Our Research Field: Detection, characterization and tracking of neurovascular diseases using MRI.

Our Goal: To build, maintain and datamine a database of SWI images on neurovascular diseases.

Our Value Proposition:
- Accelerate and enhance the understanding of neurovascular brain diseases
- Accelerate and enhance clinical trials
- Improve opportunities for grant funding with industry and government

Our Existing Database:
- User friendly SSH file transfer internationally
- Image processing software

Our Current Funding: $2 million grant (2006-2008)

Join Us: We are now forming the advisory committee to direct the next stages of our database design and development, and clinical collaborations.

Contacts:
- Jabril Bensedrine
  201-377-3127
  jbensedrine@elmresearch.com

- Dr. E. Mark Haacke
  313-758-0065
  nmrimaging@aol.com

- Rachel Martis-Laze
  313-758-0065
  rdmlaze@gmail.com

THE MRI Center of Excellence
We have created a center of excellence in neurovascular imaging. To date there are 5 major medical institutions participating in this center and partners in Michigan, California, New York, and Japan. A key goal is to improve detection and characterization of neurovascular diseases in the brain.

The SWI technology
We have developed a new type of contrast in MRI different from spin density, T1, or T2 imaging. This special data acquisition and image processing produces an enhanced contrast magnitude image which is exquisitely sensitive to venous blood, hemorrhage and iron storage. Also, we use SWI filtered phase images as a new source of information separately. This new method exploits the susceptibility differences between tissues and is referred to as Susceptibility Weighted Imaging.

Enhanced detection and characterization of neurovascular diseases using SWI
Enhanced sensitivity of SWI to venous blood, blood products and iron storage leads to better contrast in detecting neurovascular brain diseases: brain tumors, brain trauma, stroke, multiple sclerosis, occult venous disease and Alzheimer’s disease.

Our Project
We want to build, datamine and maintain the world’s largest database of SWI images and medical records on neurovascular brain diseases:
- Scientific, medical and pharmaceutical researchers can speed up the collection of statistically significant data on brain neurovascular diseases, and thus enhance their understanding of the progression and potentially etiology of the disease.
- Pharmaceutical and diagnostic companies will be able to identify easily a large pool of brain neurovascular disease patients through the database and to screen them based on key factors, which will accelerate clinical trials.

Benefits of Collaboration
- More potential for publishing your findings
- Better diagnoses of your patients’ condition
- Better opportunities to obtain grant funding

Program Director/Principal Investigator: E. Mark Haacke, PhD
- Winner of the 2004 Gold Medal of the International Society for Magnetic Resonance in Medicine;
- Inventor of SWI, MRA and several now-standard MRI technologies;
- Professor of Radiology, Physics, and Biomedical Engineering at Wayne State, Loma Linda, McMaster and Case Western Reserve Universities.

Join us: SWI Neurovascular Diseases Database Advisory Committee
We invite companies and organizations involved in neurovascular R&D to join the Advisory Committee for our SWI Neurovascular Brain Diseases Database, now for an opportunity to guide the design of our research protocol and make our database meet their specific R&D needs. We also invite healthcare providers to contribute their images to this HIPAA-compatible database.