



The NGS MIPS Herald

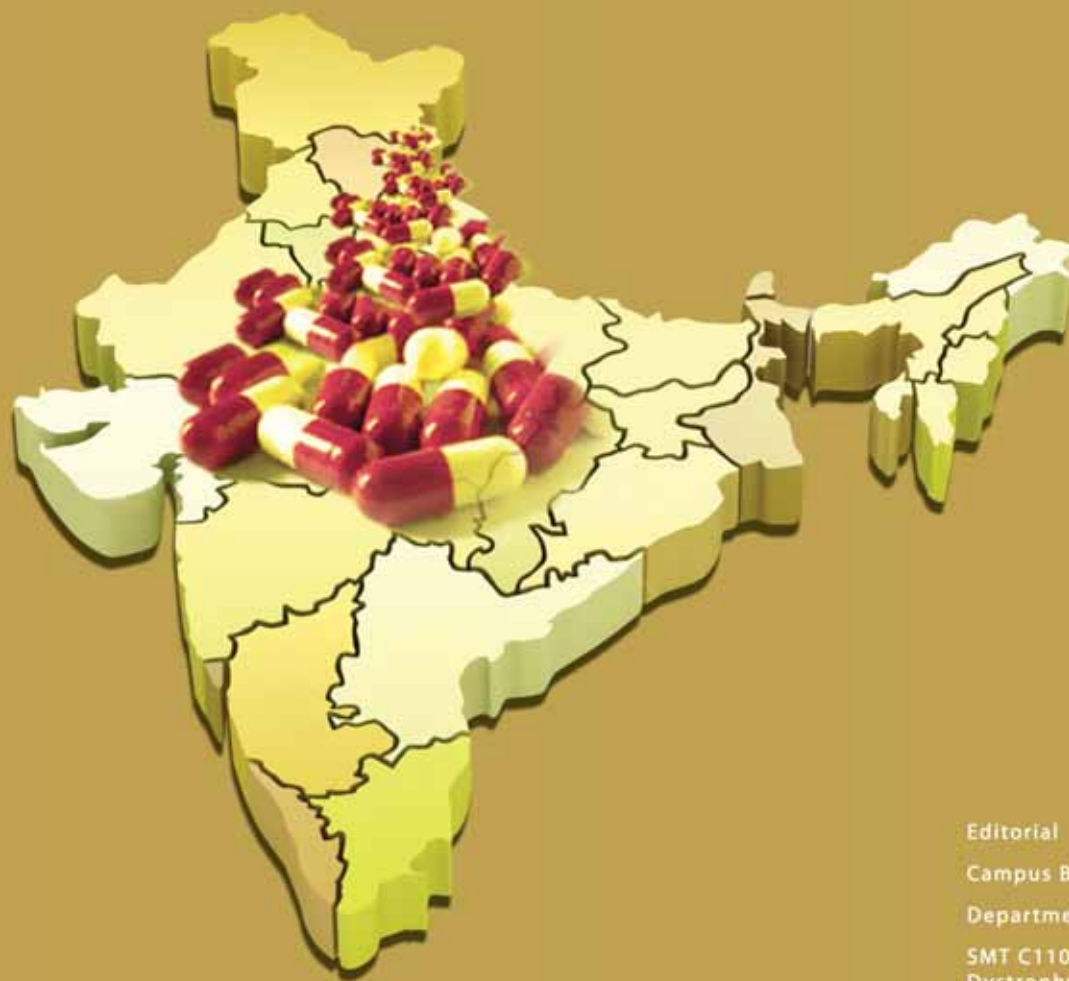
The Official news letter of the Nitte Gulabi Shetty Memorial
Institute of Pharmaceutical Sciences, Mangalore



Volume - 4

Issue - 4

October - December 2013



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VISION

To build a humane society through excellence in education and health care.

MISSION

To develop Nitte University as a centre of excellence, imparting quality education, generating competent, skilled manpower to face the scientific and social challenges with a high degree of credibility, integrity, ethical standards and social concern.

'For Private Circulation Only'

From the Editor's desk



Friends,

The health care system in India, with relentless pursuit has finally rid of polio and declared India polio free. However, the bigger challenge – eradication of tuberculosis still remains elusive. An estimated three million people in India are infected with active tuberculosis with thousands of new cases being reported every year. Poor sanitation, compromised immune system, high pricing of anti TB drugs, medication non compliance by the patients, incorrect prescription and total drug resistance (TDR) may all contribute to the failure of controlling this most recalcitrant disease.

The initiatives taken by the government for the eradication of TB like DOTS is laudable and has a positive impact in the last one decade. But more worrisome is the regularity with which the new cases of TB with MDR/TDR are being reported. It is very important to address the cause of such high rate of new cases.

The main reason is poor nutrition resulting in immune compromise making the person an easy prey. That is why the incidence is very high in the economically underprivileged. The government must focus in its food security program to provide **balanced diet with high nutrition value**. NGOs, private organizations and individuals should be involved for the effective implementation of “nutrition for all”. It requires strong commitment on the part of government to ensure that the program on paper reaches every person – especially the high risk group. It will be unrealistic to expect that only with the drug treatment we can have a control on TB. Hygiene, food and nutrition security must be a part of TB eradication program for the effective management of tuberculosis.

One last word- it is time that our pharmacy professionals integrate themselves in providing health care to all. The pharmacy practice department of NGSM Institute of Pharmaceutical Sciences has already taken some initiatives. The post graduate and undergraduate students may be given specific assignments to provide health and drug related information to people not only for the cure but also for the prevention of diseases.

C.S. Shastry, Editor in-Chief

Seminar on “Trends in Clinical Research”



Practical Placement Preparation Workshop for M.Pharm students



CAMPUS BUZZ

Inauguration of Student Council and Freshers Day Celebration

The Institution celebrated the inauguration of its new Student Council for the academic year 2013-2014 and Freshers' Day Celebration at the K. S. Hegde Auditorium on 1st October, 2013.



Prof. Rajshekar M. with Dr. C.S. Shastry, Dr. Narayana Charyulu, Mr. Anil Kumar and Ms. Rehab Tonse

The Chief Guest for the formal function was Professor Rajshekar M., Director, Curriculum Development, Nitte University and the function was presided over by Dr. C.S. Shastry, Principal, NGSMIPS. In a small ceremony, the



incumbent office bearers handed over their badges to the new members. The following are the members of the new student council.

President	: Mr. Anil Kumar, III B.Pharm
Vice President	: Ms. Thabassum A., II B.Pharm
General Secretary	: Mr. Anuroop Sood, II Pharm. D.
Cultural Committee	: Ms. Sofia Sunny, III B.Pharm Ms. Deenu Elsa, II Pharm. D. Mr. Mohammed Faizal, II B.Pharm
Sports Committee	: Ms. Trupti Shetty, III B.Pharm Mr. Jibin Jose, II B.Pharm
Literary Committee	: Ms. Raina, III B.Pharm Ms. Anit Tresa Kurian, III B.Pharm Ms. Sneha Dessai, II Pharm. D. Mr. Jestin Joseph, II B.Pharm

The occasion concluded with entertainment by the students and a talent show put up by the freshers of B.Pharm and Pharm D.

Seminar on Clinical Research held

A One-day seminar on "Trends in Clinical Research-An Overview" was organized by the Department of Pharmaceutical Chemistry on 12th November 2013 at NIBF Auditorium, Paneer. In his inaugural speech, Dr. B. Satheesh Kumar Bhandary, Dean, K.S.Hegde Medical Academy said that India is set to emerge as a global centre of excellence for clinical Research by 2020. The Seminar attended by over 150 delegates, was delivered by a team of executives from Quintiles India, Bangalore headed by Mr. Sanjay Patel, Senior Director & Head-Clinical Data Management (CDM). Besides Mr. Sanjay Patel who discoursed on "Career Opportunities in Clinical Research and Corporate Expectations: An open forum", the other resource persons from his team were Mr. Raghavendra Kalmadi, Director, CDM who spoke on Clinical Data Management and Mr. Kripesh K, Manager who delivered a lecture on Pharmacovigilance and Adverse Drug Effects. Mr. Sanjay Patel invited the students of the institution to undertake advanced training in CDM at their facility in Bangalore. The team from Quintiles promised to visit the institution periodically to update the students and staff in this area.

Nitte University Centre for Animal Research and Experimentation (NUCARE) and Pharmacy Practice Block Inaugurated

The newly established Nitte University Centre for Animal Research and Experimentation (NUCARE) at Paneer Campus was inaugurated by Prof. B. Suresh, President, Pharmacy Council of India and Vice- Chancellor, JSS University, Mysore on 28th November 2013. He also inaugurated the Pharmacy Practice Block located in KS hedge Charitable Hospital, Deralakatte. Addressing his remarks to mostly students in the audience at a formal function conducted at the KS Hegde Auditorium, Dr. Suresh emphasized the contribution of B.Pharm and Pharm D graduates to the Pharma Industry and Health Care respectively in India and abroad. He explained that India being a leading producer and exporter of drugs and medicines there is vast opportunity for pharma professionals in the country. It is the job of pharma professionals to ensure that the people get access to affordable medicines, he said. Dr. Shantharam Shetty, Pro Chancellor, Dr. Ramananda Shetty, Vice Chancellor, and Dr. Sudhaker Nayak, Registrar, Nitte University were present on the occasion. Dr. C.S. Shastry, Principal, NGSM Institute of Pharmaceutical Sciences briefed the gathering on the facilities of the Pharmacy Practice Department at the new block of the Hospital and that of NUCARE.



Dr. Hrishikesh Damle

Guest Lectures

Dr. Hrishikesh Damle, MD & CEO of ATRIMED (A Subsidiary of Atrimed Inc. USA) was invited to speak to the students of Final Year B.Pharm and M.Pharm of career



Prof. Ravilochan Rao

prospects in the Pharma Industry. This lecture entitled, “Career Scope and Prospects in the Pharma Industry” was organized by the Placement and Training Cell, NGSMIPS on October 12, 2013 at the NIBF Auditorium, Paneer Campus.

A lecture on ISO certification was also arranged for the teaching faculty of NGSMIPS on November 9, 2013.

The resource person for this lecture

was Prof. Ravilochan Rao from Justice K. S. Hegde Institute of Management, Nitte.

Dr. Himanshu Joshi, Assist. Professor, Department of Pharmacology, NGSMIPS delivered two lectures on “I.P.R: An Introduction” and “A Motivational Training Programme” at the Eastern Institute for Integrated Learning in Management (EILM), Kolkata on October 1, 2013.



Dr. Himanshu Joshi

Sports Day

The Annual Sports Day of NGSM Institute of Pharmaceutical Sciences was held on 4th December 2013. The meet was inaugurated by Prof. C.S.Shastry, Principal, NGSM Institute of Pharmaceutical Sciences. Several field and track events were conducted. Most of the students and the staff participated in the events. Mr. Zainul Azeem of I M.Pharm and Miss Liza George of II Pharm. D. emerged as overall individual champions in boys and girls section respectively.

Practical placement preparation workshop for M.Pharm students

A one day interactive workshop entitled, “Cracking that interview” was organized by the Department of Pharmaceutics and the Placement and Training Cell, NGSMIPS for the First and Second Year M.Pharm students on December 10, 2013 at the Seminar Hall of NGSM Institute of Pharmaceutical Sciences. The objective of this soft skill training workshop was to familiarize the students with the techniques of group discussions, interviewing skills and resume writing as part of the exercise for improving prospects of placement. Mr. Amey Hegde, an internationally certified Corporate Behavioral Trainer, Management Consultant and Motivational Speaker was the resource person for this program and was assisted by Mr. Raghavendra K, Assistant Manager of Sanofis Aventis, Goa.

The workshop commenced with a brief inaugural ceremony wherein Dr. Narayana Charyulu, Professor and Head, Department of Pharmaceutics introduced the speaker, Mr. Amey Hegde to the delegates. Dr. C.S Shastry, Principal emphasized to the student delegates the importance of soft skills for improving employability in the competitive job market.

PhD awards

Mrs. Nisha Girish Shetty, Assist. Professor, Department of Pharmaceutics has been awarded the Degree of Doctorate in



Philosophy (Ph.D.) in Pharmaceutical Sciences by the Nitte University, Mangalore. She has worked on her thesis entitled, “Investigation of pH triggered *In Situ* Gel Forming Solutions of Imidazoline Drugs for Ocular Administration” under the guidance of Prof. (Dr.) R. Narayana Charyulu. Vice Principal and Head, Dept of Pharmaceutics, NGSM Institute of Pharmaceutical Sciences, Deralakatte, Mangalore.

Mrs. Nimmy Chacko, Assist. Professor, Department of Pharmacology has been awarded the Degree of Doctorate in Philosophy (Ph.D) in Pharmaceutical Sciences by the Nitte University, Mangalore for her dissertation entitled, “Phytochemical and Pharmacological investigation of *Costus igneus*”, under the guidance of Prof.(Dr.) C.



S. Shastry, Head of Dept of Pharmacology and Principal, NGSM Institute of Pharmaceutical Sciences, Deralakatte, Mangalore.

NGSMIPS Students win accolades in Sports Events

The students of NGSM Institute of Pharmaceutical Sciences secured Second Place in March Fast conducted by the Nitte University Inter Collegiate Athletic Meet 2013-14 which was held on 18th October 2013. Students actively participated in different events and bagged many prizes.

Many of the non teaching staff also actively participated in this Athletic Meet and bagged many prizes. Ms. Jyosna Shetty won First Place in 50 & 100 mtr., Mr. Nithin Shetty won First Place in Discus Throw and Sercond Place in shortput while Mrs. Shamitha bagged the Third Place in 50 & 100 Mtr. and the Second Place in Discus throw was won by Mrs. Ramya Shetty.

First Year M.Pharm students namely Mr. Sudi Daniel, Mr. Nirmal Deshprabhu, Mr. Bopanna K. A, and Mr. Avinash



T. S. secured Runners Up Trophy at the Nitte University Inter Collegiate Table Tennis Tournament held on 22nd October, 2013

M.Pharm students bag second prize in Quiz competition

Mr. Tom Jose and Miss. Bindu V. of I M.Pharm won second prize in Quiz competition. The PG intercollegiate quiz competition, “Receptor Race” was conducted by the Department of Pharmacology, KSHEMA, Mangalore on 6th November 2013 during the one day seminar on “Update on Receptor Pharmacology”.

DEPARTMENT ACTIVITIES

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

RESEARCH PUBLICATIONS

DR. K. ISHWAR BHAT, Professor

1. Synthesis and biological evaluation of some novel 2-Mercapto Pyrimidines, *International Journal of Pharmacy and Pharmaceutical Sciences* 2013; 15: 471-73.
2. Cytotoxic, analgesic and anti-inflammatory studies of Prazoline derivatives derived from 2-acetyl pyrole, *Indian Journal of Heterocyclic Chemistry* 2013; 23: 69-74.
3. Synthesis and biological evaluation of some novel 2-hydroxy Pyrimidines, *Int. J. Drug & Res* 2013; 5(3): 150-154.

DR. JENNIFER FERNANDES, Professor

Synthesis and Biological Activity of some novel Quinoliny Chalcons derived from N-Substituted 2-Quinolones. *Research J Phar and Tech.* 2013; 6(12): 1336-1339.

DR. JANE T. JACOB, Assoc. Professor

A stability indicating RP-HPLC method for simultaneous estimation of Emtricitabine, Tenofovir disoproxil fumarate and Efavirenz in pharmaceutical dosage forms, *Int. J. Res. Pharm. Sci.* 2013; 4(2): 391-396

DR. REVANA SIDDAPPA B.C., Assist Professor

Synthesis and Biological Evaluation of 1,3,4-Oxadiazoles, *Universal Journal of Pharmacy*, Sep-Oct. 2013; 2(5): 112-114.

PAPERS PRESENTED AT CONFERENCES

Dr. K. Ishwar Bhat presented a paper entitled, "Synthesis, antibacterial, antifungal and cytotoxic screening of 1,5-Benzodiazepines" at the International Conference on Emerging trends in Chemical Sciences organized by the VIT University, Vellore on 5th - 7th December, 2013

Ms. Jainey P. James, Lecturer, presented a paper entitled, "Synthesis, Antitumor and Antioxidant activity studies of Cyanopyridones" at the International Conference on Emerging Trends in Chemical Sciences (IETC) organized by the VIT University, Vellore, Tamil Nadu on 5th - 7th December 2013.

She has also presented an e-poster entitled, "Synthesis of Pyrimidine bearing benzene sulfonamide as antitumour and anti-tubercular agents", at the 18th Annual National Convention of the Association of Pharmaceutical Teachers of India held at Vikas Institute of Pharmaceutical Sciences, Rajhamundry, Andhra Pradesh from 25th - 26th October.

Mr. Abhishek Kumar, Lecturer, participated and presented a poster on the research paper entitled, "Synthesis, Characterization and Antimicrobial Activity of some Novel Quinoliny Chalcons derived from N-Substituted 2-Quinolones", at the 32nd Annual Conference of Indian Council of Chemists, held at the Department of Studies in Chemistry, Karnatak University, Dharwad on 28th - 30th November, 2013

Mr. Pankaj Kumar presented a poster on his research paper entitled, "Synthesis and Antibacterial Activities of Oxazolidinones having Benzo Thiazene Moieties", at the 32nd Annual Conference of Indian Council of Chemists, held at the Department of Studies in Chemistry, Karnatak University, Dharwad on 28th - 30th November, 2013

The following teaching faculty presented their research papers at the 65th Indian Pharmaceutical Congress, Amity University, Noida held on 20th - 22nd December, 2013

Dr. Jennifer Fernandes, presented a paper by poster entitled, "Evaluation of for Antiulcer activity of stem barks of *Ficus bengalensis* Linn in rats"

Dr. Ronald Fernandes presented a paper by poster entitled, "Evaluation of for Anti-inflammatory Activity of Stem Barks of *Sapindus trifoliatus* Linn"

Dr. Jane Jacob presented a poster on, "Stability indicating RP-HPLC for the simultaneous estimation of Lamivudine, Emtricitabine, Tenofovir and Efaviranez.

Dr. Prerana Shetty presented a poster on, "Toxicity studies of calcium carbide – An artificial fruit ripener"

DEPARTMENT OF PHARMACEUTICS

RESEARCH PUBLICATIONS

DR. R. NARAYANA CHARYULU, Professor

1. A Comparative Study of Terbinafine Ethosomal Formulations: A Novel Approach, *Nitte University Journal of Health Sciences.* December 2013; 3(4): 23-29.
2. Formation and Evaluation of Mucoadhesive Oral Gel Containing Miconazole Nitrate for Oral Candidiasis, *Research Journal of Pharm. and Tech.* November 2013; 6(11): 1251-53
3. Design and Evaluation of Melt in Mouth Films of Almotriptan, *International Journal of Pharm.Sci. Rev. Research.* Nov-Dec 2013; 23(1): 71-77.
4. Influence of Bioenhancers on the In Vivo Fate of Niosome-Encapsulated Methotrexate, *Trends Biomater Artif. Organs* Oct. 2013; 27(4): 138-145.
5. Formulation and Evaluation of Acyclovir Matrix Tablet using Mucoadhesive Polymer, *Journal of Drug Delivery and Therapeutics* 2013; 3(5): 52-57.

DR. NISHA GIRISH SHETTY, Assist. Professor

1. Design, Development and Evaluation of an Antiviral Drug Loaded Microencapsulation Technique. *Res J Pharm Bio Chem. Sci.* 2013; 4(3): 585-595.
2. Preparation and Characterization of Sustained Release Tablet Containing Solid Dispersion Granules of an Anti-Hypertensive Drug

MR. AMIT B. PATIL, Assist. Professor

Development and characterization of atenolol fast dissolving orodispersible films. *World Journal of Pharmaceutical Research.* 2013; 2(6): 3284-3295

DR. VIJAYA C. DODDANGOUDAR, Assist. Professor

Reduced vancomycin susceptibility in porcine ST9 MRSA isolates, *Frontiers in Microbiology* 2013; 4: 316(1-6)

PAPERS PRESENTED AT CONFERENCES

Mr. Amit B. Patil presented a paper entitled, "Design and characterization of atenolol fast dissolving orodispersible films embedded with pullulan and solubilizing agent" at the 65th

Indian Pharmaceutical Congress, Amity University, Noida held on 20th – 22nd December, 2013

DEPARTMENT OF PHARMACOLOGY RESEARCH PUBLICATIONS

DR. C.S. SHASTRY, Professor

The Phytochemicals explored from the roots of *Syzygium cumini* (L) skeel assessed for Anti-hyperglycemic activity, *Asian Journal of Research Chem.* October 2013; 6(10): 920-925

PAPERS PRESENTED AT CONFERENCES

Dr. C.S. Shastri, presented a paper entitled, "Evaluation of radioprotective effect of aqueous extract of the seed kernel of *Entada scandens*" at the 65th Indian Pharmaceutical Congress, Amity University, Noida held on 20th – 22nd December, 2013

DEPARTMENT OF PHARMACOGNOSY RESEARCH PUBLICATIONS

MRS. DIVYA JYOTHI, Lecturer

Design, development and evaluation of antidiabetic liquid oral preparation from extract of fenugreek, *International Journal of Pharmaceutical research and Bioscience.* 2013; 2(4): 39-47.

MR. ATANU BHATTACHARJEE, Lecturer.

1. Evaluation of acute and sub-chronic oral toxicity study of ethanolic extract of *Crataeva nurvala* Buch-ham stem bark on experimental Wistar rats. *Research J. Pharmacognosy and Phytochemistry.* 2013; 5(6): 293-296.
2. Isolation, purification and structural elucidation of novel bioactive phytoconstituents from *Crataeva nurvala* Buch-ham stem bark chloroform fraction. *International Journal*

of Pharmaceutical Research and Bio-Science. 2013; 2(5): 452-64.

3. Phytochemical and ethno-pharmacological profile of *Desmodium gangeticum* (L.) DC.: A review. *International Journal of Biomedical Research.* 2013; 4(10): 507-15.

PAPERS PRESENTED AT CONFERENCES

Mrs. Divya Jyothi presented e-poster entitled, "Development and evaluations of various Antidiabetic oral herbal formulations from fenugreek extract", at the 18th Annual National Convention of the Association of Pharmaceutical Teachers of India held at Vikas Institute of Pharmaceutical Sciences, Rajahmundry, Andhra Pradesh from 25th - 26th October.

DEPARTMENT OF LIBRARY AND INFORMATION CENTRE

MR. CHANDRASHEKHAR D, Librarian

1. Published and presented a paper entitled, "Information and Communication Technology Skills for Library Professionals in the digital era" at the National Seminar on "Innovative practices in Libraries" held on 13th December 2013 at the Besant Women's College, Mangalore
2. Published and presented paper entitled, "Open Archive Initiatives in Health Science Services: an Overview" at SoFERENCE-2013 a social conference jointly organized by TCS and KALA, on 19th and 20th Oct 2013 held at TCS Ltd, Bangalore.
3. Presented a paper entitled, "Role of Librarians in the Evidence based Medicine" at the 5th Annual Conference of Karnataka Health Sciences Library Association, on 24th and 25th January 2013, held at Father Muller's Medical College, Mangalore.

SMT C1100- A New Approach to Treat Muscular Dystrophy

Compiled by: **Mr. Ananth V Prabhu & Mr. Shanon Ben Mascarenhas**

I Year M.Pharm

Department of Pharmaceutics

Introduction

Muscular dystrophies (MD) are a group a group of genetic diseases characterized by progressive weakness and degeneration of the skeletal or voluntary muscles which control movement. The muscles of the heart and some other involuntary muscles are also affected in some forms of muscular dystrophy, and a few forms involve other organs as well.

Duchenne Muscular Dystrophy (DMD) is the most common form of MD and primarily affects boys. It is caused by the absence of dystrophin, a protein involved in maintaining the integrity of muscle. Onset is between 3 and 5 years and the disorder progresses rapidly. Most boys are unable to walk by age 12, and later need a respirator to breathe.

Symptoms

The symptoms of muscular dystrophy are the result of a deterioration of the body's muscles. This deterioration is due to the death of the muscle cells and muscle tissues and leads to ongoing muscle wasting and muscle weakness. Muscular dystrophy progresses and gets worse over time eventually. This results in difficulty walking, disability, the need for leg and hand braces, and ultimately the use of a wheelchair. The muscle weakness of muscular dystrophy often begins in the legs.

About DMD

DMD is a degenerative muscle disease — affecting boys almost exclusively — that involves progressive degeneration of voluntary and cardiac muscles, with resulting weakness and heart abnormalities. The disease manifests in early childhood, causing delayed motor milestones and, in some cases, cognitive, behavioural or language deficits. Loss of the ability to walk occurs in most children with DMD between the ages of 10 and 12 years; weakened cardiac and respiratory muscles severely limit life span.

The disease is caused by a number of different mutations in the X-chromosome gene that carries instructions for the muscle protein dystrophin. Without dystrophin, muscle fibers are abnormally fragile and break down under the stress of contractions.

Corticosteroid medications, such as prednisone and its chemical cousin prednisolone, slow disease progression.

About SMT C1100

Utrophin is the functional equivalent protein to dystrophin in foetal and regenerating muscle and its SMT C1100 is designed to regulate and maintain the production of utrophin. Utrophin is a protein that is highly expressed in fetal and regenerating

muscle but decreases as the muscle fibre mature and is eventually replaced by dystrophin, a similar protein that maintains the integrity and healthy function of muscles. Patients with DMD are unable to make dystrophin, resulting in muscle fiber degeneration. SMT C1100 is capable of increasing utrophin to restore and maintain the healthy function of muscles, including the heart and diaphragm.

Outline of Pre-Clinical Studies done on SMT C100 in wild type mouse

SMT C100 shows two fold increase in utrophin RNA and protein in skeletal muscle, diaphragm and heart. There is reduction in membrane damage and rate of muscle fibre degeneration. Increase in fibre survival and decrease in pathological symptoms. Protects against forced exercise changes and calcium influx profile was equivalent to wild type mouse. Increases the number of normal fibres. Over 75% decrease in necrotic area. Improved muscle function completely protects against loss of grip strength. Improved muscle function reduces muscle fatigue. Analogous to the 6 minute distance walk test - primary efficacy endpoint in DMD clinical trials.

Outline of Phase 1, double-blind, placebo-controlled study in healthy male subjects

Primary Objective – To determine the safety and tolerability of single oral ascending doses and multiple oral doses of SMT C1100 in healthy male subjects.

Secondary Objectives

- To determine the single and multiple oral dose pharmacokinetics of SMT C1100 in healthy male subjects.
- To determine the effect of food on the single oral dose pharmacokinetics of SMT C1100 in healthy male subjects.

Study Design – Double-blind, placebo-controlled, single ascending oral dose study and multiple oral dose study conducted in two parts,

Part 1 comprised of an ascending single dose, sequential group study, incorporating a food effect evaluation.

32 subjects studied in 4 groups (50mg/kg, 100mg/kg, 200mg/kg, 400mg/kg), each group consisting of 8 subjects.

Part 2 comprised of a multiple dose, sequential group study. 16 subjects studied in 2 groups (100mg/kg and 200mg/kg bid)

Increase in SMT C1100 plasma concentration above estimated efficacy levels with single ascending doses

Increase in single oral dose from 50mg/kg up to 400mg/kg results in plasma levels for several hours above the estimated 0.2µM required for 50% increase in utrophin in the human *in vitro* cell assays.

The new nanoparticle aqueous suspension formulation results in higher plasma exposure of SMT. C1100 in healthy volunteers compared to formulation used in the first Phase 1 Clinical trial.

Increasing the oral dose isn't followed by a directly proportional increase in plasma exposure however in a subgroup of individuals in each dose group there is a significant increase. Analysis of the multiple ascending doses looking at 100 mg/kg and 200mg/kg dosed every 12 hours is on-going with data available later this year. All single doses were safe and well tolerated.

Summary of Single Ascending Dose Results

- SMT C1100 has completed a Phase 1 trial utilising a paediatric suspension formulation and was found to be safe and well tolerated in this study
- Orally administered SMT C1100 resulted in higher plasma levels than those required to cause a 50% increase in levels of utrophin in cells *in vitro*
- The authors, Professor Glyn Edwards and Dr. Kay Davies believe the data are strongly supportive of SMT C1100 moving into patient trials

Reference:

- 1) DMD@summitplc.com www.summitplc.com
- 2) <http://www.medicalnewstoday.com>
- 3) <http://www.iamd.in>

Toppers 2012-2013



Ms. Kripa G. S.
I M.Pharm (Pharmacy Practice)



Ms. Ashwini M.
II M.Pharm (Pharmaceutics)



Ms. P. Parvathy Devi
II M.Pharm (Pharmaceutics)



Ms. Meghana Rao
IV B.Pharm



Ms. Rithik Iris Mary Mascarenus
III B. Pharm



Ms. Deeksha U. Suvarna
II B. Pharm



Ms. Natasha Naval Aggarwal
I B. Pharm



Ms. Gayathri Baburaj
I Pharm.D

Inauguration of NUCARE and Pharmacy Practice Block

28th November 2013



Book Post