2016/17 Summer Scholarship Project

**Project title:** Hidden and not so hidden bias in nutrition research

**Primary supervisor:** Professor Lisa Bero  
[mailto:lisa.bero@sydney.edu.au](mailto:lisa.bero@sydney.edu.au)  
+61 2 8627 1881

**Co-supervisors:** N/A

**Project type:** Meta-analysis, “meta-research”

**Research theme:** Health Services and Patient Safety

**Project description:**
Health practitioners, consumers, and policy makers are presented with conflicting food, nutrition, and dietary recommendations almost daily. Much of this advice is derived from biased research. Although there is an empirically-based literature on how to evaluate the risks of bias of human clinical trials, little is known about extent, types, and impact of different risks of bias in studies of nutrition interventions which are often observational studies. Although we are interested in bias at all stages of the research process, the unique contribution of this study will be data on risks of bias in the design of studies. The objective of this proposal is to produce empirical evidence quantifying influences on the design and reporting of nutrition interventions aimed at reducing obesity, cardiovascular disease and diabetes.

**Aim**
Determine whether methodological risks of bias, research sponsorship and/or investigator conflicts of interest are associated with publication of biased outcomes in nutrition studies.

**Significance**
It is essential that an evidence base as rigorous and extensive as the evidence on bias in pharmaceutical research is established to illuminate the ways in which investments in nutrition research are at risk of bias. *Our findings will be significant* because they will identify specific sources of bias in the evidence base supporting different dietary interventions and related health claims. Evidence on what influences the outcomes of this research will facilitate evaluation of studies testing dietary interventions, the development of systematic reviews and dietary guidelines, help resolve conflicting results, reform how the research is conducted, identify new areas for study and assist clinical practitioners in providing nutritional guidance.

**Methods**
Conduct comprehensive literature search to identify published studies evaluating the effects of nutrition interventions on obesity-related outcomes.  
Extract data on risks of bias, study characteristics, types of research questions addressed, funding sources and author conflicts of interest from included studies.  
Analysis: Report on frequencies of study and author characteristics. Conduct meta-analysis to assess the impact of different study characteristics on effect sizes of outcomes.

**Feasibility**
All data are readily accessible and publicly available.