

## TRANSLATING SPACE MEDICINE TO EARTH: SYNERGISTIC BENEFITS OF MENTORSHIP

*TRADUIRE LA MÉDECINE SPATIALE À LA TERRE: LES AVANTAGES SYNERGIQUES DU MENTORAT*

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**Introduction:** The Bellagio International Summit on Space Medicine: Terrestrial Application for Human Health Performance and Longevity, resulted in more than 30 abstracts of mature science, translated for earthbound applications. A key objective of this summit was to mentor young investigators to become the next generation scientists. This project examined the experience of young investigators, to define the structure and elements of mentorship, and to determine the synergistic benefits.

**Methods:** Eleven young investigators participated in a three phase Bellagio initiative, which included a three month data retrieval process, a four day summit in Bellagio, and a presentation of scientific abstracts. A mentorship questionnaire was designed that included 12 synergistic variables of mentorship, which they rated on significance of impact on their mentoring experience. Participants answered four open-ended questions which defined variables with the strongest interactive synergy.

**Results:** Scientific merit was cited in five conceptual domains, where young investigators participated, including, Genetics and Space, Environmental Hazards, Nutrition in Space, Physiological Fitness and Behavioral Health. Strongest interactive synergy was felt in (1) scientific merit, (2) passion and alignment with personal goals, (3) personal achievement in actually delivering a paper, and (4) one on one mentoring. One example of delivery of countermeasures or mature science by a young investigator, who rated these four interactive variables as a 10, will be shown. Application of the National Institutes of Health Translation Science Model will be demonstrated in the laboratory--discovery of vitamin D through its five stages, leading to population health in preventing osteoporosis. On a 10 point scale for 12 synergistic variables, all were ranked 8 and above.

**Conclusions.** The mentorship questionnaire is an initial attempt to quantify the mentorship experience from the perspective of the mentee. It defines the synergistic variables that shape mentee satisfaction. This assessment will be replicated with a larger sample, in Bellagio III, to determine statistical inferential impact on the entire mentoring experience.