

International E-Conference on

NUTRITION AND FOOD SCIENCE

December 09-10, 2020 | Virtual Webinar

**Garrick D Lee¹ and Xiaoxue Wang¹**

The First Affiliated Hospital of Henan University, PR China

Concept of turning points and improvement in visceral organ function during and after 14 days' prebiotic-assisted total dietary deprivation in human

Life time fasting has demonstrated to be a robust lifespan extension in yeast and *C. elegans*. Although prolonged fasting in human have been evaluated in history, there were long-term safety and practical concerns regarding with these regimens. We have applied a novel prebiotics-assisted fasting approach for 7~14 days' continual dietary deprivation (CDD) regimen, which were designed as taking prebiotic and mineral at three meal times daily to protect the gut from potential damage by Intestinal flora. Bioelectrical and biochemical results indicated significant reducing in both lean and fat mass at 7D CDD, while lean mass (protein level) remained stable at 14D CDD. In addition, we found that lab-biochemistry results, which showed either significant increasing or reducing at 7thD CDD, would turn to be an opposite direction toward a satiation pattern. We defined this phenomenon as turning point (TP). Among the factors tested, some pathological related factor levels such as creatine kinase (CK), alanine transaminase (ALT) glutamic oxalacetic transaminase (GOT) or uric acid (UA) baselines were significantly increased at 7thD of CDD but started to reduce at 14thD of CDD. The blood levels remained lower than individuals' baselines even after 3~6 months' refeeding. Our results indicated that, when the CDD applied less than 7D, fasting related autophagy have utilized reserved energy of the system and caused a release of harmful factors in blood. Following a longer term of CDD treatment (14D), while ketone body metabolism has been established, the system started to facilitate the regeneration of damaged tissues and showed lower in CK, ALT or GOT than baseline levels even after refeeding. Our results indicated a novel health improvement strategy in preventing metabolic syndrome in clinic.

Keywords: dietary deprivation, prebiotic, turning point, creatine kinase, alanine transaminase, metabolic syndrome

Biography:

Garrick D Lee is a Professor in Molecular Gerontology Study in Aging and anti-aging approaches. Recent research interest is in dietary regulation in metabolic syndrom, obesity, and anti-cancer approaches.