

NEWS RELEASE

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL SCHOOL AT DALLAS



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DALLAS -- Research helping to explain the mysterious body process that enables a "blue baby" to survive despite a potentially fatal heart defect has won a national award for a new member of the faculty of The University of Texas (Southwestern) Medical School.

Dr. William W. Miller, who joined UTSMS in September as associate professor of pediatrics, received the Young Investigator's Award of the section on cardiology of the American Academy of Pediatrics. The annual award, including a \$500 cash prize, was presented recently at the 38th annual meeting of the academy in Chicago.

Dr. Miller won the recognition for studies of the body mechanism which controls release of oxygen from the blood. The research was conducted while Dr. Miller was associated with the Department of Pediatrics at the University of Pennsylvania.

With research associates at the Children's Hospital of Philadelphia, he conducted clinical studies of infants and children with congenital heart defects producing heart failure or hypoxemia--the deficiency of oxygen in the blood which is characteristic of "blue babies".

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The researchers established that in "blue babies" and others with heart failure an inherent mechanism in blood chemistry, acting to help the body adapt to the diseased state, triggers the release of significantly increased amounts of oxygen to body tissues.

This mechanism, Dr. Miller says, plays an important role in alleviating potentially fatal effects of these heart disorders.

Key ingredient in this release mechanism, Dr. Miller explained, is a substance in red blood cells known as 2,3-diphosphoglycerate (2,3-DPG). Although this substance was first discovered during the 1920s, its function remained a mystery until 1967, when the purpose of this oxygen-releasing factor was discovered by Drs. Reinhold and Ruch Benesch of Columbia University.

Dr. Miller's current research, being conducted at UTSMS, is directed toward finding a chemical agent that will amplify this natural response to provide patients with even greater amounts of oxygen at the tissue level.

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