The College of Health & Human Sciences (HHS) has requested approval to purchase a state-of-the-art MRI scanner in support of the research currently being conducted in the College and elsewhere on campus. No equivalent suitable scanner exists on campus today and all existing requirements for this need are conducted off-campus at third-party installations.

The total cost of the MRI is $2,545,072, of which $2 million will be funded by a recently received grant from the National Institute of Health (NIH) and the remaining $545,072 will be funded by a variety of departments, including the Executive Vice President for Research and Partnerships, HHS, various other Colleges and the Purdue Center for Cancer Research.

Ulrike Dydak, a Professor in HHS and a 25% adjunct professor with the Indiana University School of Medicine (IUSM) Radiology, is the Principal Investigator (PI) associated with the primary clinical research project that will benefit from this purchase. However, the new MRI will also significantly advance life sciences clinical research of at least 20 other faculty members from the Colleges of HHS, Engineering, Science and Veterinary Medicine.

Prior to submission of the NIH application, the features, support and cost of machines from GE and Siemens were explored. Although the base costs of the instruments from the two companies were similar, originally a Siemens 3T MRI Skyra was selected because of the superior features and support available. Due to Professor Dydak’s position at IUSM, as well as Purdue’s close relationship to IUSM, an original quote of $2,545,072 by Siemens in 2013 for a 3T MRI Skyra (older model) was based upon the Siemens & Indiana University strategic partnership agreement and reflected a discount level of 35%. In December, 2014, the quote was updated to the newer MAGNETOM Prisma 3T MRI system with several additional features, yet remained at the original price to match the budget of the NIH grant, saving us an additional $180,096. The Siemens MAGNETOM Prisma Scanner is currently the 3T MRI scanner with the most advanced technology on the market, and compatible with the 4 Siemens research scanners at IUSM to enhance collaborative translational research.

It should be noted that the College of Engineering is also exploring the purchase of a similar MRI, to be used to support imaging research, as opposed to the clinical research use of the MRI referenced above. Engineering’s additional MRI is not part of this approval request and will be submitted separately when appropriate.

These MRIs need to be located in a facility/space specifically designed for the MRI technology, including heavy shielding in the walls and other special requirements for the instruments. The Colleges of HHS and Engineering have identified a pre-fabricated facility, containing the specified requirements that could be constructed at a cost of approximately $1.8 million. Physical Facilities is currently working with the Colleges to see if there is an existing space on campus that could be retro-fitted for this purpose, or whether the pre-fab facility is the most cost-effective solution.
Finally, the annual operating costs of this equipment and facility are estimated at $300,000 to $350,000 per year, which will be paid for through a re-charge operation to others for use of the technology, with any shortfall being covered by HHS, with assistance if necessary from the Executive Vice President for Research and Partnerships.

The recommendation today is to approve the purchase of this MRI with the NIH obtained funding. Approval will allow HHS to order the MRI to start the minimum 12 week lead time needed to manufacture the device. Physical Facilities, HHS and Engineering will work together over the next 45 days to finalize the appropriate location for not only this MRI, but the one Engineering may purchase in the next year as part of Engineering Expansion. This location will be within the current foot-print of the West Lafayette campus. There are several promising locations already identified, but additional time is needed to finalize the most cost effective option.