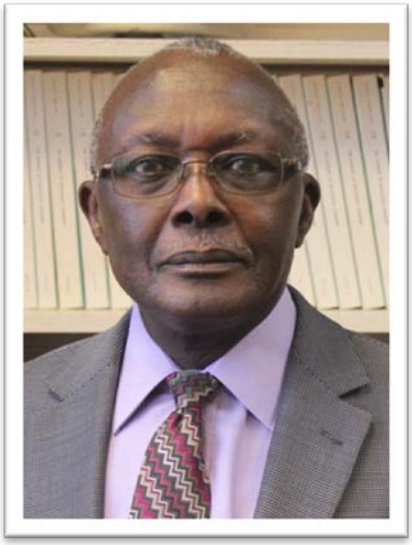
FOR DIRECTOR, DISTRICT II



ISAI T. URASA

Hampton University, Yorktown, Virginia.

URASA, ISAI T. ***Hampton Roads Section***. Hampton University, Yorktown, Virginia.

Academic Record: Hampton Institute, B.A., 1970; SUNY, Buffalo, M.A., 1972; Colorado State University, Ph.D., 1977.

Honors: AAAS Fellow, 2000-01; Edward L. Hamm, Sr. Distinguished Teaching Award, Hampton University, 1996; Outstanding Faculty Award, State Council of Higher Education for Virginia, 1991; Beta Kappa Chi.

Professional Positions (for past 10 years): Hampton University, Department of Chemistry, 1981 to date; Professor, 1988 to date; Associate Professor, 1983-88; Assistant Professor, 1980-83.

Service in ACS National Offices: Committee on Minority Affairs, 2001-09, Consultant, 2010, Committee Associate, 2000; International Activities Committee, 2013-15, 1991-99, Committee Associate, 2011-12; Petroleum Research Fund, Proposal Review Panels.

Service in ACS Offices: Member ACS since 1976. *Hampton Roads Section*: Chair 1985; Chair-Elect and Program Committee Chair, 1984; Program Committee, 1983; Member-at-Large, Program Committee, 1982; 2013 Fall ACS National Meeting, Symposium Co-organizer (Water Resources:

Global Problem, Local Solutions); ACS Office of International Activities, Global Innovation Imperatives (GII) delegation to Singapore, 2014.

Member: National Organization for the Professional Advancement of Black Chemists and Chemical Engineers; Beta Kappa Chi Honor Society; Tanzania Chemical Society. *ACS Divisions*: Analytical Chemistry; Environmental Science & Technology and Chemical Education.

Related Activities: Louisiana Board of Regents, Science Review Committee 1992, 2011, 2014; Southeast Universities Research Association (SURA), Board of Trustees, 2007-10; University of Pittsburgh Cancer Institute/Hampton University, Research and Training Partnership, Advisory Board, 2003-07; National Science Foundation, Center for Workshops in the Chemical Sciences, Advisory Committee, 2002-08; American Water Works Association, Research Foundation, Project Advisory Committee, 2001-05; U.S. Agency for International Development, Project Review (Mississippi Consortium for International Development/Agostinho Neto University-Angola), 2001; U.S. Agency for International Development, Project Review (West Virginia State College/National University of Benin, 2001; U.S. Agency for International Development, Project Review (Virginia Tech/Malawi Ministry of Education), 2001; Hampton University, Board of Trustees, 2000-01; Tanzania Journal of Science, Editorial Board, 1999-2005; University of Dar es Salaam, Tanzania, External Examiner, 1998; National Science Foundation, Committee of Visitors, 1997; Monsoura University, Egypt, External Examiner, 1996; Instrumentation Science and Technology, Editorial Board, 1995-2000; HBCU/MI Environmental Technology and Education Consortium, Steering Committee, Chair, Subcommittee on Undergraduate Education, 1990-2005; University of Nairobi, Kenya, External Examiner, 1990; National Science Foundation; U.S. Department of Education; U.S. Department of Energy; U.S. Environmental Protection Agency; U.S. Agency for International Development; Alfred P. Sloan Foundation, Louisiana Board of Regents; published 15 journal articles, two book chapters; directed 15 M.S. research theses.

STATEMENT

The statements of the nominees represent their opinions and do not necessarily represent the views of the ACS.

My personal statement is predicated on my thirty-five years of experience in higher education during which I have served as a professor, researcher, and head of the Department of Chemistry & Biochemistry at Hampton University. I have also had the opportunity and privilege of working with students and teachers of local K-12 schools in a variety of capacities and activities (Project SEED, Advanced Placement, International Baccalaureate, Science Fairs, etc.). In addition that, I am currently directing a project designed to help local K-12 science teachers to develop and integrate inquiry-based activities in their laboratory classes. As a whole, my experience as an educator has given me great insight into the tremendously important role that higher education institutions play in society, not only as pillars of the economy, but in many other ways that may not be so obvious. The inextricable relationship between K-12 and higher education institutions is a good example. This interdependence is especially significant today as we strive to improve the quality of STEM education in this country. A lot has been written on this subject in recent years.

For example, in a report that was published in 2007 by the National Academy of Sciences, "*Rising above the Gathering Storm*", several concerns were raised as to whether the U.S. Science and Engineering education is suited for the 21st century. The report makes a strong recommendation for the improvement of science and engineering education for students, starting at the K-12 levels. The report also acknowledges the fact that science education will be greatly improved if teachers are

given opportunities to improve their knowledge and skills, sensitized to life-long learning, and can inspire and motivate students to become life-long learners. The need for continual professional development of teachers is highly stressed in the guide for implementing the "*Next Generation Science Standards*" published in 2013 (The National Academies Press).

In another report that was sponsored by the National Academies in 2011, titled "*Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, and Mathematics"*, criteria for identifying effective programs were outlined, including the importance of learning STEM concepts and practices; developing positive dispositions towards STEM; and preparing students to be lifelong learners. The general sentiment is that an effective K-12 STEM program must be motivated by maximizing the student's intellectual engagement. It must also emphasize development of the student's skills; increase the student's motivation; and stimulate higher order thinking.

The observations and recommendations made in these reports and other works that have appeared in the literature point to the critical need for direct involvement of higher education institutions to K-12 education. Our ongoing study at Hampton University that involves K-12 science teachers in Hampton City Schools has shown that: (1) there is a need for strong ties between school systems and local higher education institutions; (2) K-12 teachers need access to opportunities for continual professional development; and (3) there is a need for new initiatives to encourage and prepare college science students for potential careers in science education. This is especially true for chemistry. Therefore, if elected, my service as a Board member will focus on helping the Society (ACS) to adopt a heightened position of promoting closer involvement of the Society in K-12 education.