Dr. RAVI KUMAR NUTAKKI M.Pharm, Ph.D.

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Summary

A Senior Scientific Leader and Consultant with over 18 years of experience in executing research methodologies and providing scientific screening strategies to increase efficiency in the discovery and development of novel therapeutics in cancer, immune and metabolic disease areas. A unique researcher with End-to-End project operational abilities along with data analytics capabilities providing data-driven solutions to the discovery projects. Adept with extensive preclinical discovery biology knowledge with demonstrated ability to plan and execute IND enabling experiments, to produce actionable conclusions and to inform decision making.

SKILLS

Multiple Therapeutic Area Discovery Knowledge
-Cancer, Immune disorders, Sepsis, Psoriasis, Fibrosis, Asthma, Diabetes and Obesity

Discovery Project Handling and Operations Management
-Research and Development of Biologics & NCEs

In-vitro Biology Assays
-Cell culture (mammalian and mouse cell lines) techniques, 3D spheroid models, Cell-based assays, ELISA, Multiplex, Immune phenotyping, Translational biomarker assays, Functional assays, Biochemistry

In-vivo Models
-Syngeneic, Orthotopic, Xenograft, PDX, Cancer metastasis, Adoptive T cell transfers, Immune cell depletion studies, Antigen-induced allergic asthma, DTH, Sepsis models, CIA, NASH, HFD-induced obesity (DIO), STZ-Diabetes, HFD+STZ, Oxymax and energy expenditure, Knockout models and PK-PD studies

Multicolor Flow Cytometry
-Single cell isolation techniques, flow cytometric analysis and interpretations

Effective Communication and People Management

Statistical Analysis & Business Insights
-Machine learning algorithms, R, Tableau

EXPERIENCE

Oncoseek Bio Pvt. Ltd., Hyderabad - *Lead Consultant*
January 2019 - till date

- Providing scientific inputs and overseeing the development of 3D spheroid models for fibrosis and cancer
- Managing laboratory operations, Grant writings, client relations and executions of studies at CROs

Nektar Therapeutics, Hyderabad - *Senior Scientist*
December 2013 - October 2018

- Led discovery projects in cancer (NKTR-214 & NKTR-255) and immune mediated diseases (NKTR-358); key decision maker in the team
- Rationalized data-driven scientific experiments for PEG-conjugated biologics and provided

data-driven insights to advice critical thinking & decision making
- Managed quality control checks for appropriateness in data collection, analysis and reporting; data integrity
- Demonstrated experience with linking experimental data to clinical biomarkers that led to therapeutic hypothesis-driven clinical follow-ups in cancer clinical trials (NKTR-214 & NKTR-358)
- Contributed to the delivery of key mechanistic data for NKTR-358 that resulted in $400 million collaboration deal with Eli Lilly in 2017
- Instrumental in nominating clinical developmental candidate (NKTR-358) for autoimmune mediated disorders in 11 months' time; played an active role in transition from preclinical to clinical development
- Represented pharmacology on program teams and provided inputs on the design and execution of project operating plans and strategies
- Managed the preparation and delivery of experimental protocols and study reports for submission to regulatory approvals ensuring consistency of content within therapeutic areas
- Managed cell culture aspects (mammalian and mouse cell lines), in-vitro biology assays, tumor model experiments, adaptive spleen transfer, mechanistic and PK-PD studies
- Established immune cell isolation and phenotyping procedures; multicolor (12-color) flow cytometry
- Led the people management, performance and career developmental plans for 3 scientists

Biocon-Bristol Myers Squibb Research Centre, Bangalore - *Senior Research Scientist*
July 2008 - December 2013

- Led the in-vivo biology activities for obesity program (MCHR1 antagonists) by collaborating cross-functional teams to execute project deliverables on-time and provided constant updates to the stake holders
- Represented discovery working group meetings and communicated experimental results & conclusions for further strategic decisions
- Developed and managed the conduct of efficacy studies for NCEs in animal models of obesity, fibrotic diseases and neuropathic pain
- Contributed to discovery portfolio: Proposed novel target for fibrotic diseases along with screening strategy that was initiated by the senior management
- Coordinated a team of 3 scientists working simultaneously on different projects to execute IND enabling studies and enabled the transition to clinical developmental candidate nomination
- Contributed to automations in the lab and built experimental specific database in collaboration with IT team

Dr. Reddy's Laboratories, Hyderabad - *Associate Scientist*
May 2004 - June 2008

- Participated in diabetes & obesity research and created scientific reports and data presentations on experimental results
- Handled biology aspects of multiple discovery projects simultaneously without compromising on the quality of deliverables
- Successfully identified and nominated developmental candidates (DC nomination) under dual PPARαδ agonists and AMPK activators programs

Torrent Research Centre, Ahmedabad - *Scientist-II*
September 2002 - May 2004

- Participated in diabetes research, provided data analysis and reporting of biological study results

PROJECTS

- **Ph.D Research Work:** Studies on the role of Quercetin, Curcumin and Dexamethasone on Immune Dysregulation mediated through Th1/Th2 immune cytokine balance in mice challenged with type 1 diabetes and allergic asthma
    - Studied the influence of type 1 diabetes on the incidence Ovalbumin-induced allergic asthma in mice
    - Studied the Th1 and Th2 mediated immune and cytokine changes in comorbid conditions of type 1 diabetes and allergic asthma
    - Studied the immunomodulatory roles of Quercetin, Curcumin and Dexamethasone in comorbid diabetic asthma mice
- **Immuno-Oncology and Autoimmune Projects:**
    - Handled and served as primary contact for 1 clinical translational (Immuno-Oncology) and 2 preclinical (Immuno-Oncology & Autoimmune) developmental projects at Nektar
    - Managed resource planning, budgeting, study designs, executions (including at CROs), compliances and reporting
- **Metabolic Research Projects:**
    - Handled 2 preclinical (Obesity) and 1 early discovery (Fibrosis) projects at Biocon-BMS R & D Centre
    - Handled 2 preclinical (Diabetes & Obesity) projects at Dr. Reddy's and 1 preclinical (Diabetes) project at Torrent
    - Managed cross-functional coordination, study designs, executions and reporting

PUBLICATIONS AND POSTERS

- 3 First Author and 2 Co-Author publications in peer-reviewed journals
    - Therapeutic potential of curcumin on immune dysregulation in comorbid diabetic asthma in mice. Biomed Pharmacol J, 2020; 13(2):821-831
    - Immunomodulatory effect of quercetin on dysregulated Th1/Th2 cytokine balance in mice with both type 1 diabetes and allergic asthma. J Appl Pharm Sci, 2020; 10(3):080-087
    - Role of dexamethasone on immune dysregulation mediated through Th1/Th2 cytokine balance in mice challenged with type 1 diabetes and allergic asthma. Int J Res Pharm Sci, 2019; 10(4):3042-54
    - Role of hepatic blood flow and metabolism in the pharmacokinetics of ten drugs in lean, aged and obese rats. Xenobiotica, 2014; 44(12): 1108-1116
    - Novel 4-oxothienopyrimidinyl propanoic acid derivatives as AMP activated Protein Kinase (AMPK) activators. Letters in Drug Design & Discovery, 2014; 11(6):778-785
- Contributed to the scientific weight of the organizational research by preparing abstracts, posters and slide decks for presenting at relevant conferences and scientific meetings

- Poster 343: SITC 2016, National Harber, Maryland, USA. Anti-tumor activity of NKTR-214; a CD122-biased agonist that promotes immune cell activation in the tumor microenvironment and lymphoid tissues
- Poster 342: SITC 2016, National Harber, Maryland, USA. NKTR-255: an IL-15-based therapeutic with optimized biological activity and anti-tumor efficacy
- Abstract B057: 2016 CRI-CIMT-EATI-AACR Cancer Immunotherapy Conference. The CD-122-biased immunostimmulatory cytokine NKTR-214 combined with checkpoint blockade leads to mobilization of antitumor immunity and synergistic activity

EDUCATION

Ph.D in Pharmacology - GITAM Deemed to be University, Visakhapatnam | 2015-2021

Post Graduate Program in Business Analytics - Great Learning, Hyderabad | 2019

M. Pharm in Pharmacology - Manipal Academy of Higher Education, Manipal | 2000-2002