

Conquer Chiari is very excited to announce that the **National Institutes of Health** (NIH) has awarded the Conquer Chiari Research Center (CCRC) a **\$468,000** grant for the project, "*Novel MR Image Processing as an Objective Diagnostic Test for Chiari Malformation*". Dr. Francis Loth, Executive Director of the CCRC, will lead a two year collaborative effort with Emory University exploring the utility of MR DENSE technology in assessing symptomatic Chiari.

With every heartbeat, blood is pushed into the brain which then expands by a small amount and drives cerebrospinal fluid into the spine. DENSE MRI is capable of quantifying the brain tissue motion that occurs due to the cardiac cycle with incredible precision. Preliminary results have found that Chiari patients tend to exhibit abnormal levels of motion of the cerebellum and brainstem compared to healthy controls, and that these motions are correlated with successful surgical outcomes.

This project will refine the MR DENSE technique and test its value on 50 or more Chiari patients. In addition, the DENSE measurements will enable the CCRC researchers to calculate the strain that is being placed on the brains of Chiari patients. Finally, Conquer Chiari will supplement the NIH grant with an additional \$50,000 so that more images can be acquired and processed.

This exciting work is only possible due to the incredible participation of the Chiari community over the years in supporting Conquer Chiari's fundraising and research efforts.