

**WAYNE STATE
UNIVERSITY**

SCHOOL OF MEDICINE

* Department of
Obstetrics & Gynecology

THE C.S. MOTT CENTER
FOR HUMAN GROWTH AND DEVELOPMENT



Chaur-Dong Hsu MD
*Professor and Chair,
Department of Obstetrics/Gynecology*

Steven Krawetz, PhD
Associate Director

Roberto Romero, M.D.
*Chief, Perinatology Research Branch,
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**ReproStress 3M
Inc**

GET
IT
RIGHT



DESCRIPTION OF POSITION (Duties and Responsibilities)

POSITION DUTIES

Description; Development and validation of high throughput screens (HTS) in transgenic mouse embryonic and placental trophoblast stem cells to be used to detect toxic levels of environmental pollutants, new drugs and compounds.

As a Post doctoral research associate in the Ob/Gyn Department at Wayne State University or Company Principal Investigator at Reproductive Stress Inc, the candidate will have the following duties and responsibilities:

- A) Skill in working with transgenic stem cells to upgrade and re-engineer a Patented transgenic embryonic stem cell line (ESC). These cells report in a high throughput screen (HTS) for toxicity and metabolic stress using a stemness promoter to drive a reporter in viable stem cells. For academic purposes we have used fluorescent reporters but for commercial purposes it is important to use a luminescent reporter.
- B) Skill in doing a number of validations of the new ESC HTS lineage and compare these to the validations of the current patented ESC HTS1 (Rex1 promoter-red fluorescent protein ESCs) using microplate readers, FACS, immunofluorescence and fluorescence micrography, immunoblot, and Drop-seq/RNA-seq with 10X Genomics. Also, R&D for a placental trophoblast stem cell (TSC) HTS2 assay. Validations will emphasize testing large sets of toxicant samples for dose-dependent (dosimetric) toxic effects on our patented ESC or TSC reporter lines. These include potency/stemness decrease, differentiation increase and growth rate decrease assays.
- C) Ability to work with stem cells and manage and keep optimal their growth rates and stemness qualities is essential to performance of job duties.
- D) Knowledge of stress dose-response dosimetry in cell culture for toxicological high throughput screens or software used to calculate IC50s, NOAEL, and LOAEL and perform other Point of Departure toxicological analyses.

D) Knowledge or personal experiences with as many of these specific protocols and technologies is important for job duties

E) In addition to the specific job duties are general areas of strength. These include ability to communicate and work with teams, effort, honesty, planning and keeping a clear lab notebook (e.g. for patent needs). Preferred are keen general skills and ability in logic, communications, and effort and specific skills in molecular biology with probable lentivirus infection strategy, embryonic stem cell culture and assays used for the validation steps.

REQUIREMENTS FOR POSITION

A Ph.D. in a Biological science, preferably, developmental and molecular biology or toxicology plus some other relevant experience are the required.

OFFERED

Salary in 48,000-55,000 range, or commensurate with background and experience (and fringe benefits)

Please email CVs and call the CONTACT NUMBERS below

Best Regards,



Signature: _____

Name & Title of Supervisor: _____ Daniel Rappolee PhD, Assoc Professor Ob/Gyn and
Physiology, Wayne state university Medical school

CSO, President of Reproductive Stress, 3M Inc

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