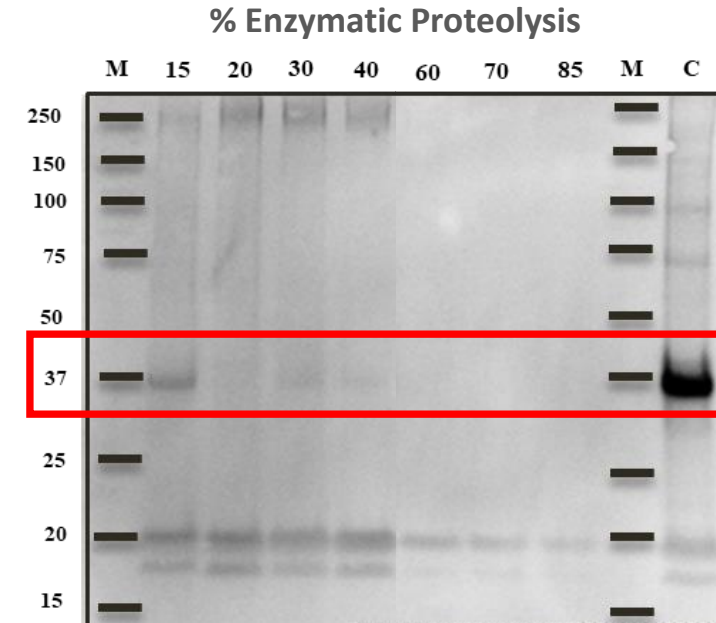
ALLERGIES

Contains Nuts. If you have
a Shellfish Crustacean allergy,
you may be allergic
to this product.

Effect of enzymatic proteolysis on cricket allergenicity



Broekman, H., Knulst, A., et al. (2015). *Molecular Nutrition & Food Research*, 59(9), 1855-1864.



Hall, F., Johnson, P. E., & Liceaga, A. (2018), *Food Chemistry*, 262, 39-47

Insects will be the next lobster



<https://pinetreeseafood.com/the-history-of-the-lobster-how-lobster-went-from-cockroach-of-the-sea-to-decadent-dinner/>



Thank you