FACILITIES & OTHER RESOURCES

UNIVERSITY OF MINNESOTA
Founded in 1851 as a public land-grant university, the University of Minnesota is the state's only research university and a major center of education, creative scholarship, research, and service. The University of Minnesota is one of the largest universities in the U.S. with more than 47,000 students and some 4,000 full-time faculty, making it one of the nation's largest campuses with a rich interdisciplinary research and teaching agenda.

DRIVEN TO DISCOVER RESEARCH FACILITY AT THE MINNESOTA STATE FAIR ("D2D")

Overall Description: The Driven to Discover Research Facility at the Minnesota State Fair (referred to hereafter as "D2D") provides researchers the opportunity to recruit, enroll, and collect a variety of data from fairgoers in a highly efficient manner given the unique access it provides to a large number of potential research subjects in a short period of time. The Minnesota State Fair, which runs for the 12 days leading up to and ending on Labor Day each year, is among the largest state fairs in the United States in terms of gross attendance. In 2019, the Minnesota State Fair set an attendance record yet again, surpassing 2.1 million visitors, giving it the highest attendance of any state fair on a *per capita* basis, and the highest daily-attended event in all of North America. An estimated 20% of the population of the state of Minnesota attends the Fair each year. D2D thus links the massive research capacity of the University of Minnesota with a large number of potential research subjects from across the Minnesota population. In addition, about 85% of attendees report returning to the Fair every year and an additional 12% visit every two to five years, allowing for the possibility of efficiently conducting longitudinal studies. This innovative facility is the only one of its kind in the state, and to our knowledge, the nation.

Evidence of Rapid Recruitment at D2D: Since D2D was established in 2014, fairgoer participation has increased steadily. In 2019, over 25,000 participants were enrolled in 47 studies, an average of 162 participants (range 22-402) per shift (5 to 6.5 hours), per study. Additional participants were recruited for studies conducted off-site. The majority of D2D investigators surveyed reported that it would take 6 months to 2 years to recruit as many subjects for their research projects as they recruited in less than two weeks at the Fair.

Types of Research Conducted at D2D: D2D is available for use by faculty, staff and students from the University of Minnesota, as well as other colleges, universities, and institutions across the state. Collaboration is encouraged. Approved research projects will be those for which the protocol is minimal risk, is appropriate to the Fair environment, and pursues a scientifically valid research question as determined by a committee of University researchers. Once approved, D2D staff will work with each principal investigator to estimate the number of shifts at the Fair that would be required to successfully recruit and collect data from the desired number of research subjects. Past studies have conducted survey and opinion research, human performance studies, biomedical research involving collection of biospecimens, and many others. We have experience with studies for preschool children, school-age children, adolescents, and adults of all ages. Researchers may also recruit subjects for studies to take place later at the University.

Physical Description: The Driven to Discover Research Facility (D2D) is located on the Minnesota State Fairgrounds at 1367 Cosgrove Street. The Fairgrounds are adjacent to the University of Minnesota's St. Paul campus, enabling easy access by UMN faculty, staff, and students as well as the efficient transport of samples back to the University for processing. In 2017, a new building was built to replace the existing

one, increasing research space to over 2,500 square feet. The research area, an attractive two-story space with abundant natural light, is divided into bays to accommodate up to 10 studies at a time.

D2D provides a "turnkey" research environment that provides the following:
- Physical space and basic equipment (equipment storage on site, furniture) for recruitment and conduct of minimal risk human subjects research in adults and children
- Assurance that the studies comply with all State Fair rules and regulations
- Step-by-step guidance to obtain University of Minnesota IRB approval for all studies
- Expertise in strategies to recruit specific populations at the Fair
- Refrigerator and freezer space for sample storage on-site
- iPads with links to study –specific consent forms and questionnaires
- High-speed WiFi and hard-wired internet
- Promotion of D2D research studies in local media before and during the Fair

Information technology: D2D is equipped with high-speed wireless internet maintained by the University of Minnesota's Office of Information Technology. D2D provides tablet computers to research groups to record all consent and survey data. These are collected using online survey tools maintained by the University and available for free to investigators. REDCap at https://redcap.ahc.umn.edu/ is a secure web application, managed by the Clinical and Translational Science Institute and available free for University of Minnesota students and staff. Qualtrics at https://it.umn.edu/technology/qualtrics is a second web-based survey tool, managed by the University's Office of Measurement Services and Office of Information Technology. Use of electronic surveys at D2D ensures rapid, secure data collection with immediate deposition on University servers.

Publicity: All studies taking place at D2D are publicized on the D2D website at d2d.umn.edu and on the State Fair mobile app. Traffic to the website is driven by Facebook ads during the month of August, as well as by news media stories and appearances facilitated by University Relations and Communications staff from various departments who have projects at the fair.