

## 2009 Neonatal Education Award: Ron Ariagno

Ron Ariagno epitomizes the doctor [*doctor*, from Latin, teacher, from *docēre* to teach] as educator. In this regard, he has taken on a variety of national and regional leadership roles on behalf of the American Academy of Pediatrics (AAP) Section on Perinatal Pediatrics. This was with the aim of educating us all about the direction of our field, defining our research agenda and the processes that will acknowledge the young talent in neonatology both in the United States and around the world. Ron's whole career exemplifies these kinds of educational contributions as they impact the field of neonatology. I would like to give you a further sense of how Ron evolved as a leader and became well prepared for such roles in neonatology; this is the professional foundation upon which he has built a career of selfless dedication to inform our discipline and its future.

Ron first came to the Department of Pediatrics at Stanford University in 1975 in Neonatology. He was one of three neonatologists at the time and brought to Stanford a unique expertise in neonatal pulmonary physiology. He was appointed as Professor of Pediatrics in 1987 and throughout his career has assumed various leadership positions, including most recently Senior Associate Chief for Academic Affairs in the Division of Neonatal and Developmental Medicine. He is a Fellow of the American Academy of Pediatrics (AAP); an active member of the Western Society for Pediatric Research, having served as its President from 2005 to 06; the Society for Pediatric Research; and the American Pediatric Society, among many other professional organizations, and has served on the Executive Committee of the Section on Perinatal Pediatrics of the AAP.

Ron's academic pedigree is first-rate. Ron was trained as a classic physiologist under the tutelage of Dr. June Brady (herself a trainee of Dr. Stanley James), who was Chief of Neonatology at the Children's Hospital of San Francisco and on the faculty at the Cardiovascular Research Institute (CVRI) at UCSF under Julius Comroe. He now has a national and international reputation as a clinical investigator, which reflects this training experience. He has a distinguished record of contributions in the research of the development of biological rhythms, thermoregulation, control of breathing, and infant sleep. In particular, he is one of this country's most renowned experts in infant sleep and in the regulation of respiration. The body of his work in its entirety (which spans nearly three decades) is an impressive legacy, which has contributed to many practical recommendations for care of the preterm and term newborn and throughout infancy. Ron was one of the investigators who challenged the hypothesis that the response to hypoxia and hypercarbia was impaired in infants at risk for Sudden Infant Death Syndrome (SIDS)



Dr. Ron Ariagno demonstrating proper hand washing at the School for [homeless] Boys in Nakuru, Kenya in 2007

and questioned the use of home monitoring as a rational approach to preventing apnea as a cause of SIDS. His studies of the effects of servo-controlled environments on the metabolic rates of premature infants showed that radiant warmers, which are still in use in neonatal intensive care units throughout the country today, allow for minimal oxygen consumption since the physiologic feedback system is primarily dependent on the skin receptors and not core or deep temperature feedback. In fact, Ron's work was instrumental in preventing the FDA recall of radiant warmers and incubators from clinical practice in the late 1970's. Some of the original research on prone versus supine sleeping positions and heart rate variability in the young infant was done by Ron, helping to inform the "back to sleep" educational program of the AAP, which has reduced the incidence of SIDS by almost 50% worldwide. In particular, he showed that the supine sleep position in the preterm infant provides more heart rate variability, a shorter Qtc interval, and more arousals from sleep, each of these physiologic changes alone and in combination providing better adaptation for the young infant to respond to asphyxial challenges. Most notably, Ron was awarded the 2002 Daniel E. Boatwright Award, which is the most prestigious SIDS service award that a Californian can receive, Ron being only the twelfth person to be so honored by the State of California.

Ron also has had an important and formative role in the development of the California Association of Neonatologists (CAN), and was instrumental in the early years of this organization, serving as its first President, when the District IX Section on Perinatal Pediatrics was established in parallel with CAN. The linkages created at that point in time have lasted to this day and ensure good communication between the neonatologists in California and the Executive Committee of the Section on Perinatal Pediatrics, as well as continued education of his California and national colleagues about various professional matters, affecting practice and academics.

Even with respect to research, Ron has worked to ensure that processes exist to educate the next generation of researchers and to recognize others for their contributions in this regard. For example, Ron has served as Chair of the Committee for Research of the Section on Perinatal Pediatrics, having been appointed by Ann Stark in 1997 in response to the NICHD request of the Section on Perinatal Pediatrics to define the research agenda for neonatology. This committee developed a survey to assess training programs in neonatology with respect to their research emphases and capacities in research training. A summary of the findings was reported in the *Journal of Perinatology* supplement [*J Perinatol* 26:S38-45, 2006]. The Section then partnered with the NICHD on a workshop to address research in neonatology for the 21<sup>st</sup> century. The findings of this workshop were published in back-to-back articles in *Pediatrics* [*Pediatrics* 115:468-74, 2005; *Pediatrics* 114:475-9, 2005]. In 2002, the Klaus Award Program was inaugurated by Ron's committee, having established a process for reviewing neonatology fellows for research awards, with the first awards being granted in 2003. Currently, the Committee on Research is working with the International Committee to develop an International Research Mentorship Award for junior faculty in developing countries.

From his research on biological rhythms to his studies of breathing and sleep state, Ron's work serves as a foundation for much of the changes that have occurred in our nursery environments and the monitoring of premature and sick infants which we now all take for granted. In summary, Ron has been a leader nationally and internationally in the field of neonatology, especially in circadian and thermoregulatory development, infant lung function, sleep, as well as SIDS. His work has advanced neonatology in each of these areas.

Ron has made substantive contributions to our field and has always followed through by educating us in a way that has allowed us to change the way that we think about ourselves and, most importantly, how we practice. He is most well known for these efforts as he translates his research into practical solutions affecting the infants to whom he has committed his career. He has done this work graciously and without much fanfare. It is fitting that he is now recognized for these achievements by being bestowed the National Neonatal Education Award for outstanding contributions in Neonatal-Perinatal Medicine for health care students, professionals, and the lay public.

*David Stevenson, MD*

## Membership Report

The Perinatal Section remains focused on recruiting and retaining new members via several different pathways. The future leaders of our specialty are our fellows and the section is actively working to engage them in section activities. The section offers free membership to senior fellows and wants to expand the offer to the other fellowship years as well. The section also continues to reach out to former section members, neonatologists who are AAP members but not section members, and unaffiliated neonatologists. We rely on each of our section members to involve their colleagues and encourage membership in our section. As of March 2009, our section had 3293 members- the largest within the AAP. This number has remained fairly stable within the past few years.

Affiliate membership is another area with tremendous opportunity for growth. Currently there are 265 affiliate members of the section, represented in large part by neonatal nursing. The affiliate membership is the most rapidly growing subgroup of members within our section.

The section has successfully lobbied for special section rates for the NCE meeting as well as other CME courses including NeoPrep. These benefits are in addition to all the activities and benefits membership dues support. The section activities include member education, policy development, public education, and advocacy. Additional benefits include access to the *Directory of Perinatologists and Neonatologists* and a free subscription to the *Journal of Perinatology*.

Thank you for your support in our endeavors and for your help in making the section as strong as possible.

*Ivan Hand, MD, FAAP*  
*Membership Chair*

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#### **16<sup>th</sup> Annual Conference**

**Current Topics and Controversies  
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**March 5-7, 2010**

**Coronado Island Marriott Resort  
San Diego, CA**

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