September 14th, 2014

Dear Editor

Journal of Visual Experiments

We were invited to submit our manuscript titled, “Removal of Trace Elements by Cupric Oxide Nanoparticles from Uranium *In situ* Recovery Bleed Water and Its Effects on Cell Viability” for possible publication. This manuscript is prepared by Jodi R. Schilz, K.J. Reddy, Sreejayan Nair, Thomas E. Johnson, Ronald B. Tjalkens, Kem P. Krueger, and Suzanne Clark.

Approximately 20% of the US electrical supply is provided by nuclear power and, based in part on national incentives to increase energy independence; nuclear capacity is expected to increase. In the US, uranium is predominately extracted through an in situ recovery (ISR) process. ISR technology produces significant volumes of production bleed water (PBW). The PBW consists of contaminants such as arsenic, selenium, vanadium and uranium, all of which are above regulatory levels and must be decontaminated before PBW can be discharged into the environment. Agencies including the ASTDR and NIEHS are placing more emphasis on studying the toxicity of environmentally relevant mixtures using *in vitro* testing to prioritize chemicals for further *in vivo* testing. The methods presented in our paper are a new and innovative way of treating complex environmental mixtures and incorporating the actual mixture before and after treatment into the cytotoxicity testing method. JoVE’s unique multimedia format is ideal for our methods because it is a new innovative molecular biology/toxicology approach that would be better explained in a multimedia format.

Author Contributions:

Jodi Schilz obtained samples, conducted experiments, and collected and analyzed data. KJ Reddy, Suzanne Clark, Sreejayan Nair and Jodi Schilz wrote the grant that provided funding for this project. Thomas Johnson provided lab facilities during the first year of experiments. The manuscript was written through contributions of all authors. All authors have given approval to the final version of the manuscript.

Peer Reviewers (6 requested):

Dr. Saumitra Mukherjee, email: [saumitramukherjee3@gmail.com](mailto:saumitramukherjee3@gmail.com)

Dr. Neha Singh, email: [hereisneha.singh@gmail.com](mailto:hereisneha.singh@gmail.com)

Dr. Morris Argyle, email: [mdargyle@byu.edu](mailto:mdargyle@byu.edu)

Carol Martinson, email: [mysamuri@hotmail.com](mailto:mysamuri@hotmail.com)

Kyle McDonald, email: [kyle.jeffrey.mcdonald@gmail.com](mailto:kyle.jeffrey.mcdonald@gmail.com)

Dr. Pradip Bhattacharyya, email: [no-reply@researchgate.net](mailto:no-reply@researchgate.net)

Thank you for your consideration.

Sincerely

K.J. Reddy

Professor of Ecosystem Science and Management

University of Wyoming, WY

Visiting Research Scholar

Physics Department, Harvard University, MA