

Recent advances in methods to determine amino acid requirements and availability in humans and animals

Session Description:

Recently there have been important advances made in methods to determine amino acid requirements which in humans have resulted in a realization that amino acid (and protein) requirements have been underestimated significantly. Further since amino acids are contained in dietary protein the availability of these amino acid to meet dietary needs must be determined. Recently two novel approaches have been developed which should permit direct determination of the metabolic availability of amino acids from dietary sources to meet the needs for optimizing the nutrition of animals and humans.

Purpose:

1. To encourage the translation of observations made in optimizing the protein and amino acid intake of growing farm animals to improve the nutrition of children.
2. To inform the delegates of these recent advances and to stimulate discussion of the implications.
3. Stunting is a widely recognized problem among children in the Developing World. The recent evidence is that the basis for feeding intervention programs with regard to protein and amino acids may be too low. It is expected that presentation of the recent advances will spur development of new and higher levels of essential amino acids and total protein for dietary interventions in children aimed at the prevention of growth impairment (stunting)

Session Chair & Co-chair:

Chair: Paul B. Pencharz, Canada

Co-chair: Anura Kurpad, St. John's Medical College, India

Topics and Proposed Speakers:

Topic 1: *Recent advances in the determination of amino acid requirements in animals; including using animals as potential models to evaluate human requirements.*

Speaker: Professor Ronald O. Ball, University of Alberta, Canada

Topic 2: *Recent advances in techniques to determine the availability of amino acids in dietary protein to meet needs in humans*

Speaker: Professor Daniel Tomé, INRA, Paris France

Topic 3: *Advances in the determination of dietary amino acid requirements in adults*

Speaker: Professor Anura Kurpad, St. John's Medical College, India

Topic 4: *Dietary amino acid requirements in childhood: in health and disease*

Speaker: Professor Paul Pencharz, University of Toronto, Canada