



ALLA MAGNIFICA RETTRICE
DELL'UNIVERSITA' DEGLI STUDI DI MILANO

COD. ID: 7030

Il sottoscritto chiede di essere ammesso a partecipare alla selezione pubblica, per titoli ed esami, per il conferimento di un assegno di ricerca presso il Dipartimento di Biosciences

Responsabile scientifico: Prof. Cappelletti Graziella

[Nome e cognome]

CURRICULUM VITAE

INFORMAZIONI PERSONALI

Cognome	KUMAR
Nome	ARTHI

OCCUPAZIONE ATTUALE

Incarico	Struttura
Student	University of Milan, Italy

ISTRUZIONE E FORMAZIONE

Titolo	Corso di studi	Università	anno conseguimento titolo
Laurea Magistrale o equivalente	Medical Biotechnology and Molecular Medicine Curriculum: Molecular Diagnostics and Personalized Medicine	University of Milan, Italy	Feb 2025
Specializzazione			
Dottorato Di Ricerca			
Master	Biotechnology	SASTRA Deemed University, India	Oct 2020
Diploma Di Specializzazione Medica			
Diploma Di Specializzazione Europea			
Altro			



ISCRIZIONE AD ORDINI PROFESSIONALI

Data iscrizione	Ordine	Città

LINGUE STRANIERE CONOSCIUTE

lingue	livello di conoscenza
Tamil	Native speaker
English	C1 level

PREMI, RICONOSCIMENTI E BORSE DI STUDIO

anno	Descrizione premio
2024/2025	Regional scholarship for pursuing my Master degree at University of Milan, Italy. Amount awarded: €3800
2023/2024	Regional scholarship for pursuing my Master degree at University of Milan, Italy. Amount awarded: €7218
2022/2023	University scholarship for pursuing my Master degree at University of Milan, Italy. Amount awarded: €6000
2022	Awarded \$300 by my Abbvie clients for my exemplary work as a Data Warehouse Analyst

ATTIVITÀ DI FORMAZIONE O DI RICERCA

Research Intern IRCCS Foundation National Cancer Institute Milan, Italy Dec 2023- Present During my internship, I am contributing to the BREAKFAST2 clinical trial, which aims to enhance treatment for early-stage triple-negative breast cancer (TNBC). My project focuses on investigating the correlation between metabolic and immunological changes induced by the fasting-mimicking diet (FMD) and standard chemo-immunotherapy, utilizing single-cell RNA sequencing technology. In addition to this, I contributed to many other projects ongoing in the institute which lead to me gain practical experiences in 3D organoid cultures of colon cancer, immunohistochemistry and fundamental knowledge on spatial transcriptomics.
Research student Vascular Biology Lab, SASTRA Deemed University, India May 2017-Oct 2020 Under the supervision of Dr. Gino A. Kurian, my thesis focused on evaluating the effects of carbon



monoxide-releasing molecule-2 (CORM-2) against myocardial ischemia-reperfusion (I/R) injury in ovariectomized female rats. I acquired hands-on experience in advanced experimental techniques, including the isolated heart perfusion system (Langendorff apparatus), hemodynamic analysis, biochemical assays for mitochondrial enzyme activity, and analysis of antioxidant systems and cardiac cell injury markers. This project allowed me to develop skills in scientific writing and data analysis using tools such as GraphPad Prism and Microsoft Excel.

Additionally, I gained practical expertise in mammalian cell culture techniques such as cell passaging, viability assays, and cryopreservation.

ATTIVITÀ PROGETTUALE

Anno	Progetto
Dec 2023- Present	<p>BREAKFAST2 trial: Investigating fasting-mimicking approach in TNBC treatment</p> <p>IRCCS Foundation National Cancer Institute, Milan, Italy</p> <p>I am contributing to the BREAKFAST2 clinical trial, aimed at evaluating the efficacy of integrating a fasting-mimicking approach alongside chemo-immunotherapy in early-stage TNBC treatment. The primary objective of the trial is to assess the rate of pathological complete response, with translational aims including investigating the correlation between metabolic and immunological changes induced by fasting mimicking and treatment efficacy</p>
Jun 2024- Aug 2024	<p>Analysis of the performance of newly available colon organoid culture media from ADS Biotech with a lab made media</p> <p>IRCCS Foundation National Cancer Institute, Milan, Italy</p> <p>Developed colon organoids and conducted immunohistochemical procedures to test for the performance of colon organoid culture medium from ADS Biotech compared to lab-made medium.</p>
Jan 2019- Jun 2020	<p>Evaluating the effects of carbon monoxide releasing molecule- 2 against myocardial ischemiareperfusion (I/R) injury in ovariectomized female rats.</p> <p>Vascular Biology Lab, SASTRA, Thanjavur, India We investigated the cardioprotective effects of preconditioning isolated rat hearts with CORM-2 against I/R injury. This study focused on evaluating the role of CORM-2 in reducing myocardial damage in both premenopausal and postmenopausal female rats. Key assessments included hemodynamic measurements and biochemical analysis of cardiac injury markers, mitochondrial function, and antioxidant systems.</p>
May 2019- Jun 2020	<p>Investigated the effects of ethanolic extract from Ganoderma Lucidum against I/R injury in rat hearts</p> <p>Vascular Biology Lab, SASTRA, Thanjavur, India</p> <p>We investigated the cardioprotective effects of preconditioning isolated rat hearts with an ethanolic extract of Ganoderma lucidum against I/R injury. Our study focused on assessing the reduction in cardiac cell damage, preservation of mitochondrial enzyme activity, and mitigation of oxidative stress.</p>
Dec 2017- Aug 2018	<p>Diabetic animals fed with a high-fat diet prevent the protective effect of myocardial ischemic preconditioning (IPC) effect in isolated rat heart perfusion model.</p>



	<p>Vascular biology lab, SASTRA, Thanjavur, India</p> <p>IPC preserves mitochondrial function and offers cardioprotection in normal hearts. However, in this study we understood that in diabetic hearts, with or without myopathy, IPC is less effective due to severe perturbations in myocardial architecture, structural and functional mitochondrial damage, and impaired oxidative status, even in the absence of I/R stimuli.</p>
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CONGRESSI, CONVEGNI E SEMINARI

Data	Titolo	Sede
2019	Mammalian Cell culture workshop	SASTRA, India
2019	Data analysis of Next Generation Sequencing	SASTRA, India
2017	Advanced Histopathology workshop	SASTRA, India
2016	Biofilm Biology and Drug Development	SASTRA, India
2015	Basics of Forensics	SASTRA, India

PUBBLICAZIONI

Articoli su riviste/ ricerca
Kumar A, Boovarahan SR, Prem PN, Ramanathan M, Chellappan DR, Kurian GA. Evaluating the effects of carbon monoxide releasing molecule-2 against myocardial ischemia-reperfusion injury in ovariectomized female rats. Naunyn Schmiedebergs Arch Pharmacol. 2021 Oct;394(10):2103-2115. doi: 10.1007/s00210-021-02129-8. Epub 2021 Aug 2. PMID: 34338837.
Belfiore, A., Stetco, D., Kumar, A., Pruneri, G., Keeley, T. (2024) To analyze the performance of newly available colon organoid culture media from ADS Biotec with a lab made media, ADS Biotec. (White paper)

ALTRE INFORMAZIONI

<p>Worked as a Data Warehouse Analyst at Cognizant Technology Solutions, India from Aug 2020- Dec 2022.</p> <p>In my role, I led the construction of clinical trial databases, overseeing ETL processes and integrating case report forms from diverse source systems. Adhering to ICH-GCP guidelines, FDA expectations, and CDISC standards, I played a pivotal role in database design, development, and validation, especially in LSH and Oracle Life Science Data Hub. I collaborated with data providers to ensure seamless integration and analysis. Proficient in Informatica Power Center, I optimized workflows and resolved issues effectively. I have expertise in SQL, SAS, and Spotfire facilitated data analysis and visualization. I was a Team Leader in this field for Neuroscience area and contributed my work across various therapeutic domains.</p>

Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del DPR n. 445/2000.



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Il presente curriculum, non contiene dati sensibili e dati giudiziari di cui all'art. 4, comma 1, lettere d) ed e) del D.Lgs. 30.6.2003 n. 196.

RICORDIAMO che i curricula **SARANNO RESI PUBBLICI sul sito di Ateneo** e pertanto si prega di non inserire dati sensibili e personali. Il presente modello è già precostruito per soddisfare la necessità di pubblicazione senza dati sensibili.

Si prega pertanto di **NON FIRMARE** il presente modello.

Luogo e data: Milano, 18-Dec-2024.