Cancer biology postdoctoral opportunities available in the laboratory of
Dr. Suzanne Conzen at UT Southwestern Medical Center

The Conzen Laboratory, https://www.utsouthwestern.edu/labs/conzen/, recently relocated to UTSW in Dallas, Texas, studies mechanisms underlying stress hormone receptor-driven (glucocorticoid receptor or GR) cancer progression. Our lab was one of the first to uncover GR-mediated mechanisms contributing to breast, prostate, and ovarian cancer cell survival. Based on these discoveries, we are involved in several clinical trials of GR modulators. These studies provide complementary clinical insights and an iterative discovery process between the laboratory and the clinic. We seek postdoctoral fellows who are within 0-3 years of completing their PhD studies who will focus on one of the following four interconnected projects:

• **GR crosstalk with activated estrogen receptor (ER) inhibits breast cancer growth and metastasis.** GR activity inhibits ER-driven proliferation of breast cancer (BC) cells; in early-stage ER+ BC, we have found that GR overexpression is associated with a decreased risk of cancer progression. We have found that ER and GR co-occupy a subset of enhancer regions, independently of PR or AR activity. We wish to understand, at the chromatin level, how tumor GR activity modulates ER-mediated proliferative gene expression and explore GR modulators in models of ER-driven breast cancer biology.

*Applicants with chromatin and transcriptional activation experience are especially encouraged to apply.*

• **Mechanisms whereby acquired GR activity drives the progression of castration-resistant prostate cancer (CRPC).** We have shown that GR expression and activation increase during PC progression that occurs despite AR signaling inhibition. Understanding how GR activation bypasses AR activity will allow us to develop approaches to overcome therapeutic resistance. Of particular interest are the mechanisms by which GR interacts with the cAMP/PKA signaling pathway. We also study human PC specimens from ongoing clinical trials to test hypotheses derived from modeling CRPC GR activity in the laboratory.

*Applicants familiar with experimental techniques to study molecular mechanisms of kinase activation and previous cellular signaling experience are encouraged to apply.*

• **Modulation of ovarian cancer immune microenvironment by tumor cell-intrinsic GR activity.** Our group found that high tumor cell GR expression in patients with primary ovarian cancer is associated with a significantly faster time to progression compared to patients with low tumor GR expression. In addition, we found that GR activation in ovarian cancer cells causes a cytokine release profile expected to reduce cytotoxic T cell infiltration. This project focuses on the modulation of ovarian cancer immune microenvironment by tumor cell-intrinsic GR activity.

*Applicants who are knowledgeable in the tumor microenvironment, immunology, single cell sequencing, and flow cytometry are especially encouraged to apply.*

• **GR-mediated N6-methyladenosine (m6A) RNA modification in triple-negative breast cancer (TNBC) oncogenic signaling.** m6A is an abundant and reversible RNA methylation modification. m6A-regulatory proteins can add, remove, or preferentially bind to m6A on RNA and thereby alter specific mRNA degradation and translational efficiency. m6A methylation of specific mRNAs is implicated in the progression of several human cancers.

*Applicants with experience in mass spectrometry, ribosome profiling and/or nascent and steady-state RNA sequencing are especially encouraged to apply.*
**Requirements and how to apply:**
Candidates must hold a Ph.D. and/or M.D. degree and should possess strong laboratory and analytical skills, a record of high impact peer-reviewed publications, and proficiency in oral and written scientific presentation. We are seeking applicants with a strong background in molecular biology, biochemistry, cancer biology, and immunology. Preference will be given to applicants who are within the first 0-3 years of postdoctoral training. Information on the UTSW postdoctoral training program and benefits can be found at [http://www.utsouthwestern.edu/postdocs](http://www.utsouthwestern.edu/postdocs)

Interested individuals should send a CV, statement of interests, and a list of three references to:
Dr. Suzanne Conzen
[https://utswmed.org/doctors/suzanne-conzen/](https://utswmed.org/doctors/suzanne-conzen/)
c/o Lynda Bennett
UT Southwestern Medical Center
5323 Harry Hines Blvd
Hematology/Oncology NB2.200
Dallas, TX 75390-8852
lynda.bennett@utsouthwestern.edu

**With one of the following in the subject line:** Conzen Lab Postdoc – ER+ Breast Cancer; Conzen Lab Postdoc – Prostate Cancer; Conzen Lab Postdoc – Ovarian Cancer; Conzen Lab Postdoc – m6A TNBC

"**UT Southwestern Medical Center is committed to an educational and working environment that provides equal opportunity to all members of the University community. In accordance with federal and state law, the University prohibits unlawful discrimination, including harassment, on the basis of: race; color; religion; national origin; sex; including sexual harassment; age; disability; genetic information; citizenship status; and protected veteran status. In addition, it is UT Southwestern policy to prohibit discrimination on the basis of sexual orientation, gender identity, or gender expression."**