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NEONATOLOGY TODAY
9008 Copenhaver Drive, Ste. M
Potomac, MD 20854 USA
tel:+1.301.279.2005
fax: +1.240.465.0692
www.NeonatologyToday.net

Editorial and Subscription Offices:
16 Cove Rd, Ste. 200
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BUILDING RELATIONSHIPS: THE HEART OF RECRUITING

By Kathleen O'Sullivan, MSN, MBA, RN and W. Richard McNally, PhD

The recruitment of physicians is a multi-faceted effort, and building relationships is at the heart of the job. Communication is an essential ingredient of the recruiter's job description. It is critical to be informed about, and sensitive to what physicians desire in their career, next role or moonlighting opportunity. The recruiter must also be in constant communication with the responsible Human Resources person(s) controlling the position, to be certain of the organization's true needs and desires. The desires and needs of the physicians must then be matched as closely as possible with what is available and feasible in the organization. At the core of this task is dialogue, complemented by other forms of interaction.

Open, clear, and honest dialogue helps the recruiter understand physicians' needs and desires, and helps communicate to the doctors how there might be a fit. Evaluation of fit is a two-sided affair, and there are numerous issues to take into account. When looking at new opportunities, most people fixate on the immediacy of a need, and attempt to fill it with whatever is available. This approach is analogous to needing precious metals, and running around on the surface seeking them. More productive in the long term is examining the geology, digging through the overburden, and finding the main vein of the metal desired. The latter is much more work, but also much more rewarding. In order to dig the shaft properly, however, one must first know the geology, the lay of the land. To do that, one must ask the proper questions.

Why would someone start looking to change jobs in the first place? This is a key question to answer in determining candidates' desires. Many different considerations go into looking at career opportunities. It is not something entered into lightly. Career advancement, life circumstances, finances, and child care issues, among others, may be included in these deliberations. Sometimes, dissatisfaction in the current workplace drives the desire to change jobs. Or perhaps it is time to cut back, but still remain active. Maybe location is an issue, and family members want to return to their roots. Often, it is a combination of factors, and any reason is valid. Sometimes the reasons for change are not so clear-cut.

A good recruiter recognizes and respects the fact that these types of decisions are hard to make. Interactions, even friendship, with a good recruiter can help job seekers identify the

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issues at hand, and take a broader view of different issues for themselves. Thus, the recruiter becomes a confidant and career counselor. A thorough screening conversation can bring to light the various factors influencing the process of making a career transition. Oftentimes, people are just too busy to go through this process, or to do anything about making a change. Individuals won't even look into anything new on their own because they are so busy or not dissatisfied enough. They will not think about it until someone comes to them. Then it becomes the recruiter's job to take the burden from the busy professionals and accomplish that which the physicians cannot or will not do for themselves.

It is in these intense dialogues that a seasoned recruiter can not only fill a 'job order,' but help physicians in a coaching capacity. For good recruiters, the job is not only about filling a position; it is, again, about building relationships. Recruiters know that their interaction with potential candidates is a reflection of the organization they represent. If physicians have a good experience with the recruiter, chances are they will consider the employer in a positive light.

Because of this interaction, physicians recognize that the recruiter isn't there just to procure a warm body. Physicians understand that the recruiter is not just looking out for his or her own needs, but, in a broader context, the recruiter is looking out for the good of the organization, and essentially for the good of the physicians as well. The recruiter wants people who are a fit for the organization, and for whom the organization fits. In this way both the organization and the physicians are satisfied.

Of course, since there is not a fit every time, every conversation does not end in a hire. However, every conversation should end in a manner that encourages the physicians to consider the recruiter as a friend and confidant. When the conversation ends on that note, physicians and their colleagues are encouraged about the recruiter's value and will likely, in the future, be in touch with the recruiter for themselves and others. This is the essence of relationship recruiting. Career change and employer change are not actions to be taken lightly, nor will they be. The timing, the opportunity, the location, the hospital, among other factors - all have to line up to make it a fit for candidates. Sometimes, if candidates are willing, there can be flexibility in one area or another, especially if they are motivated to make a change because of dissatisfaction, or a strong push from family to make a change. But sometimes, it just doesn't work out at that time.

This is where relationship building kicks into high gear. Really understanding what future candidates need and how they are not getting that in the current scenario allows the recruiter to lend meaning to future dialogues. Staying in contact with future candidates and maintaining a level of dialogue is essential. It is good to stay in touch about what is going on in the organization as the organization develops new clients and expands in different ways. This way, when the right opportunity comes along, candidates can be placed quickly.

The key to this process is to keep customer satisfaction high, and a good organization works hard to do that. One way this is done is by making certain the recruitment practice has a high level of integrity. The integrity of the process must be assured by the recruiter in that all information concerning prospective candidates must be shared with potential placements. All information about placements must be shared with candidates. All information about both candidates and placements must be closely held between the three – candidates, placements and recruiter – until a final decision is reached by the candidates. To break faith with either placements or candidates is to compromise the relationships.

Consistency also influences the process. Most organizations use electronic databases to keep track of their candidates and efforts to recruit them. There are many different types of systems that all do basically the same thing. However, consistency and integrity of the data are critical. Many organizations have internal processes designed to complement the database. Almost like a critical pathway, these internal processes identify a flow of activity in the system to move candidates through the key stages of the recruitment and hiring process.

These mechanisms should also be monitored using quality improvement methodology to ensure consistency and identify reasons for outliers. Database errors are no excuse for breaking a relationship. The recruiter must take responsibility for ascertaining potential systemic breaks in the relationship, and encourage their organization to implement system fixes. Meanwhile, the recruiter must take upon themselves the responsibility to maintain manual records to cover the gaps and ensure the quality until the systems catch up with the needs.

There are also many means by which new opportunities are sought. Traditionally, print ads, recruiting events and newsletters have been the way physicians have inquired about jobs. These have given way to the electronic job board and specialty sites, which all target the active job seeker. These methods must be carefully tracked by the recruiter and/or the recruiting manager to assure the best return on time and investment. For some specialties and certain professions, one method proves to be more successful than another. But for a different profession or the same profession at a different time, the opposite may be true. Thus, the recruiter must maximize the use of their resources by ascertaining which for this position is the best current method of generating interest and relationships.

Many recruiters, however, also try to attract the passive candidates--those not really interested in making any changes. This is done through direct mail campaigns, emails and calling. The 'cold call' is often viewed in a negative light harking back to the stereotypical cut-throat headhunter out only to line his pockets with the commission. However, cold calling opens up an opportunity for a recruiter and physicians to begin dialogues and introduce the organization, and/or provide additional information about the organization and its opportunities. In the light of relationship recruiting, these calls must be viewed as "information gathering" and "friend seeking" and not as sales calls.

This takes us back to the relationship issue. As everyone involved in our business knows, physicians are only going to make changes when they are good and ready. It is an internally motivated process. There is no advantage to 'hard-sell' here. It is, in fact, an extreme disadvantage. The 'hard sell' will only leave a bad taste in someone's mouth. And, since it is a small community, word spreads quickly! We also all know that the negative word is the first and the quickest one to spread. Therefore, one must avoid the hard sell at all costs.

Conversations are not entered into lightly. Most people have no interest in speaking with an unknown person. The frequent experience of the sales call at dinnertime has conditioned our responses. Many professionals will not welcome the call. The information they may gain may well not be considered by them to be worth the time they must expend to gain it. Others like to see what is out there, and how it compares to their current position. Any recruiter understands this, and is flexible and respectful in their approach.

Another popular avenue to recruit physicians is at a conference. Many continuing education events have an exhibit component in which vendors have an opportunity to interact with attendees and promote their products, job opportunities, medical equipment or medications. These events are useful in providing face-to-face contacts between the physician and the recruiter. Conferences also offer recruiters the opportunity to see other recruiter's approaches and methods which may be positive (or negative) models for the recruiter. These are opportunities to gather other kinds of information about offers and placements as well as potential clients for an outsource recruiter.

Recruitment must work as a team approach for it to work well. Physicians can have great interactions with a recruiter, but if a competent team is not behind the effort, it will not work effectively. The administrative team that drives the process with the support of the infrastructure is what makes the physicians' experiences ideally feel "seamless and flawless." The most critical parts of that process are the hand-off from the recruiter to the administrator, who is next in line, and then to each subsequent hand-off. Since the recruiter's reputation is on the line, it is critical for the recruiter's career, that they track the process at each step to make certain that the physicians have good experiences in the transitions. This can be done both through the tracking available through electronic databases, through manual systems and hire flow charts, or simply through the maintenance of relationships within the hiring administration/human resources departments. The process obviously does not stop at the first phone call. The recruitment process typically involves additional phone conversations with the recruiter and directors, site visits (with or without family), real estate visits, paperwork, and so on. The final step is orientation. From orientation to the practice, to orientation to the organization, it takes a lot of energy and effort to make a career transition. There are numerous individuals and departments that are involved at all stages of this process of finding, hiring and orienting new physicians into the organization, so the process needs to be done right.

What happens when a physician is hired….retention begins…, but that is a topic for our next article.

Corresponding Author:

Kathleen O'Sullivan, MSN, MBA, RN
Director of Physician Recruiting
Onsite Neonatal Partners
1000 Haddonfield-Berlin Rd., Ste 210
Voorhees, New Jersey 08043
T: 866-535-8647x109
C: 856-313-4490
F: 856-782-2213

kosullivan@onsiteneonatal.com

W. Richard McNally, PhD
Onsite Neonatal Partners

What's in a Name? The ABCs of Medical Credentials and Degrees

By Linda J. Juretschke, PhD, RNC, APN/NNP, CCNS

Health care professionals use a variety of initials to designate their educational backgrounds and professional accomplishments, but variations across disciplines can leave others confused about what these initials actually stand for. In addition, the way in which professionals list their credentials is inconsistent, leading to more confusion about what all the letters behind the names mean. While pride in one's achievements is certainly warranted, there is a proper way to list credentials, starting with one basic rule: less is more. Many professionals list all of their academic degrees, which may be redundant and unnecessary. For example, a person with both a Bachelor of Science and a Master of Science Degree does not need to list both, as the MS implies that a BS previously was earned. There also is a proper way to list one's credentials, following these basic steps:

1. List the highest degree in the practice profession first. So, for the registered nurse with both an MSN and a BSN, only the MSN is listed; the BSN is understood. For the practicing RN with a BSN as the highest nursing degree awarded, that previously-earned Master of Fine Arts, while something to be proud of, is no longer listed, as it does not qualify the individual to practice nursing.
2. List the highest degree in another profession next, if pertinent. For example, someone with a medical degree may list an MBA as pertinent to his or her practice, if that is the case. The listing would then be MD, MBA.
3. List any state licenses or designations next. These would include LPN, RN, APN, etc. More than one state license may be held by an individual. In that case, the basic practice license is listed first, fol-

"Given the many acronyms in health care today, it's no wonder that confusion exists…"

Academic Degrees—Medicine

MD – Medical Doctor
DO – Doctor of Osteopathic Medicine

Academic Degrees—General

AAS – Associate in Applied Sciences
BA – Bachelor of Arts
MA – Master of Arts
BS – Bachelor of Science
MS – Master of Science
BHA or **BHSA** – Bachelor of Health (Services) Administration
MHA or **MHSA** – Master of Health (Services) Administration
BBA – Bachelor of Business Administration
MBA – Master of Business Administration
MPH – Master of Public Health
MSPH – Master of Science in Public Health
JD – Juris Doctor
DrPH – Doctor of Public Health
EdD – Doctor of Education
PhD – Doctor of Philosophy

Academic Degrees—Nursing

ADN – Associate Degree in Nursing
ASN – Associate of Science in Nursing
BSN or **BScN** – Bachelor of Science in Nursing
DNS or **DNSc** – Doctor of Nursing Science
ND – Nursing Doctorate

Nursing Designations and Certifications

RNC or **RN, C** – Registered Nurse, Certified
CCRN – Critical Care Registered Nurse
NNP – Neonatal Nurse Practitioner
CCNS – Certified Clinical Nurse Specialist
CPN – Certified Pediatric Nurse
CPNP – Certified Pediatric Nurse Practitioner
CPON – Certified Pediatric Oncology Nurse
PNP – Pediatric Nurse Practitioner
CNM – Certified Nurse Midwife
WHNP – Women's Health Nurse Practitioner
CRNA – Certified Registered Nurse Anesthetist
LNC – Legal Nurse Consultant
LNCC –Legal Nurse Consultant, Certified
PCE – Prepared Childbirth Educator
LC – Lactation Consultant
IBCLC – International Board Certified Lactation Consultant

Nursing Licenses

CNA – Certified Nursing Assistant
LPN – Licensed Practical Nurse
RN – Registered Nurse
APN – Advanced Practice Nurse
APRN – Advanced Practice Registered Nurse
ARNP – Advanced Registered Nurse Practitioner
CRNP – Certified Registered Nurse Practitioner
NP – Nurse Practitioner
NS – Clinical Nurse Specialist

lowed by advanced practice licenses, as in RN, APN.

4. National certifications: these are designations by independent certifying bodies indicating that the person is recognized through successful completion of a national certification exam. As long as the person is actively practicing with those certifications, more than one may be listed. These may be listed either in order of the most pertinent to the practice, or in the order in which they were earned.

5. Last, any special honors or recognitions are listed. For the perinatal health care professional, these would most commonly include FAAN, FAAP or FACOG.

The Tables in this article, though not exhaustive, will help clarify some of the most commonly used acronyms in the perinatal health care setting:

Given the many acronyms in health care today, it's no wonder that confusion exists—not only for consumers of health care, but for health care providers themselves. A basic understanding of the unique language of medicine according to specialty practice will help clarify who is who within the health care community.

NT

Respiratory Care Providers

CRT – Certified Respiratory Therapist
CRTT – Certified Respiratory Therapy Technician
RCP – Respiratory Care Practitioner
RT – Respiratory Therapist
RRT – Registered Respiratory Therapist
NPS – Neonatal-Pediatric Specialist
CPFT – Certified Pulmonary Function Technologist
RPFT – Advanced Pulmonary Function Technologist

Other Health Care Professionals

PA – Physician Assistant
NPP – Non-physician Provider
PharmD – Doctor of Pharmacy
RD – Registered Dietician
LCSW – Licensed Clinical Social Worker
MSW – Medical Social Worker
OT – Occupational Therapist
OTR – Occupational Therapist, Registered
OTR/L – Occupational Therapist, Registered/Licensed
PT – Physical Therapist
SLP – Speech Language Pathologist
CCC – Certificate of Clinical Competence (from the American Speech Language-Hearing Association)
FAAN – Fellow in the American Academy of Nursing
FAAP – Fellow in the American Academy of Pediatrics
FACOG – Fellow in the American College of Obstetricians and Gynecologists
BLS – Basic Life Support
CPR – Cardiopulmonary Resuscitation
ACLS – Advanced Cardiac Life Support
PALS – Pediatric Advanced Life Support
NRP – Neonatal Resuscitation Program

Linda J. Juretschke, PhD, RNC, APN/NNP, CCNS
Neonatal Nurse Practitioner,
Loyola University Medical Center
Maywood, IL USA

Founder/President,
NICU Solutions, Inc.
www.nicusolutions.com

info@nicusolutions.com

First Annual Meeting of NEO-The Conference for Neonatology - Held at Walt Disney World, Orlando, Florida - February 7-10, 2007

By Alan R. Spitzer, MD

The first annual NEO Conference was held in Orlando, Florida, at the Yacht and Beach Resort and Convention Center at Walt Disney World, February 7-10, 2007. This meeting actually represented the 29th gathering of the former Management of the Tiny Baby Conference, started in 1979 by Dr. Willa Drummond of the University of Florida, and Dr. Gregor Alexander, of Winnie Palmer Hospital for Women and Babies. That conference was one of the longest running in Neonatology, but after careful consideration, it was decided to revise the program, change the name, and have Pediatrix Medical Group join as a primary partner for the meeting. Additional support was generously provided by Ross Products Division of Abbott Laboratories. The meeting was then retitled NEO-the Conference for Neonatology and expanded to four days from the original three. This year's event was an outstanding success, with more than 900 registered attendees and 55 exhibitors. A special tent was erected outside the Yacht and Beach Club to both house the exhibitors and to serve as the area for food breaks and meals during the meeting.

Highlighting the program was a group of outstanding presenters, selected for their expertise and their ability to communicate the latest information in a series of controversial and problem areas dealing with the management of the neonate. The meeting opened on Wednesday afternoon, with a unique presentation by Neil Finer, MD, Professor of Pediatrics and Director of Neonatology at the University of California at San Diego, entitled "Resuscitation of the neonate-incorporating the new AAP guidelines." Unable to travel for personal reasons, Neil gave an electric presentation by two-way teleconference, and then followed this session with a question and answer period that made it feel as if he were present in the room. Neil covered virtually all of the key issues that plague the neonatologist in the delivery room, ultimately providing superb suggestions for achieving optimal outcomes during resuscitation.

Joseph Neu discusses myths, dogmas, and other misconceptions in neonatal nutrition at NEO-The Conference for Neonatology.

Following Neil's talk, three of the country's leading experts in neonatal nutrition, Joseph Neu, MD, Professor of Pediatrics at the University of Florida, William Hay, MD, Professor of Pediatrics at the University of Colorado, and Ed Bell, MD, Professor of Pediatrics at the University of Iowa, updated the audience on some of the primary management issues in neonatal nutrition. Dr. Neu

William Hay describes the latest information on neonatal protein nutrition at NEO-the Conference for Neonatology.

addressed a series of myths, dogmas, and controversies in neonatal nutrition, while Dr. Bell focused on the neonate who is failing to thrive in the NICU. This issue was expanded further by Dr. Hay who spoke on the topic of neonatal protein administration and the various considerations that the practicing clinician encounters in this regard. This series of talks provided a superlative summation of current knowledge related to both intravenous and enteral feeding of the critically ill neonate, and was extremely well received. Dr. Richard Schanler was also supposed to join this group;, unfortunately, he was taken ill and could not be present. His spot in the program was admirably filled by Dr. Reese Clark, Director of Neonatal Research for Pediatrix Medical Group, who focused on the theme of the use of breast milk in the high-risk infant. Dr. Clark was outstanding as a last minute replacement,

and we hope that Dr. Schanler is now well on the way to recovery from his sudden illness. Following the day's events, a reception was held for conference attendees.

On Thursday, the program continued in high gear with a series of talks dealing with the topic of "Fetal Origins of Neonatal Disease-New Thoughts About Improving Outcomes." Scott Adzick, MD, Chief of Surgery and Professor of Pediatrics and Surgery at the University of Pennsylvania School of Medicine started the day with an illuminating talk on the capabilities that now exist for fetal intervention, both medical and surgical. Dr. Adzick's unique and extraordinary experience in this area was one of the meeting highlights. Dr. Alan Spitzer, Director of the Center for Research and Education of Pediatrix Medical Group, then spoke on the rapidly emerging field of fetal and neonatal proteomics and metabolomics, offering new data from current research at Pediatrix that is examining a variety of disease biomarkers in neonatal pathophysiology and neonatal nutrition. It is anticipated that this work will become a major part of neonatal evaluation in the very near future.

Alan Jobe presents the latest information on neonatal lung injury at NEO-The Conference for Neonatology.

Following this talk, Alan Jobe, MD, PhD, Professor of Pediatrics at the University of Cincinnati

one of the world's foremost experts on the neonatal lung, addressed the topic of fetal origins of neonatal lung disease, brilliantly outlining how lung disease actually starts before birth in many cases, and how lung disease might be ameliorated with better understanding of fetal lung development. As is often the case, Dr. Jobe's own remarkable research provided an important foundation for his talk. Dr. Jeffrey Perlman, MD, Professor of Pediatrics and Chief of Neonatology at Weil-Cornell Medical College, outlined his thoughts and his ongoing work on brain injury in the neonate and the

Lucky Jain outlines the increasing concerns about the near term neonate at NEO-The Conference for Neonatology.

fetal factors that contribute to a variety of newborn brain injuries. The day's plenary session was closed by Lucky Jain, MD, Professor of Pediatrics at Emory University, who brilliantly addressed the increasing concerns related to the late near-term infant, including both the reasons for the increased numbers of births as well as methods for reduction in numbers of these infants and improving the outcome of their care.

Afternoon sessions on this day consisted of a series of seminars in Neonatology and Neonatal-Perinatal Nursing that were both well attended and well received by participants. Topics included continuous quality improvement in the NICU, pay for performance in neonatology, secondary surfactant deficiency, and pain management in the neonate.

Friday, February 9th, focused on the stressed neonate, the management of these patients and how to improve their overall care. Thomas Foley, MD, Emeritus Professor of Pediatrics at the University of Pittsburgh, spoke twice during this session, one talk focusing on the treatment of neonatal thyroid problems, especially in the very low birth weight infant, while his other lecture outlined current thinking on the hypoglycemic neonate and optimal treatment. Both discussions served as superb reviews of difficult areas for every neonatologist. Dr. Foley was followed by Dr. Peter Lee, Professor of Pediatrics at Penn State University, who addressed the issue of the neonatal adrenal gland and steroid treatment, ongoing problem areas in management of the neonate.

Istvan Seri, MD, PhD, Professor of Pediatrics at the University of Southern California and Chief of Neonatology at LA Children's Hospital, presented a thoughtful, highly engaging, and often humorous talk on blood pressure management in the critically ill neonate. Dr. Seri is often acknowledged as the leading expert in this difficult area, and successfully conveyed a great deal of the work, much of it his own, that has helped us better understand neonatal hyper- and hypotension therapy. The morning was capped by a superlative discussion by Dr. Isaac Blickstein, Professor of Obstetrics and Gynecology at Kaplan Medical Center, Rehovet, Israel, that embraced the topic of the multiple gestation pregnancy and its complications for the neonatologist. Afternoon breakouts this day dealt with issues such as neonatal birth injuries and the legal implications, the role of the NNP,

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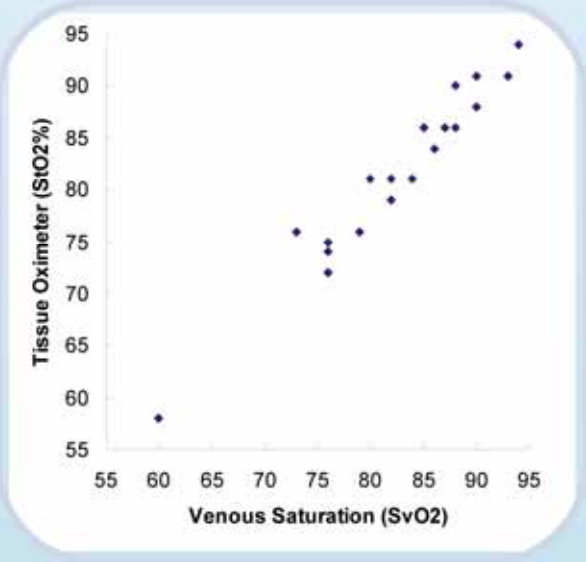

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and two unique series of talks, one by William Meadow, MD, Professor of Pediatrics at the University of Chicago on neonatal ethics and ethics case presentations, and a group of case presentations by Dr. Seri on the treatment of neonatal shock. The entire day's events were highly successful and very well reviewed by the participants.

Legends of Neonatology Award Honorees (Left to Right): Mildred T. Stahlman, MD; Maria Delivoria-Papadopoulos, MD; Mary Ellen Avery, MD; Lucille Ann Papile, MD.

Perhaps the most special event of the meeting, however, was the Legends of Neonatology Ceremony on Friday Evening. Mary Ellen Avery, Mildred T. Stahlman, Maria Delivoria-Papadopoulos, and Lucille Ann Papile were selected as the first recipients of the Legends Award, and all were present to receive this honor.

Legends Award Honorees with NEO Conference Planning Committee. Left to right: Lucille Ann Papile, David Burchfield, Mildred Stahlman, Alan Spitzer, Maria Delivoria-Papadopoulos, David Auerbach, Willa Drummond, Mary Ellen Avery and Gregor Alexander.

The award recipients were cited for their pioneering and lifelong contributions to the field of newborn medicine. Dr. Avery was cited for her discovery of the relationship between neonatal respiratory distress syndrome and surfactant deficiency in the lung, as well as her contributions to the fields of newborn lung physiology and pediatric education. Dr. Stahlman was credited with establishing the first NICU in the United States at Vanderbilt University Medical Center, as well as her notable research into neonatal lung diseases. For being the first individual in North America to use positive pressure ventilation to save the life of a neonate with RDS (Dr. Stahlman was the first to use negative pressure ventilation to treat an RDS patient), Dr. Maria Delivoria-Papadopoulos received one of the Legends Awards, and she was praised for her ongoing research in oxygen transport and mechanisms of brain injury in the neonatal period. LuAnn Papile received one of the Legends Awards for her ground-breaking research in the classification of intraventricular hemorrhage in the neonate and her career efforts in understanding and reducing neonatal brain injury.

All four women were in attendance at this historic meeting to receive their awards from the NEO Conference Director, Alan Spitzer, and each received enthusiastic and prolonged applause from the 500 attendees at the dinner held in their honor. When asked to say a few words about the secret of her career-long success to the audience, Dr. Stahlman remarked in her unique style, "Work until you drop!"

It was a wonderful evening that highlighted the extraordinary accomplishments of women in neonatal medicine. Dr. Virginia Apgar's efforts in improving the health care of the newborn infant were also noted by Dr. Spitzer, as well as her struggle to be accepted as a woman in medicine. It is hoped that the Legends Award will begin the establishment of a Neonatology Hall of Fame, intended to honor the great contributors to the field, both men and women. Each year a group of individuals will be selected for this award by the NEO Conference Planning Committee.

"Next year's NEO and Legends Award Ceremony will be held from Feb. 6-9th, 2008, at the Walt Disney World Yacht and Beach Club Convention Center in Orlando."

The last day of the meeting covered a series of controversial areas in neonatology. Laurence McCullough, PhD, Professor at the Center for Ethics and Health Policy at Baylor University, addressed the complexities of the Born Alive Infant Protection Act (BAIPA) and the implications for neonatal care. In his comprehensive talk, Dr. McCullough also clarified his thoughts on a number of ethical concerns that all neonatologists share. It served as a most stimulating discussion. After this talk, Philip Gordon, MD, PhD, Associate Professor at the University of Virginia, brilliantly reviewed his own research work into spontaneous intestinal perforation, especially elaborating the roles of steroids and indomethacin in this process. Dr. Gordon's presentation provided an outstanding example of how translational research can move from the basic science lab to the bedside. Following this talk, Dr. LuAnn Papile, one of the honored Legends, discussed the current controversies in brain and body cooling, offering a great, objective review of the current research in this area, as well as the potential risks and benefits of these relatively new therapies.

The morning was completed by two world-class talks, one by Jon Watchko, MD, Professor of Pediatrics at Pittsburgh Children's Hospital and Director of the Division of Neonatology, which detailed our current understanding of the infant with severe hyperbilirubinemia and its management. The final speaker, Dr. Donald Chace, PhD, Director of Pediatrix Analytical Laboratories, examined the current areas of controversy in neonatal screening, detailing the success of these programs during the past several decades with some recommendations for the future. It was a great conclusion to this new annual meeting.

Next year's NEO and Legends Award Ceremony will be held from Feb. 6-9th, 2008, at the Walt Disney World Yacht and Beach Club Convention Center in Orlando. Because space is limited, reservations should be made early for next year's meeting. Mailings will be sent out in the Spring of 2007, and more information will be forthcoming during the months ahead. We hope that you will be able to join us for what promises to be one for the major annual meetings in neonatal medicine.

NT

Alan R. Spitzer, MD
Senior Vice President and
Director, Center for Research and Education
Pediatrix Medical Group
1301 Concord Terrace
Sunrise, FL 33323 USA
Phone: 954-384-0175, Ext. 5660
Fax: 954-851-1957

Alan_Spitzer@pediatrix.com

Medical News, Products and Information

Sox17 Required for Steps from Embryonic to Heart Muscle Cell

An important choreographer of the complicated dance of signals, enzymes and proteins that takes embryonic stem cells through the steps to becoming a beating heart muscle cell is the gene Sox17, said researchers from Baylor College of Medicine in a report in a recent issue of the *Proceedings of the National Academy of Sciences*.

To be precise, Sox17 is critical in transforming primitive mesoderm (an early layer of tissue in the embryo) into the more specialized cardiac mesoderm from which heart muscle develops, said Dr. Michael Schneider, senior researcher of the report.

"Heart muscle formation by embryonic stem cells is a complex, multi-step process," said Schneider, Professor of Medicine, Molecular and Cellular Biology, and Molecular Physiology and Biophysics at Baylor College of Medicine. "We have succeeded in uncoupling the formation of cardiac mesoderm from its antecedent steps. That discovery provides immediate insight into how one might seek to generate cardiac muscle more effectively from embryonic stem cells."

"One of the major challenges is the very meager ability of the heart muscle to restore itself after cell death," said Schneider. Heart muscle cells die acutely during heart attacks and sporadically in chronic heart failure.

"Identifying stem cells that can be encouraged along the path to becoming heart muscle is a paramount scientific goal," he said.

Embryonic stem cells are a potential source because they have the potential of becoming every type of cell in the body. However, much research remains before scientists can outline a blueprint for how these totally undifferentiated cells can be guided to the "fate" of becoming heart muscle selectively.

Schneider and his colleagues used proteins that block certain signals for cell specialization at the surface of mouse embryonic stem cells to pinpoint early steps that lead to the development of heart muscle. Then, using "gene chip" technology to measure the expression of 40,000 mouse genes simultaneously, Schneider and his colleagues identified the sudden expression of Sox17 as a potentially important step for the signals that lead to heart formation.

Using a technique called RNA interference, they then blocked the action of Sox17 in the embryonic stem cells. By doing so, they prevented the embryonic cells from becoming cardiac muscle, almost completely.

"Knocking down Sox17 (reducing expression of the gene) had a dramatic effect, both on genes for structural components of the heart and also genes for transcription factors that turn on the cardiac fate," said Schneider.

Others who took part in the research include: Drs. Yu Liu, Masanori Asakura, Hironori Inoue, Teruya Nakamura, Motoaki Sano and Zhiyv Niu of BCM, Michelle Chen of Agilent Technologies in Santa Clara, California; and Robert J. Schwartz of the Institute of Biosciences and Technology at Texas A&M University Health Science Center in Houston.

Funding for this work came from the National Institutes of Health, the M. D. Anderson Foundation Chair, and the Fondation Leducq Transatlantic Network of Excellence for Cardiovascular Research.

Newborns with Respiratory Distress Potentially Have Rare Genetic Disease

Newborns with respiratory distress should be evaluated for primary ciliary dyskinesia, a rare genetic disease that has features similar to cystic fibrosis, says Thomas Ferkol, M.D., from Washington University School of Medicine in St. Louis. He reports finding that about 80% of patients with primary ciliary dyskinesia (PCD) have a history of newborn respiratory distress.

"The diagnosis of PCD requires a high index of suspicion, but PCD must be considered in any term newborn who develops respiratory distress or persistent hypoxemia (low oxygen in the blood), especially those who have reversed internal organs or an affected sibling," says Ferkol, Director of the Division of Pediatric Allergy and Pulmonary Medicine at Washington University School of Medicine and St. Louis Children's Hospital.

Reviewing published reports, Ferkol and Margaret Leigh, M.D., Professor of Pediatrics at the University of North Carolina at Chapel Hill (UNC), found that neonatal respiratory distress was a common clinical symptom of PCD, a chronic airway disease that affects about 1 in 15,000 children. Their findings appeared in the December issue of *Seminars in Perinatology*.

Also known as immotile cilia syndrome, ciliary aplasia or Kartagener Syndrome, PCD causes persistent wheezing and cough in children and is associated with recurrent or persistent sinus and ear infections. Half of patients with PCD have reversed internal organs, called situs inversus, and males are usually infertile.

In PCD patients, the cilia, tiny hairs that move mucus, bacteria and particulates out

of the respiratory tract, including the lungs, middle ear and paranasal sinuses, have abnormal or no motion. As a result, the airways become obstructed and infected, which incites a destructive inflammatory process in those organs. Cilia are also present in the female reproductive system, central nervous system and gut.

"The tricky thing about this disease is that many of the clinical symptoms are very similar to other more common conditions, such as asthma, allergy or cystic fibrosis," Ferkol says. "Physicians often fail to consider PCD, in part because we don't have a great diagnostic test for the disease."

Ferkol indicates that several clinical features of PCD mirror those found in the more-common cystic fibrosis, including chronic sinus and lung disease as well as male infertility. However, chronic ear disease and neonatal respiratory distress are relatively uncommon in cystic fibrosis and should prompt the caregiver to consider PCD.

"Once children with PCD are past the newborn period, the signs and symptoms that typically bring them to medical attention are chronic ear disease, hearing loss and a runny nose that persists despite seasonal changes or the use of antibiotics and antihistamines," Ferkol says. "But as patients age, the lung manifestations become more evident. Also, infertility becomes a greater issue in adulthood."

Because definitive testing is not always readily available, patients with PCD are often diagnosed late. In addition, treatment of PCD in the community is highly variable, largely because the necessary clinical studies have not been performed.

Ferkol, also Associate Professor of Pediatrics and of Cell Biology and Physiology and Director of the Cystic Fibrosis Center at Washington University School of Medicine, is leading the Washington University research team that is part of a national consortium investigating the genetic causes of PCD. The Genetic Diseases of Mucociliary Clearance Consortium, based at UNC, is part of the National Institutes of Health Rare Diseases Clinical Research Network.

The consortium aims to improve diagnosis and treatment of PCD as well as to better define its origin and how it progresses.

"We want to identify as many PCD patients as we can to help us understand the genetics, pathophysiology and clinical spectrum of this disease so we can devise better, more effective treatment strategies," Ferkol says.

Ultimately, members of the consortium will invite patients with PCD to enroll in a long-term study where they will be monitored and be eligible to participate in clinical trials of potential treatments, Ferkol says.

The consortium includes six sites: Washington University in St. Louis, UNC, University of Washington in Seattle, University of Colorado in Denver, University of Toronto, and the National Institute of Allergy and Infectious Diseases of the National Institutes of Health.

Ferkol T, Leigh M. Primary ciliary dyskinesia and newborn respiratory distress. Seminars in Perinatology 2006 Dec;30 (6):335-40.

Funding from the National Institutes of Health supported this research.

Washington University School of Medicine's full-time and volunteer faculty physicians also are the medical staff of Barnes-Jewish and St. Louis Children's hospitals. The School of Medicine is one of the leading medical research, teaching and patient care institutions in the nation, currently ranked fourth in the nation by U.S. News & World Report. Through its affiliations with Barnes-Jewish and St. Louis Children's hospitals, the School of Medicine is linked to BJC HealthCare.

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NEONATOLOGY TODAY

Non-Invasive Monitoring for Neonatal Sepsis Goes National

Imagine being able to know ahead of time when a baby will get a serious infection and then being able to treat the infection before it can affect his or her tender life. More than a dream, researchers at the University of Virginia Health System have developed a way to monitor babies in neonatal intensive care units and predict sepsis before there is any indication of illness. Sepsis is a serious bloodstream infection that more than doubles the risk of dying for its smallest victims. Results of this research appeared in the February issue of the *Journal Pediatric Research*.

"One of the major concerns for the medical staff in the NICU is that infants can develop a life-threatening infection before there are any apparent signs of illness, said Dr. Pam Griffin, co-author and former UVa Health System neonatologist and now Senior Director of Clinical Development at MedImmune Corporation, "so continuous monitoring for infection is potentially a very useful addition to our management of these vulnerable patients."

Dr. Randall Moorman, study co-author and cardiologist at the UVa Health System, was instrumental in developing the novel bedside monitoring system to predict the likelihood that sepsis will occur in a baby in the next 24 hours. The new system analyzes heartbeat signals obtained from a standard bedside heart rate monitor and looks for patterns that give an early indication that the baby is getting sick. Characteristics such as decreased variability of the heart rate along with brief episodes of slowing of the heart rate indicate that the infant may be getting an infection. These characteristic patterns can serve as an early warning to the physicians and nurses caring for the infants.

"At UVa we found characteristic heart rate patterns in infants twelve or more hours before they were known to be infected, and we designed a computer program to detect these patterns," said Moorman. "We worked with colleagues at Wake Forest to be sure that these heart rate characteristics typical of illness happened in sick infants elsewhere."

Now after years of testing and clearance from the Food and Drug Administration, academic research hospitals are participating in a multi-center National Institutes of Health-sponsored study to further test if heart rate characteristic monitoring improves outcomes for NICU babies.

"My expectation is that the continuous monitoring of heart rate characteristics will allow clinicians to identify and treat infected infants sooner, and that earlier initiation of treatment will decrease the severity of the illness and improve the infant's outcome," said Dr. Mike O'Shea, MD, MPH, Professor of Pediatrics at Wake Forest University Health Sciences Center.

The patented monitoring technology was developed by Griffin and Moorman at the University of Virginia Health System. The rights are licensed by the University of Virginia Health System Patent Foundation to Medical Predictive Sciences Corporation in Charlottesville, Virginia. Griffin and Moorman have an equity share. The multi-centered study is funded through a 5-year, $2.5 million NIH grant.

Neonatology Today would like to share your interesting stories or research in neonatology and perinatology.

Submit a brief summary of your proposed article to:

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NEONATOLOGY TODAY
9008 Copenhaver Drive, Ste. M
Potomac, MD 20854 USA
tel:+1.301.279.2005
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