Food Stock, Food Storage, and Potential Acrylamide Levels

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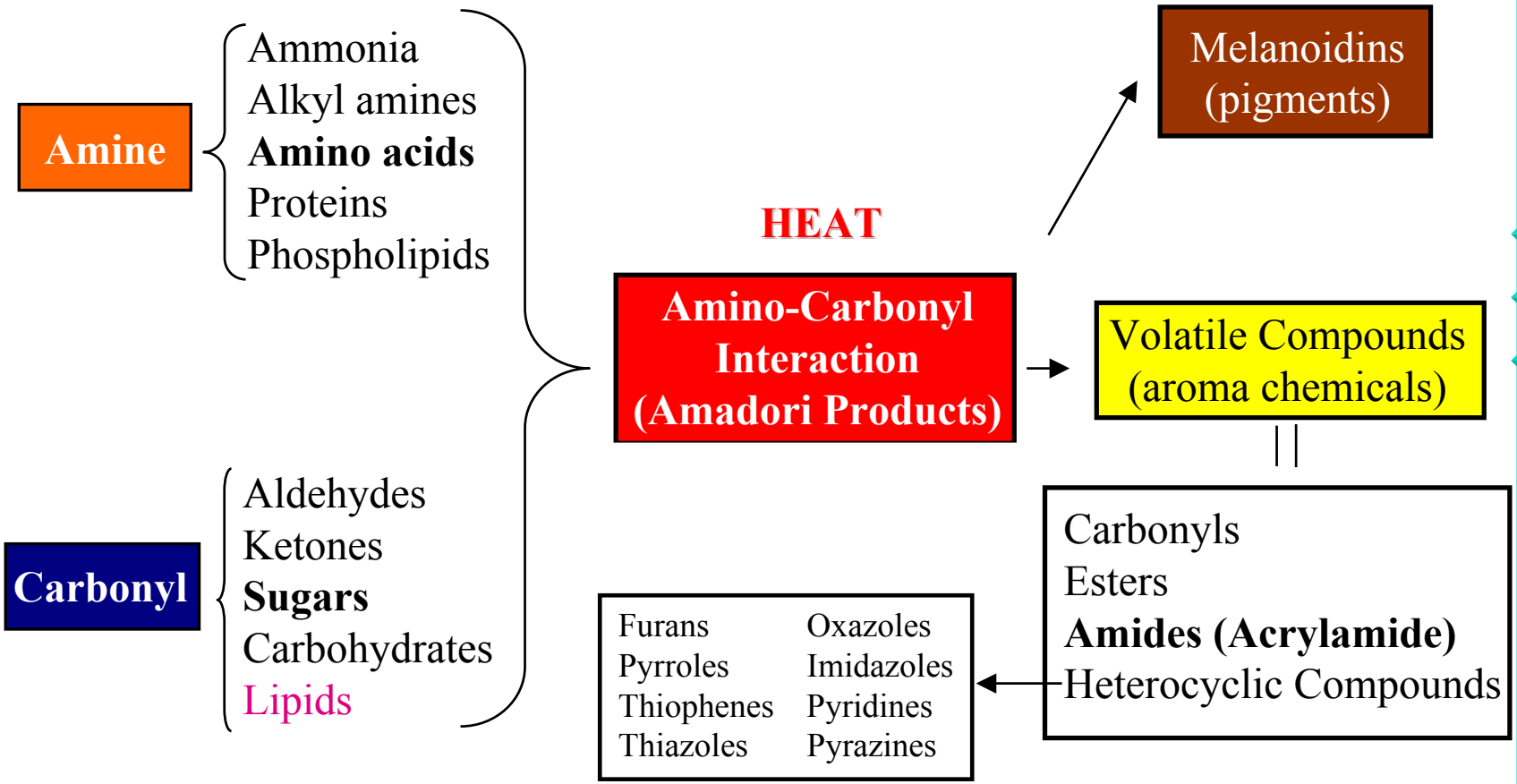
Personal Background

- Ph.D. (1974), Agricultural Chemistry, UC Davis (Thesis: Formation of Pyrazines in Sugar-Amino Acid Browning Model Systems)
- Professor, Department of Environmental Toxicology, UC Davis, since 1979
- Research: Chemical and Biological Studies on Browning Reaction (Anti-oxidant, anti-mutagen, anti-carcinogen, volatile chemicals)
- Over 230 publications on articles associated with browning reactions out of over 290 publications

Food Storage

- Does food storage have a significant impact on acrylamide levels in food?
- A complex question with many factors to consider
- Very little research on acrylamide and food storage completed to date
  - Nothing has been published in scientific journals
  - Understandable, given April 2002 discovery of acrylamide in food
  - Some research may be published in the future
- Impact of food storage on acrylamide is difficult to predict now, based on complexity of acrylamide formation in cooked food

General Scheme of Maillard Browning Reaction



- **Based on model system using amino acids and sugars**
  - **Includes asparagine and glucose**
- **Fundamental inquiries:**
  - **Does acrylamide form during storage?**
  - **If so, what impact does storage have?**
- **Model system is stored at 60**