

## **Authentication of Key Biological and/or Chemical Resources**

To ensure the identity and validity of key biological and/or chemical resources used in the proposed studies the following methods will be implemented:

1. The validity of healthy subjects will be confirmed using a health history questionnaire and fasting comprehensive metabolic panel before collecting samples (Aims 1-3). Patients with CaOx kidney stones will only be enrolled based on Dr. Dean Assimos's recommendation (treating physician) and after confirming medical history and inclusion/exclusion criteria (Aim 1).
2. THP-1 cells (ATCC ® TIB202™) will be purchased commercially from American Type Culture Collection and maintained as suggested by ATCC. Frozen aliquots of cells from the same lot will be used for experiments.
3. CaOx crystals will be purchased commercially or made in the laboratory. Crystals purchased will have been authenticated prior to receipt by the vendor. The information on the specification sheet will be reviewed prior to use. Along with using the vendor's supplied data, we will independently test the product before use. Authenticity of CaOx crystals will be determined by visualizing crystal morphology using a polarized microscope and measuring the level of oxalate per mg crystal powder using mass spectrometry. A fresh working solution of CaOx crystals will be made prior to every experiment. The stock concentration of CaOx crystals will be measured monthly.
4. Flow cytometry or confocal microscopy experiments using fluorescence dyes will have both positive and negative controls included to properly assess the data being collected. All flow cytometry experiments will include compensation. All fluorescence dyes will be used within the labeled expiration date and stored as recommended by the manufacturer.
5. Antibodies will be confirmed using Western blotting and ELISAs. Positive controls will be included in all experiments to validate antibody staining. All antibodies will be used within the labeled expiration date and stored as recommended by the manufacturer.