



### **Sources of Funding**

List current sources and limits of funding for this project:

Is external funding anticipated for this project?

List potential sources for future funding and proposed application/award dates

### **Purpose of the Project (one sentence):**

### **Description of Proposal**

Attach a 3-5 page summary of the proposed project using the NIH-PHS-398 research plan format. If the work is connected with a funded project, please attach a copy of the proposal if available.

#### Research Plan Format

Specific Aims – Concise statement of hypotheses and specific aims

Background and Significance – Brief description of work in related fields including a few key references and appropriate journal articles. Describe any previous work you have done on related problems. Attach your relevant publications

Preliminary Studies – If you have performed preliminary experiments that are relevant to the proposal, briefly describe them.

Research Design and Methods – Describe the experiments which you propose to address the specific aims.

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For Staff Use only

**Anticipated Costs:**

**Billing Information:**

**Imaging Methodology to be Employed**

Cardiac Ultrasound

2D

- Basic Anatomy
- Fractional area change
- Valve annulus
  - Aortic
  - Mitral
  - Tricuspid
  - Pulmonary
- LA area/volume
- LV volume
- LV EF

M-mode

- LVED
- LVES
- Hd
- Hs
- IVSd
- IVSs
- SF
- LV mass
- RWT
- End-systolic wall stress
- ET
- VCFc
- VCFc difference
- LA size

Doppler

- Valve peak velocity
  - Aortic
  - Mitral
  - Tricuspid
  - Pulmonary
- Gradient
  - TR
  - Other
- Time velocity integral

Aortic  
Mitral  
Tricuspid  
Pulmonary  
Mitral E/A ratio  
Color Doppler m-mode  
Doppler tissue imaging  
MV lateral  
MV septal  
TV lateral  
Other  
Pulmonary venous velocity

Vascular Ultrasound (human only)

Carotid IMT  
Regional aortic compliance  
M-mode  
2D  
Regional carotid compliance  
M-mode  
2D  
Brachial artery reactivity

Applanation Tonometry (human only)

Augmentation Index  
Pulse wave velocity

**Equipment to be Utilized:**

GE Vivid 7  
Philips HP Sonos 5500  
Visualsonics  
Sphygmacor