

## **2008 Medical Student Summer research Award Application**

Faculty name: Joe J. Hoo, MD

Academic Rank: Professor

Department: Pediatrics

Telephone Number: 419 - 251 8083

Co-Investigators: Not applicable

Project Title: Synopsis of Diseases Included in the Newborn Screening of Ohio State

Brief Summary / Description of Project: The advance of methodology, i.e. the application of tandem mass spectrometry, has allowed an “explosion” of diseases to be included in the newborn screening. Up to about two or three years ago most of the states in the US screened only about five different diseases. The number of screened diseases is now in the thirty or forty. Ohio has thirty two diseases included in its newborn screening program. Some of the inborn error of metabolism pertaining to organic acids and fatty acids are extremely rare and information about them is not readily found in the common textbooks of pediatrics, obstetrics or medicine. We contemplate writing a synopsis of those 32 diseases in a most succinct manner for the primary physicians of Northwestern Region of Ohio, and perhaps also for the whole state of Ohio subsequently.

Describe Student’s Role and Responsibility:

- 1) The student would help in collecting the biochemical pathways, either from specialty textbooks or from the internet. Pictorial diagrams would enhance the readers’ comprehension.
- 2) The student would help in checking the most recent advances in the confirmatory diagnosis and treatment of the conditions.
- 3) The student would participate in writing succinct text designed for primary care physicians, who deal with pregnant women, infants and children, i.e. family physicians, obstetricians and pediatricians.

Special Qualification: Love of biochemistry and genetics. Joseph Sisk, the first year medical student, has professed his interest in participation in this project.

Funding: The Department of Pediatrics would contribute to the stipend.

Prior experience: I have had previous experience in mentoring students. Please see the next item.

List Presentations and/or Publications that included medical students over the past five years:

- Lloyd A.R., Ragosta K.G., Bryke C.R. and Hoo J.J. : "Desbuquois Syndrome in Three Sisters With Significantly Different Length of Survival". American Journal of Medical Genetics 140(A):1253-1255, 2006

- Davili,Z., Johar, S., Hughes, C., Kveselis, D., and Hoo, J. : "Succinate dehydrogenase deficiency associated with dilated cardiomyopathy and ventricular noncompaction" Eur J Pediatr. 166:867-870, 2007

Amanda Lloyd (a currently third year pediatric resident) and Zubar Davili (a currently second year orthopedic surgery resident) were third year medical students, when they got involved with the above projects. Colleen Hughes (a currently first year neonatology fellow) was finishing her first year medical school, when she got involved with the initial stage of the project. I recall that she went through the same summer work program.

IRB Approval #: Not applicable

IACUC Approval #: Not applicable

Biosafety Committee Approval #: Not applicable

Biosketch: Attached



Joe J. Hoo, MD  
Division of Genetics  
Department of Pediatrics

Feb. 19, 2008

Date



David Krol, MD  
Chairman  
Department of Pediatrics

2/19/08

Date

## Curriculum Vitae

**Name:** Joe J. Hoo, MD  
E-mail: joejhoo@yahoo.com

**Current Position:** Head, Division of Genetics, Department of Pediatrics  
Medical College, University of Toledo

### Education and Training:

#### Medical School:

Malang, Indonesia, interrupted due to political turmoil. 1963-65  
University of Marburg, Germany, Degree: M.D. (Dr. med.) 1967-72  
M.D. Thesis in Cytogenetics.

Internship: University Children's Hospital, Marburg and 1972-73  
Community Hospital, Melsungen, Germany.

#### "Wissenschaftlicher Assistent":

University Institute of Human Genetics, Marburg, Germany. 1973-74  
(Clinical Genetics and Cytogenetics)  
University Institute of Human Genetics, Hamburg, Germany. 1974-75  
(Biochemical Genetics and Pharmacogenetics)

#### Internship/Residency Training:

Mercy Hospital and Children Hospital, Buffalo, NY, USA 1975-78

Fellowship: Medical Research Council of New Zealand Fellowship Award 1978-79  
at Department of Community Health, University of  
Auckland (activity in Clinical Genetics and Cytogenetics)

### U.S. Certifications and Licenses:

Medical License of the State of Pennsylvania (inactive since 2001) 1977  
American Board of Pediatrics 1981  
American Board of Medical Genetics 1982  
(subspecialties: Clinical Genetics and Clinical Cytogenetics)  
Medical License of the State of Illinois (active) 1985  
Medical License of the State of New York (active) 1994  
Medical License of the State of Ohio (active) 2007

### Academic Appointments:

"Wissenschaftlicher Mitarbeiter" (research activity in pharmacogenetics), 1979-81  
University Institute of Human Genetics, Hamburg, Germany  
"Wissenschaftlicher Angestellter" (as a clinical geneticist), 1981-82  
University Institute of Human Genetics, Giessen, Germany  
Assistant Professor, Department of Pediatrics, University of Calgary, Canada 1982-84

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