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Personal Details

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Academic Qualification

- ❖ M.Pharm-Pharmaceutics, The Tamilnadu Dr MGR MEDICAL UNIVERSITY, Chennai, Tamilnadu-India 2009-2011.
- ❖ MBA-Marketing Management, University Of Madras, Chennai, Tamilnadu-India 2012-2014.
- ❖ B.Pharm, The Tamilnadu Dr MGR MEDICAL UNIVERSITY-Chennai Tamilnadu-India 2004-2008.

Professional Career

- ❖ Technical Officer –National Institute of Epidemiology-Indian council of Medical Research-Chennai, Tamilnadu: 2017
- ❖ Xeno pharmaceuticals–Group Product Manager, Chennai, Tamilnadu: 2016 - 2017
- ❖ Scientist at Himalaya Drug Company R&D Bangalore, Karnataka: 2013-2016
- ❖ Scientist at CavinKare Research Centre (CRC), CavinKare Pvt Ltd R&D Chennai, Tamilnadu: 2011-2013

Research Publications-Scientific book

“Design and development of iontophoretic drug delivery system”

Ionto drug delivery therapy LAP Lambert Academic Publishing (2016-09-27) ISBN-13: 978-3-659-95196-1 N. Kirubakaran*, K.Reeta Vijaya Rani ISBN-10: 365995196X
<https://www.morebooks.de/store/gb/book/design-and-development-of-iontophoretic-drug-delivery-system/isbn/978-3-659-95196-1>

Research Publications-Scientific journals

- **DESIGN AND DEVELOPMENT OF EMULSION-BASED CLEAR COMPLEXION SKIN WHITENING CREAM USING *GLYCYRRHIZA GLABRA* (LICORICE) ROOT EXTRACT AND *VATERIA INDICA* (WHITE DAMMAR) BARK EXTRACT BY SKIN MELANIN INHIBITORY PATHWAY** N. Kirubakaran^{*1}, Thiyagarajan², Chandrika Mahendra¹, Sandeep Varma², Vijaya Kumar³, Virendra Tripathi¹ and Babu³ International Journal of Pharmaceutical science & Research (Inclusion in Thamson Reuters) IJPSR, 2017; Vol. 8(3): 1210-1219- E-ISSN: 0975-8232; P-ISSN: 2320-5148 Five-Year Projected Impact Factor: 2.60 DOI :10.13040/IJPSR.0975-8232.8(3).1210-19
- **FTIR SPECTROSCOPIC INVITRO DRUG COMPATIBILITY DERMINATION OF DICLOFENAC DIETHYLAMINE WITH DIFFERENT SOLVENT SYSTEMS** S. Murugan*¹, N. Kirubakaran³, K. Prathap Naik¹, P. Ramaiah¹, Chathurya .Vulchi¹, M. Niranjan Babu²- - Asian Journal of Pharmaceutical Analysis and Medicinal Chemistry 2(1), 2014, 9 - 25. ISSN: 2321-0923 Impact factor 0.798
DOI: <http://www.ajpamc.com/archives1.php?volume=2&issue=1>
- **DESIGN AND DEVELOPMENT OF IONTOPHORETIC DRUG DELIVERY SYSTEM OF L-TYROSINE** N. Kirubakaran*, K.Reeta vijaya Rani, A.Anithaa, R.Senthamarai - International Journal of Pharmaceutical science & Research IJPSR, 2015; Vol. 6(8): 3174-3185 E-ISSN: 0975-8232; P-ISSN: 2320-5148 Five-Year Projected Impact Factor: 2.60 DOI: 10.13040/IJPSR.0975-8232.8(3).1210-19
- **Design And Development Of Polymer Gel Network Technology Incorporated Light Gel Cream For Improved Skin Hydration By Aquaporin 3 Gene Up regulation** Kirubakaran^{1*}, Chandrika Mahendra², Thiyagarajan³, Dilmel Krishnan⁴, Nageswara Rao⁵, Sandeep Varma⁶, Virendra Tripathi⁷, Shyam Ramakrishnan. International Journal of Applied Engineering Research (IJAER)- Volume 10, Number 92 (2015) pp.62-67 ISSN No 0973-4562 *Special Issues* *IF* 0.181
<https://www.rippublication.com/Volume/ijaerv10n92spl.htm>

- **Iontophoresis: Controlled Transdermal drug delivery system** N. Kirubakaran*, K.Reeta Vijaya Rani- - International Journal of Pharmaceutical science & Research-IJPSR, 2015; Vol. 6(8): 3174-3185 E-ISSN: 0975-8232; P-ISSN: 2320-5148 Five-Year Projected Impact Factor: 2.60 DOI: 10.13040/IJPSR.0975-8232.6(8).3174-84

Poster presentation

- Presented “**Design & Development of Iontophoretic drug delivery of L-Tyrosine**” in the Sipra Innovative Pharma Research Award symposium at Sipra Labs Ltd Hyderabad

Scientific sessions

- Participated Scientific session entitle of “**2nd Global Ayurveda festival**” conducted by Ayurveda Kerala at cochi
- Participated Scientific session entitle of “**Rheology Applications in semisolid dosage forms**” conducted by TA instruments at Bangalore
- Participated Scientific session entitle of “**Thermal Analysis**” conducted by TA instruments at Bangalore
- Participated Scientific session entitle of “**Gel Permeation Chromatography** “conducted by Aimel instruments at Bangalore
- Participated 64th IPC entitle of “**Pharmacy Education, innovation and strategies 2020**”conducted by Tamilnadu pharmaceutical Teachers Education at Chennai
- Participated Scientific session entitle of “**Carbopol:Applications in pharmaceutical dosage forms**” conducted by Lubrizol at Chennai
- Participated Scientific session entitle of “**Stability studies/ Testing with Current Guidelines**” conducted by Thermo lab Scientific Equipment’s Private limited at Chennai
- Participated **ICMR sponsored workshop on “Stem cell applications and opportunities in drug discovery**” at Periyar college of pharmaceutical sciences, Trichy
- Participated national seminar on “**New Drug Inventions and Reverse Engineering**” at PRIST UNIVERSITY, Pondicherry Campus, Pondicherry
- Participated “**National Conference on Recent Trends and Applications of Nanotechnology in Pharmacy and Biology**” at Anna University, Tirchy
- **AGILENT Seminar about Handling of HPLC and Gas Chromatography at Trichy**

Oral Presentations

- Oral research paper Presented on entitle of “**Formulation Optimization of Clear Complexion Whitening Day Cream-CNLP**” in the Scientist of the Contest at Himalaya drug company Bangalore
- Oral research paper Presented on entitle of “**Formulation and invitro evaluation of antacid product**” in the Annual Success sharing programmed at Cavinkare Research Center Chennai
- Oral research paper presented on entitle of “**Formulation and invitro release of Transdermal patch of alcoholic extract of *adathoda vasica***”at R.V.S College of pharmaceutical sciences Coimbatore
- Oral research paper presented on entitle of “**Optimization of Iontophoretic drug delivery profile of Lidocaine hydrochloride-a local anesthetic**” at R.V.S.college of pharmaceutical sciences Coimbatore
- Oral research paper presented entitle of “**effect of piper longum on the bioavailability of boswellic acid fraction of boswellia serrate**” at Periyar college of pharmaceutical sciences trichy

Projects

- M.Pharm:
Design & Development of Iontophoretic Drug Delivery system of L-Tyrosine
- B.Pharm:
Awareness of AIDS in Kancheepuram District Tamilnadu 2008

Research expertise (Active ingredients and formulations development)

- Identification, development and discovery of specialty proprietary and efficacious active ingredients for finished products of skin care and hair care formulation. Development of botanical ingredient for pharmaceutical and cosmaceutical ingredients.
- Formulations like cream, lotion & gels for skin care s & Face washes, Face scrub's for skin cleansing segments & shampoos & hair gels for hair care formulations.
- OTC formulations like AntiPsoriasis Antiseptics, Foot care, Pain balms, Pain liniments, Pain lotions for healthcare segments
- ingredients like emulsifiers, surfactants, humectants, opacifiers, viscosity enhancers, preservatives etc.
- Formulation Development in the area of Therapeutic cosmetics.
Exposure of Tablets, suspensions, Liniments, Ointments, syrubs etc.
- Exposure of fragrance & flavors for personal & OTC & Food & FMCG products.
- Having Exposure of Packaging Materials & Filling Process.
- Experience of laboratory training focused on complex laboratory techniques, advanced instrumental analysis

Development of Formulations & marketing co-ordinations

- ❖ Development of skin care cream and lotion for F&D feasibility with incorporation of several skin care active ingredients having above properties.
- ❖ Development of cream shampoo for hair care cream shampoo with initial active ingredients of above properties for FD feasibility.
- ❖ Development of initial formulation to justify the efficacy of new natural preservatives.
- ❖ Well accustomed with Knowledge on various formulations ingredients like surfactants, emulsifiers, humectants, thickeners, preservatives, Opacifiers etc.
- ❖ Fragrance profiling as per the Project & product requirements.
- ❖ Fragrance dossier optimization as per the product & Market scenario.
- ❖ In house Fragrance stability studies as per the ICH guidelines.
- ❖ Documents pertaining to IFRA certifications, Allergens, MSDS etc.
- ❖ Vendor development & co ordinations with perfume houses.

Projects

- ✓ **Identification and development of unique ingredient compatible for skin care formulations for several key needs:** skin lightening, anti-aging, wrinkles reduction, Acne, Dry skin
- ✓ **Identification of and development of ingredient compatible for Hair care formulation for several needs:** Hair loss prevention, Anti-dandruff, Natural surfactants
- ✓ stability study of the various products
- ✓ Actively involved in the Cost cutting and Cost optimization process.
- ✓ Evaluate new application of ingredients through thorough literature survey
- ✓ Evaluation of physicochemical properties of active ingredients with respect to skin care and hair care formulations.
- ✓ Identification and selection of botanical ingredients to deliver cutting edge claims on the various consumer products on the basis of chemistry and pharmacology
- ✓ Scale up of various standardized herbal ingredients.
- ✓ Pharmacological evaluation through literature survey by in-vitro, in-vivo and human trial, clinical study of the finished products and active ingredients for claim substantiation of the products.
- ✓ Testing and approval of ingredients for pharmaceutical and cosmoceutical formulations.
- ✓ Resolving consumer complaints in pharmaceutical products and providing answers to various queries to MOH of various countries.
- ✓ Train and develop R& D officers and trainees.
- ✓ Standardization of botanicals and finished formulations by Fragrance & sensorial aspects as per the consumer & customer & competitive strategy.

Major Challenges

- **Skin care:** To understand pathophysiology and mechanism of various skin disorders like acne, skin darkening, vitiligo, wrinkle and various other skin disorders. Finding of putative biomarkers on the cascade path way and develop active ingredients containing formulations for targeting the biomarkers. Effectively extrapolating the active's efficacy in to successful formulation.
- Development of New Iontophoretic drug delivery system for various therapeutic areas
- To designed the iontophoretic device & validation of designed devices as per the delivery & safety aspects. Various invitro & invivo studies of amino acids, analgesics, herbals through transdermal pathways.
- Transdermal pathway of improved skin penetrations using different chemical enhances by invitro study models.

Software Skills

- Statically analysis using Graph-Pad Software
- Kinetics release analysis using software
- MS-Office 2003 & 2007
- MS-Office Project 2003
- Image J software for particle size determination
- Rheosoft software for Rheometer

RELAVENT TRAINING INVOLVED

- In Plant Training in “**Quality Control and Quality Assurance in**” Mical Laboratory Limited Guindy, Chennai. 2007

Awards /achievements:

- ❖ College First Rank in B. Pharm Under Dr.M.G.R.Medical University Examination
- ❖ Barthiyar Award from HOPE organization, Trichy due to best performance in Education
- ❖ Best performance award in radio Jacky from Hello Fm 106.4, Trichy
- ❖ Scientist of the winner award in Himalaya drug company