Community water fluoridation (CWF) and other fluoride modalities historically have been and remains the cornerstone for the prevention and control of dental caries. There is extensive evidence on the efficacy and cost-effectiveness of these interventions as well as assessments of the risks associated with fluoride ingestion. In 2006 the National Research Council identified severe fluorosis as the only documented health effect of fluoride at 2 – 4 mg/L in drinking water. Concentrations recommended for CWF and current dosage schedules for other modalities ensure safety. Systematic reviews on fluorides have identified gaps in knowledge or the need to replicate some of the previous studies under current widespread use of fluorides. The objective of this symposium is to review evidence of effectiveness and safety, identify research gaps and consider implications for optimizing use of fluoride in public health and clinical practice.

- **Effectiveness of fluorides: findings of evidence-based reviews**
  
  *Dr. Martinez-Mier Indiana University Preventive & Community Dentistry*
  
  a. Evidence gaps for effectiveness of certain fluoride modalities
  b. Relationship/balance among effectiveness, dose, and safety.
  c. Findings of newly funded study on relationship between fluoride exposure and neurobehavioral outcomes

- **The health assessment of fluoride in drinking water: Conclusions from the National Research Council and subsequent scientific assessments by EPA**
  
  *Dr. Jay Kumar, Assistant Director, Bureau of Dental Health, New York State*
  
  a. Health effects of fluoride in drinking water: Conclusions from the NRC report
  b. Research needs (recommendations) identified in the report
  c. Implication of these findings for water fluoridation

- **Community water fluoridation: Translating evidence into public health practice**
  
  *Dr. Barbara Gooch, Associate Director for Science, Division of Oral Health, NCCDPHP, CDC*
  
  a. Evidence and rationale supporting CWF as a public health priority
  b. Evidence gaps identified by the Task Force on Community Preventive Services (2013)
  c. Ongoing surveillance and communication efforts

- **Gaps in scientific knowledge regarding water fluoridation and other fluoride modalities**
  
  *Dr. Gary Slade, John W. Stamm Distinguished Professor of Dentistry, Department of Dental Ecology, University of North Carolina at Chapel Hill*
  
  His presentation will cover:
  
  a. The caries preventive effects of fluoridation in adults, particularly the findings from the Australian study published in 2012
  b. Misinterpretations about study designs that apparently have caused some reviewers to exclude such studies from systematic reviews
  c. Implications for population calculations of cost-benefit

**Chair:** Dr. Stephen H. Abrams (Cliffcrest Dental Office, Toronto, ON, Canada)