The Human Research Core (Core) is a clinical facility located within the UNC Nutrition Research Institute on the North Carolina Research Campus in Kannapolis, NC just 30 minutes north of Charlotte.

The Core is complete with examination rooms and equipment, pharmacy, phlebotomy laboratory, specimen laboratory, and furnished consultation rooms. For nutrition intervention studies, the core offers a metabolic kitchen specifically designed to support nutrition research.

The Human Research Core offers state-of-the-art resources and support for investigators through:

- Human metabolism and body composition assessments
- Clinical laboratory and support services
- Preparation and delivery of precisely designed meals for study participants

The core provides human nutrition research investigators with multidisciplinary services and equipment in one location. In service since 2008, the Core continues to expand to meet the needs of its investigators.

The Human Research Core encourages collaborative as well as independent research.

The Nutrition Research Institute is committed to conducting innovative, basic and translational science to support the understanding of individualized nutrition. These advances in science promote the prevention and reduction of chronic disease and obesity.

See inside for available equipment and services.
The Human Research Core offers these clinical services for academic, public and private research:

**Consultation**
- Study Design
- IRB Submission
- Scheduling
- Subject Recruitment
- Telephone Screening
- Informed Consent
- Anthropometric Measurements

**Clinical Services**
- Phlebotomy
- Medical Screening
- Urine and Stool Collection
- Pregnancy Test
- Sperm Analysis
- Processing of Samples

**Nutrition Assessment**
- Diet Recall
- Food Frequency Questionnaire
- Food Records

**Diet Design**
- Recipe Development

**Metabolic Research Kitchen**
Investigators work with a Registered Dietitian to design, prepare and serve precisely composed meals with a safe, accurate and consistent approach. The kitchen is equipped with commercial appliances and professional software. A spacious dining area, adjacent to the kitchen, is available to accommodate up to 50 research participants for diet intervention studies.

**BODY COMPOSITION LABORATORY**

**Dual-Energy X-ray Absorptiometry (DXA)** (GE Lunar iDXA)
The DXA provides precise measurements of total and regional body composition through high resolution imaging. The scan is noninvasive and exposes the research participant to very low radiation. The DXA can accommodate up to 450 pounds.

**BOD POD® and PEA POD®** (COSMED USA, Inc.)
The BOD POD® is the gold standard in body composition assessment, with the ability to analyze across the lifespan. The BOD POD® is fast, accurate, noninvasive and accommodates a variety of populations. This equipment uses air displacement technology to determine body volume and density. A pediatric accessory is available for use with the BOD POD® to accommodate children 2-6 years of age. The PEA POD® measures the same variables in infants from 0-6 months.

**CLINICAL LABORATORY**

**Hematology Analyzer (Beckman COUTLER® Ac-T diff 2™)**
This analyzer offers a 3-part differential utilizing a closed tube sampling system to deliver consistent results with a fast turnaround time. Windows-based operating system. Able to accommodate pediatric samples.

**Computer-Assisted Sperm Analysis**
(Hamilton-Thorne IVOS II)
Automated and accurate analysis of sperm concentration and motility. Reduced bias compared with visual evaluation. Software available to assess human and animal samples.

**METABOLIC RATE ASSESSMENT LABORATORY**

**Dynamometer (BIODEX)**
Testing and rehabilitation services for knees, ankles and hips plus shoulders, elbows, forearms and wrists. A variety of output reports allow numeric and graphic information to be printed in a number of different formats. Isokinetic testing can be used to provide valid, reliable, objective measures of a muscle’s performance time after time.

**Metabolic Cart (Parvo Medics)**
Two carts are available to measure resting metabolic rate and exercise-induced changes in energy expenditure. Exercise-based testing uses a treadmill or stationary bike.

**Human Whole-Room Calorimeter**
Our advanced research suite uses indirect calorimetry to evaluate a research participant’s 24-hour energy balance (intake and expenditure). The suite is equipped with a bed, stationary bike, bathroom, airlock chamber for entry of food, ports for blood draws and entertainment options. Data can be collected without interruption during meals, sleep and light activity. Monitoring, consenting, scrubs, supplies, technicians and analysis upon completion are included. The Whole-Room Calorimeter is essential for studies on energy balance and fuel use.

General Exam Rooms (4), Meeting Room and Consultation Rooms (2)

See reverse side for staff and contact information.