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**Diabetes Research Center (DRC)**

**Washington University Faculty**

**Membership Application**

**Instructions**

1. Read the Washington University DRC Membership Guidelines, available by clicking [here](http://diabetesresearchcenter.dom.wustl.edu/applying_for_membership/membership_guidelines.htm).

2. Complete the application form.

3. Return Application, NIH biosketch, and Other Support page electronically to:

Karen Muehlhauser

Program Manager

Diabetes Research Center

Washington University School of Medicine

[kmuehlha@wustl.edu](mailto:kmuehlha@wustl.edu)

Date of Submission: (mm/dd/yy)

|  |  |
| --- | --- |
| Last Name: |  |
| First Name: |  |
| Middle Initial: |  |
| Degree: |  |
| Academic Title: |  |
| Department: |  |
| Division: |  |
| Institution: |  |
| Address: |  |
|  |  |
| E-Mail: |  |
| Telephone: |  |
| Short Name for PubMed Search: |  |
| Admin Assistant: |  |
| Admin Asst E-mail: |  |
| Admin Asst Tel: |  |

**Research Interests**

Select as many as apply:

Area Metabolic Regulation

Islet Biology/Immunology

Prevention/Control

Complications

Category Basic

Translational

Clinical

Population/Community-Based

Please provide a one-paragraph description of your diabetes/metabolism-related research (less than 250 words):

**Other Memberships**

Select all that apply:

Digestive Diseases Research Core Center (DDRCC)

Nutrition Obesity Research Center (NORC)

Clinical Translational Science Award (CTSA)

Center for Diabetes Translational Research

**Support**

Please list your Current Support. Please add additional rows to table as necessary.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sponsor Name | Award Number | Title | Start Date | End Date | Annual Direct Costs | 1-2 sentences describing goals and relation to diabetes/metabolism, if any |
|  |  |  |  |  |  |  |

Please list your Pending Support. Please add additional rows to table as necessary.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sponsor Name | Award Number | Title | Start Date | End Date | Annual Direct Costs | 1-2 sentences describing goals and relation to diabetes/metabolism, if any |
|  |  |  |  |  |  |  |

**DRC Collaboration**

List DRC members with whom you collaborate. For a complete listing of our membership, please click [here](http://diabetesresearchcenter.dom.wustl.edu/members/index.htm). Please add additional rows to table as necessary.

|  |  |
| --- | --- |
| Last Name | First Name |
|  |  |
|  |  |

**Projected Core Use**

What is your planned use of DRC Biomedical Cores? Indicate all that apply and estimate your annual use and for which of your grants use of the Core is relevant. Details regarding core services offered are available by clicking [here](http://diabetesresearchcenter.dom.wustl.edu/cores/index.htm).

|  |  |  |
| --- | --- | --- |
|  | **Annual Usage Estimate** | **Applicable Grant Number** |
| **Cell and Tissue Imaging Core Services** | | |
| Fluorescence/bright-field microscopy |  |  |
| Slide scanning microscopy |  |  |
| Confocal microscopy (fixed and live) |  |  |
| TIRF microscopy (invested platform with incubation) |  |  |
| Two-photon microscopy (inverted – live cell) |  |  |
| Super-resolution microscopy (SIM/STORM) |  |  |
| Transmission EM (TEM) |  |  |
| Scanning EM (SEM) |  |  |
| 3-D EM using Focused Ion Beam (FIB-SEM) |  |  |
| EM sample Preparation |  |  |
| X-ray microscopy |  |  |
| Cyro EM |  |  |
| Technical specialist time |  |  |
| Training |  |  |
|  |  |  |
| **Diabetes Models Phenotyping Core Services** | | |
| Biochemical serum analysis |  |  |
| Glucose and/or insulin tolerance testing |  |  |
| Body composition determination |  |  |
| Metabolic rate by indirect calorimetry |  |  |
| Blood pressure determination |  |  |
| Analysis of atherosclerosis in mice |  |  |
| Biochemical tissue analysis |  |  |
| Training for breeding and genotyping |  |  |
| Provision of diabetes models (Akita, NOD, db/db, high fat diet) |  |  |
| In vivo spectral imaging |  |  |
|  | | |
|  | | |
|  | | |
| **Metabolic Tissue Function Core Services** | | |
| Rodent islet isolation |  |  |
| Procurement of human primary islets |  |  |
| Supply of beta-cell lines |  |  |
| Generation of iPSCs |  |  |
| Islet secretion assays (static and perifusion) |  |  |
| Islet morphometry |  |  |
| Metabolic rate determinations (Seahorse) |  |  |
| Tissue analyses for endoplasmic reticulum stress |  |  |
| Tissue analyses for oxidative stress |  |  |
|  |  |  |
| **Metabolomics Core Services** | | |
| Targeted metabolomic analyses (GC/MS or LC-MS/MS) |  |  |
| Broad metabolomic survey(LC-MS/MS) |  |  |
| Structural analysis and identification |  |  |
| Validated assay development |  |  |
| Qualitative flux analyses |  |  |
| Training/education in mass spectrometry, sample preparation, or interpretation of spectra |  |  |
|  |  |  |
| **Transgenic and ES Core Services** | | |
| Complex vector and gene editing design and construction |  |  |
| Mouse embryonic stem cell manipulations |  |  |
| Microinjection of DNA into single-celled mouse embryos for conventional transgenic |  |  |
| Injection of modified ES cells into blastocyst or 8-cell stage embryos for KO/KI |  |  |
| Microinjection of nucleic acids into single celled embryos for CRISPR/Cas9 or TALENs |  |  |
| Assisted reproduction (in vitro fertilization, ovary transplant) |  |  |
| Rederivation/importation of mice/sperm from outside institution |  |  |
| Transient expression of CRE or FLP recombinase in single-cell embryos |  |  |
|  |  |  |
| **Translational Diagnostics Core Services** |  |  |
| Core diabetes hormones human (c-peptide, insulin, pancreatic polypeptide, glucagon) |  |  |
| Core diabetes hormones, mouse/rat (insulin) |  |  |
| Core diabetes metabolites (glucose, glycated hemoglobin) |  |  |
| Adipokines (leptin, adiponectin, IL-6, MCP-1, TNFalpha) |  |  |
| Lipids (apolipoprotein A1 [apoA1], apolipoprotein B [apoB], total cholesterol, low density lipoprotein cholesterol [LDL], high density lipoprotein cholesterol [HDL], lipoprotein (a) [Lp(a)], triglycerides, free fatty acid [FFA]) |  |  |
| Blood chemistry (BMP, CMP CBC, lactate, beta-hydroxybutyrate) |  |  |
| Urine chemistry (BUN, creatinine, microalbumin) |  |  |
| Custom service (RIA, ELISA) |  |  |
| Special pricing for specialized test send out |  |  |

In which of the following DRC programs do you plan to participate?

Pilot and Feasibility (click [here](http://diabetesresearchcenter.dom.wustl.edu/pilot_and_feasibility/index.htm) for a detailed description of the program)

Enrichment Program (seminar series, click [here](http://diabetesresearchcenter.dom.wustl.edu/seminars_events_and_news/upcoming_seminars.htm) for schedules)

**Submission**

Please return this completed form with your current NIH biosketch (Rev. 09/17) in Word format and Other Support Page in Word format, electronically to Karen Muehlhauser at [kmuehlha@wustl.edu](mailto:kmuehlha@wustl.edu). Please be sure the Personal Statement section of your biosketch indicates how your work relates to diabetes and metabolism.

Thank you.

Clay F. Semenkovich, M.D.

Director, Diabetes Research Center

Washington University School of Medicine