

NORC Cellular and Molecular Biology Core Services Request for Core Use

Requestor Name: _____ Date of Request: _____

Campus Box: _____ Phone: _____ Fax: _____ E-mail: _____

Summary of Project: _____

Funding Source (Agency/Number): _____ PI: _____

PLEASE ATTACH A COPY OF HUMAN AND/OR ANIMAL STUDY PROTOCOL APPROVAL LETTER(S)

Questions please contact: Terri Pietka (314-362-8469; tpietka@wustl.edu) or
Nada Abumrad (314-747-0348; nabumrad@wustl.edu)

Enter the approximate number of analyses needed for each service below.

a. Cells for Culture:

3T3-L1 _____ 3T3-F442A _____ OP9 _____ HIB1B _____ LS14 _____ LiSa-2 _____ SBGS _____
C2C12 _____ HSMM _____

b. Adipose Tissue Morphology:

Cell Size: _____ Cell Number: _____

c. Gene Expression Analyses:

RNA Extraction? _____ Number of Samples: _____ Type of Tissue: _____

Pathways of Interest:

_____ Autophagy	_____ ECM/Fibrosis
_____ FA Metabolism	_____ Angiogenesis
_____ Glucose Metabolism	_____ Inflammation
_____ ER Stress	_____ Other (Please describe below)

RT-PCR details (e.g. genes to measure, tissues, etc.): _____

Total number of genes requested: _____

d. Protein Expression Analyses:

Lysate Preparation? _____ Number of Samples: _____ Type of Tissue: _____

Pathways of Interest:

_____ mTOR Signaling	_____ ER Stress
_____ Insulin Signaling	_____ Inflammation
_____ Other (please describe below)	

Western Blotting details (e.g. proteins to measure, tissues, etc.): _____

Total number of proteins to measure: _____

e. Substrate Metabolic Assays

Glucose uptake _____ Glycolysis _____ Glucose Oxidation _____ Glycogenesis _____
Fatty Acid Uptake _____ Fatty Acid Oxidation _____ Lipid Incorporation _____ Lipolysis _____

f. Mitochondrial Physiology:

Type of analyses: isolated mitochondria _____ Tissue _____

Tissue type _____

Substrate/inhibitors requested:

Glutamate/Malate _____ Oligomycin _____ Pyruvate _____ Rotenone _____ Succinate _____

Antimycin A _____ Uncoupling _____

Number of samples to be measured _____

g. Microscopy/Cell Imaging:

Briefly describe measurements needed: _____

h. Training:

• Biochemical Characterizations (circle assay(s)):

- Glucose uptake
- Glycolysis
- Glucose Oxidation
- Glycogenesis
- Fatty Acid Uptake
- Fatty Acid Oxidation
- Lipid Incorporation
- Lipolysis
- Triglycerides

• Mitochondrial Function/Physiology (circle assay(s)):

- Respiration
- ROS Production
- Oxidative Stress
- ATP Production
- Mitochondrial Membrane Potential
- Mitochondrial Calcium Uptake

• Cellular trafficking and imaging

• Autophagy Analysis

Specifics: _____

i. Consultation:

Brief project description: _____

j. Equipment Usage:

ABI-7500 Fast _____ LiCor Odyssey _____ Tissue Culture Facility _____ Nikon TE2000U Microscope
_____ Spectroscopy (Bio-Tek/NanoDrop) _____ Oxygraph 2K _____
Qiagen TissueLyser II _____

Special instructions, comments, etc. for any of the above services: _____

PLEASE CITE: NORC GRANT DK056341 IN ALL PUBLICATIONS RESULTING FROM THIS EFFORT.

Return completed form to:

Terri Pietka tpietka@wustl.edu or

Nada Abumrad nabumrad@wustl.edu

Campus Box 8031

Approval: _____ **Date:** _____ **Priority:** _____