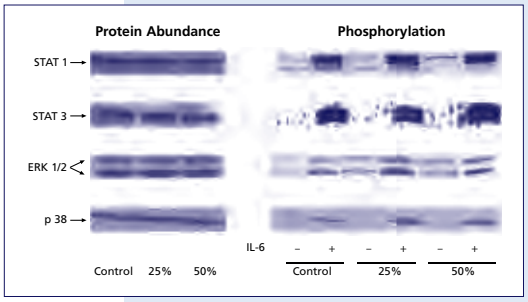
CLINICAL NUTRITION

Bruce R. Bistrian MD, PhD, MPH, Chief — The Division of Clinical Nutrition is primarily a research division with a nutrition/infection laboratory directed by Dr. Bruce Bistrian. The lab investigates the pathophysiology of protein calorie malnutrition, the interactions of nutrition and infection, the development of immune-enhancing enteral feeding formulas and novel parenteral fats, including medium chain triglycerides, structured lipids and marine oils.

Dr. Pei-Ra Ling, who has collaborated with Dr. Bistrian for many years, conducts animal studies looking at systemic inflammation due to infection, burn injury and endotoxin exposure. The laboratory has also collaborated with investigators at Tufts University and Children's Hospital Boston looking at the role of oral fish oil supplementation to reduce the consequences of HAART in HIV patients as well as enteral and parenteral supplementation to modulate the systemic inflammatory response.



The Division's research suggests that food restriction up to 50% does not alter the selected signaling protein phosphorylation in response to IL-6 stimulation. Courtesy of Pei-Ra Ling, MD.

Dr. Bistrian has been on the editorial board of the *Harvard Health Letter* and the *Women's Health Watch* for more than ten years and is a long-term member of the Editorial Board of *Critical Care Medicine*. Dr. Bistrian continues to serve on the Institutional Review Board, a role he has performed either at the former New England Deaconess Hospital and now Beth Israel Deaconess Medical Center for nearly three decades.

Dr. Bistrian was recently reappointed to the Committee on Military Nutrition Research of the Institute of Medicine, and in 2010 the group established a Committee on Nutrition, Trauma and the Brain. This group formulated a series of proposals for potential nutritional interventions in traumatic brain injury related to combat. The work of the Committee was published by the Institute of Medicine of the National Academy of Sciences. Dr. Bistrian is also the Chairman of the Nutrition Risk subgroup appointed by NASA to evaluate their proposed research program for space missions to an asteroid and ultimately to Mars.

Selected Publications

Martin CR, Dasilva DA, Cluette-Brown JE, Dimonda C, Hamill A, Bhutta AQ, Coronel E, Wilschanski M, Stephens AJ, Driscoll DF, Bistrian BR, Ware JH, Zaman MM, Freedman SD. Decreased postnatal docosahexaenoic and arachidonic acid blood levels in premature infants are associated with neonatal morbidities. *J Pediatr* 2011; 159:743-9.

Le HD, de Meijer VE, Robinson EM, Zurakowski D, Potemkin AK, Arsenault DA, Fallon EM, Malkan A, Bistrian BR, Gura KM, Puder M. Parenteral fish-oil-based lipid emulsion improves fatty acid profiles and lipids in parenteral nutrition-dependent children. *Am J Clin Nutr* 2011; 94:749-58.

Bistrian BR. Is total parenteral nutrition protective against hypoglycemia during intensive insulin therapy? A hypothesis. *Crit Care Med* 2011; 39:1533-5.

Bistrian BR, Askew W, Erdman JW Jr, Oria MP. Nutrition and traumatic brain injury; a perspective from the Institute of Medicine Report. *JPEN J Parenter Enteral Nutr* 2011; 35:556-9.

Faculty

Bruce R. Bistrian, MD, PhD, MPH
Pei-Ra Ling, MD
Karen McCowen, MD

Top: Bruce R. Bistrian, MD, PhD, MPH, and Pei-Ra Ling, MD