

July 21, 2020

MagLab Summer Exploration Series
Week 8 Links

The MagLab is a leader in biomedical research thanks to the magnets which allows us to do Nuclear Magnetic Resonance (NMR) and Magnetic Resonance Imaging (MRI). The MagLab has two of the world's best MRI machines. The elder of the two is the [900 Mhz magnet](#), which was a record breaker when it was first engaged in 2004. The other reached full strength in 2016; the [series connected hybrid](#) (SCH) magnet reached 36 tesla, which allows it to operate at 1.5 Ghz.

To get more acquainted with this biomedical technique, you need to understand that MRI works on the hydrogen atoms that are inside of all living things. [Find out what happens to these atoms inside an MRI](#). Then explore the machine itself to learn [how MRI machines work](#).

Both magnets are used for biological and chemical experiments, but only the 900 Mhz is able to do in vivo experiments. You read before about the [rodent probe](#), well the 900Mhz is the only magnet in the world that can do what it can do by scanning live animals in high field MRI. Here's the journal article about [In vivo MR Imaging at 21.1 T](#).

Over the past few years, MagLab biomedical engineer Sam Grant has studied how stem cell therapies can help the body recover from stroke and other health problems. But in April, he began aiming the technique at a new enemy: [stemming the spread of COVID-19](#).

Any questions? Email [Carlos R. Villa](#).