

Postdoctoral Position in the Laboratory of Sanjeev Kumar, Regenerative Medicine Institute, Cedars-Sinai Medical Center, Los Angeles, California, USA

An opportunity is immediately available for a Postdoctoral Research Fellow in Kumar Laboratory, Regenerative Medicine Institute, Cedars-Sinai Medical Center, Los Angeles, USA. Kumar Laboratory research is focused on dissecting out the cellular and molecular pathways of kidney repair/regeneration and fibrotic processes after acute kidney injury. To this end, the laboratory couples cutting-edge techniques such as single cell sequencing, cell- type specific transcriptomic profiling, genetic-lineage tracing, and cell-type specific inducible genetic perturbation studies including CRISPR/Cas9 to models of AKI to CKD to discover novel biomarkers and therapeutic targets to augment kidney repair and retard concomitant fibrotic processes. We identified Sox9 as an injury-induced repair response that regenerates the injured nephron epithelia, for which Dr. Sanjeev Kumar, MD, PhD received John Merrill Award from American Society of Nephrology. He is currently also the member of AKI!Now Basic Science group of ASN.

Current research is being submitted to *Nature Medicine*, where the current postdoctoral fellow, utilizing all the afore-mentioned technologies, including human biopsy specimens, has discovered a unifying mechanism that explains why certain foci undergo fibrosis whereas other repair with scar. We are currently filing patents for the discovery. This was a big elusive question in the field of tissue repair/injury.

The selected candidate is expected to lead their own projects that will provide novel biological concepts in tissue injury/repair/fibrosis. To this end, the candidate will focus on conducting **single-cell sequencing** studies of both mice and human kidneys, and working on novel highly promising targets that have been revealed by our single-cell sequencing studies and validated in human biopsies, that might have implications in kidney repair and myofibroblast formation. We have generated new genetic strains that enable genetic-lineage tracing and cell-type specific perturbations to examine their role in kidney repair and fibrosis. The candidate will take on these new exciting studies and will conduct confocal and light- sheet microscopy to spatiotemporally map the responses using reporter mouse strains, and will utilize a novel protocol generated by the laboratory to process kidneys for single-cell sequencing. *The candidate will also be trained in harvesting single kidney stem cells from fetal kidneys.*

The laboratory's research is funded by NIH/NIDDK, OneLegacy Foundation, American Heart Association, and ASN. Dr. Kumar is also affiliated with David Geffen School of Medicine, University of California, Los Angeles.

Of note, Board of Governors Regenerative Medicine Institute provides a world-class training environment for scientists at all levels that are interested in stem cell biology and tissue injury/repair. Kumar Laboratory also collaborates closely with laboratories involved in spinal cord, brain and lung injury/repair to identify shared and unique organ-specific responses. This would provide the selected candidate to think broad and will enhance scientific knowledge and acumen.

Required Qualifications:

A PhD or MD/PhD degree in biochemistry, molecular biology, molecular genetics or other related fields is required. A strong background in molecular genetics is required. Previous work in kidney is NOT required as we use AKI to CKD models to understand how an epithelial based organ repair and regenerates and induce fibrotic responses.

Salary Range:

Commensurate with experience. Provide competitive salary with excellent fringe benefits. Cedars-Sinai is in sunny Los Angeles in Hollywood and promises exciting recreational activities.

PLEASE NOTE: WE ARE IN THE PROCESS OF DEVELOPING LABORATORY WEBSITE AS THE CURRENT WEBSITE IS NOT THE REAL KUMAR LABORATORY!!!

Applicant Special Instructions:

If you are a highly career-oriented researcher and motivated to work hard, please email a CV, a cover letter and the names of three referees to:

[Sanjeev Kumar, MD, MRCP \(UK\) PhD](mailto:Sanjeev.Kumar@cshs.org)

Nephrologist-Scientist

Email: Sanjeev.kumar@cshs.org

シダーズ・サイナイ医療センター再生医学部門 (Regenerative Medicine Institute, Cedars-Sinai Medical Center) の Dr. Kumar Sanjeev 研究室では熱意のあるポスドクを募集しています。Dr. Kumar の研究室では急性腎障害における腎の修復・再生と線維化に焦点を当てて研究を進めています。シングルセル解析や、CRISPR/Cas9 を利用したモデル作成などの最先端の研究手法を用いて日々実験しています。本研究室では障害を受けたネフロンの上皮を再生する腎傷害誘導修復反応として Sox9 を同定しました。この研究が評価され、Dr. Kumar は米国腎臓学会 (ASN) から John Merrill 賞を受賞されました。現在進行中のプロジェクトではヒトのサンプルを使用した実験も含め、前述の手法を総動員して AKI における傷害された腎組織に線維化と再生される部分が両方現れる機序を解明し、結果を Nature Medicine に投稿中です。Dr. Kumar は NIH グラントなど研究費も豊富に獲得しております。

当研究室に赴任した際には、ポスドクとして当医療センター職員として雇われます。給与、米国での健康保険、各種福利厚生が提供されます。シダーズ・サイナイ医療センターはロサンゼルス・ビバリーヒルズにあり、世界各国から医師や研究者が集まる大規模な医療機関です。全米6位と称され、世界各国から症例も集まり基礎研究や臨床試験が行われており、設備・資金も充実しています。

ロサンゼルスはアメリカの中では日本人が多く住んでおり、家族での渡米もしやすい環境にあります。複数の日系スーパーや日本語学校、幼稚園や保育園が存在し、日本人医師・歯科医師が開業もしくは勤務する病院へのアクセスも可能です。ほぼ1年中晴れて乾いたカルフォルニアの気候は過ごしやすいです。アフター5や休日も充実して過ごせます。

ご応募は英文の募集要項をよくお読みいただき、CV と推薦状を直接 Dr. Kumar に送っていただくか、何か事前に質問などございましたら、熊倉までご連絡いただければ幸いです。お待ちしております。

(日本語文責) 熊倉 慧 (Satoshi Kumakura)

Ananth Karumanchi's Lab

Department of Medicine – Nephrology

Cedars-Sinai Medical Center

Satoshi.Kumakura(アットマーク)cshs.org