

# ఆంధ్ర మహిళ

## త్రైమాసిక ద్వితీయాంశ పత్రిక

సంపుటి - 12

సంచిక - 3(45), 4(46)

సెప్టెం.2015-ఫిబ్ర.2016

మార్చి-ఆగస్టు 2016

సంపాదకవర్గం

శ్రీమతి వై. వసుంధర

ఆస్ట్రా కౌసర్

ప్రచురణ

ఆంధ్ర మహిళాసభ కళాశాల పూర్వ విద్యార్థిని సంఘం

దుర్గాబాయ్ దేశ్‌ముఖ్ విద్యాపీఠం

ఉస్మానియా యూనివర్సిటీ రోడ్, హైదరాబాద్ - 500 007.

alams@gmail.com

# INDEX

From the President's Desk	Dr. (Smt.) G.L.K. Durga	3
The Stone That Speaketh (Vol. II)	Dr. Durgabai Deshmukh	4
Transgenesis	Dr. D. Rajeswari Mrs. P. Sandhya Rani	21
Mental Health	Dr. D. Rajeswari Mrs. P. Sandhya Rani	25
Zika Virus	Dr. D. Rajeswari Mrs. P. Sandhya Rani	30
Benefits of Growing Fruits and Vegetables in our own Garden	Dr. A. Pramila	34
Chelation Therapy	Dr. K. Kiranmai Dr. K.B. Shanthi Sudha	36
ఉభయకుశలోపరి (పూర్వవిద్యార్థినుల పలకరింపు)		43
Campus News		44

---

**Cover Page Photo :**

Padmavibhushan Dr. (Smt.) Durgabai Deshmukh



**Padmavibhushan Dr. (Smt.) Durgabai Deshmukh**

(15-07-1909 – 09-05-1981)

Founder President, Andhra Mahila Sabha



## **FROM THE PRESIDENT'S DESK**

I take pride in releasing “ANDHRA MAHILA” as president of Alumni association. I take this opportunity to thank all my predecessors presidents and office bearers for their efforts in keeping alumni association active.



I feel this is a payback time for me to contribute a little to DDMS in general and to alumni in particular.

The college is growing by introducing new job oriented courses to girls and reaping the benefits of autonomy.

I congratulate each and every faculty member and students who contributed to alumni for their support. I thank and wish a beaming future for alumni association.

**Dr. (Smt.) G.L.K. Durga**

President

## Chapter IX. Expansion of Educational Activities and tie Growth and development of Colleges

After my husband and I had left Delhi and taken up our permanent residence in Hyderabad, in 1967 some developments took place which helped the Andhra Mahila Sabha to expand its activities further. Our house “Rachana” is in Bagh Amberpet and within a furlong from the main road of Vidyanagar leading to the Osmania University. My husband and I had an eye on the vacant land right on the opposite side of the main road, just to the left of the entrance to the University enclave. It was a largish area measuring nearly three and half to four acres, but full of ups and downs and looking derelicts. However in the front corner there was a small building constructed by the Telugu Sahitya Academy people where we saw only a handful of men working. Just before the Telengana agitation started the Andhra Mahila Sabha had been thrown into other fields of activities merely by the force of circumstances. By this time many of our girls had passed out of our High School, but could not proceed with their further studies on account of poverty and other reasons. There were also a number of working women living in that area near Andhra Mahila Sabha. A few were living also in our hostel. The working women when they returned home after they finished their work in the house found time hanging heavily on their hands. A large number of them approached us with a request that we might organise Evening Classes to coach them for the Intermediate and B.A. Examinations of the Osmania University, as they were permitted to appear as private candidates because they were working women. The concession was confined only to the working women and to teachers to take the examination as private candidates. We thought that there was a point in what they said and that we should not hesitate to help these women. We made all the arrangements necessary for starting the evening classes and nearly 20 to 25 women

joined these classes and attended regularly. Some of them had so much enthusiasm that they were determined to take the opportunity to improve their prospects if they could get a degree which would qualify them and help them to obtain a higher job with better emoluments. Smt. Putlibai Krishnamurty a very active life member of the Sabha, showed great enthusiasm in undertaking to look after these Classes. She had already passed her M.A, by then. She and her husband Sri. N. Krishnamurthy an educationist went to the University and collected all the necessary rules and regulations applicable to the private candidates and the prospectus of the University. My brother, who happened to be in Hyderabad, took a great deal of interest from the beginning in the Evening Classes and formally inaugurated these classes at an informal function on 15th July, 1966. Smt. Putlibai Krishnamurthy is an efficient and very useful person, with pleasant manners and winning qualities. She also secured the assistance of three or four other graduates to teach in these Evening Classes other subjects as well while she her-self was in overall charge of the Evening Classes and taught History and one or two other subjects. The Evening Classes made remarkable progress and the results of the candidates who were sent up for the examination was cent percent. Soon there after, the Evening Classes which had started only as private classes between 1970-71 assumed the shape of a regular College, qualified to be recognised as one by the University.

Dr. N. Ramesan was then the Finance Secretary, while Sri S. R. Ramamurthy was the Secretary of Education and Sri L. Bullayya the Director of Public Instruction, incharge of both Higher Education and University Education. We approached Dr. Ramesan and Sri Bullayya and later Sri. S. R. Ramamurthy. We found out that such Evening Classes could be recognised as an Evening College and as such would be entitled to a grant to cover the salaries of the lecturers. Shri P. V. Narasimha Rao was then the Education Minister of Andhra Pradesh. The situation was unusual, but with the sympathy of the authorities we succeeded in getting the recognition of our Evening College by the

University and also a grant from the Government to cover the salaries of the lecturers.

### **Land from Osmania University**

The number of the students grew rapidly with the result that soon we again found ourselves in a predicament and started searching for a site where we could build a small building for the College. The three and half acres land which I have mentioned earlier at Vidyanagar appeared to offer attractive opportunities and we focussed our eye on that and saw no reason why we should not seriously try to get this land. Shri. L.B. Deshpande was then the Registrar of the University and Dr. D.S. Reddi, the Vice-Chancellor. We approached the Vice-Chancellor through the Registrar and after much serious thought the University obtained the necessary permission of the Government to grant the site to Andhra Mahila Sabha only for the construction of buildings for the purpose of Colleges and other Educational Institutions

### **Foundation Stones for the Library, Hostel, College and Mahila Vidyalaya**

We were very happy once again when as a result of this turn of events we again had a lot of work on our hands to do for shaping the Evening College and constructing the minimum necessary buildings. We occupied this site officially on August 14th, 1966. We planned in the beginning to start a Library building, a Hostel and a building for the College. The Foundation stone for the Library building was laid by Dr. D.S. Reddi, while the Foundation stone for the Hostel was laid by Dr. (Miss) Olive Reddick, Special Consultant, American Studies Research Centre on the same occasion. Smt. K. Raghavamma Brahmanada Reddy laid the Foundation stone for Mahila Vidyalaya building on this Osmania University Site.

### **Construction of buildings in the College Campus**

Our task in constructing the building on the site given to us was not easy. The surface was uneven and much of the site was a low lying

place, which had to be filled up before anything could be constructed thereon. The only level place where we could start immediately was the one on which our present Library building stands, facing the road. The entire site of three and half acres was like a wild area completely covered with thorny bushes so that it was impossible for anyone even to walk about without sustaining some injury either by a prick of a thorn or by the fall of a stone. My husband and I visited the site every day inspite of these difficulties. The first work was the clearing of the entire site. Shri T.R. Krishnamoorthy of Gannon and Dunkerley who was by that time free from the construction of other buildings in the whole campus of the Andhra Mahila Sabha took on this work and with him was associated a Junior Engineer named Shri K. Madhavrao. My brother was still in Madras but he occasionally visited Hyderabad for a period of a week or ten days. He spent that time in assisting Shri Krishnamoorthy or advising him in the planning of the Library building and also in filling up the other portion of the site, which was bigger than the one which we could effectively use. Shri C.T. Sastry gave all his time to this work on the new site. He lived very close to the site and very near to our house. We met him almost every morning for an hour from eight to nine before he went to -the office in the Andhra Mahila Sabha and discussed not only the plans for the construction of the building but also the plans for raising funds.

We had no money at all that time for the construction of any building; but I was madly optimistic about this and applied myself energetically to raising the necessary funds, at least to the extent necessary to meet the cost of construction of one building. I sent appeals to a number of Industrialists, confining myself not only to Andhra Pradesh but also to every one whom we knew in the whole of India. My belief in the maxim "no good cause would ever suffer for lack of funds" was tested and proved correct in this case. The response to my appeals was so encouraging that within six months \ could collect more than Rs 1,75,000/-. I should like to mention the names of some donors who came forward generously to help us in this matter.

## LIST OF DONORS

	<b>Rs.</b>
1. Glaxo Laboratories	50,000/-
2. War on Want, London	22,500/-
3. Hindustan Lever Ltd.	20,000/-
4. Andhra Pradesh Paper Mills Ltd.	15,000/-
5. Andhra Pradesh Welfare Fund	15,000/-
6. Birla Jana-Kalyan Trust	10,000/-
7. Escorts Ltd.	10,000/-
8. Seth Purushotamdas Thakurdas (Divaliba Charitable Trust)	10,000/-
9. Madgavkar Trust	5,000/-
10. Shri P. S. Rau	5,000/-
11. Shalimar Biscuits Pvt Ltd.	5,000/-
12. Standard Mills Co. Ltd.	2,500/-
13. Brooke Bond India Ltd.	2,500/-
14. Sir Dorabji Tata Trust	1,500/-
15. Sir Ratan Tata Trust	1,500/-
16. Mafatlal Fine Spinning & Manufacturing Co. Ltd.	1,500/-
17. India Dyestuff Industries Ltd.	1,000/-
Total	<u>Rs. 1,78,000/-</u>

We started initially with this amount and on the basis of this made a request to the Government to give us a grant for the construction which we could match by the amount we collected through these donations. I must not fail to express my grateful thanks to Dr. N. Ramesan, the then Finance Secretary, Shri S.R. Ramamurthy and Shri M.V. Rajgopal, and their colleagues who stood by us and helped us in every way possible in our efforts to establish the new campus and put it on a firm foundation. They helped us not only in getting the University's recognition for the Evening College but also in securing the necessary sanction for an adhoc grant to run the College. The Library building



had been planned already by my brother who had put a lot of thinking in the designing of it and also in using utmost economy for the construction. The Library building, besides having a very big hall with two big rooms and two rooms with a bath-room attached, had also on the first floor a gallery with two corresponding rooms large enough to provide enough accommodation for the students.

### **Inauguration of Library building**

The building was ready for occupation and we arranged for a big function for its inauguration. Sri K. Brahmananda Reddy the then Chief Minister inaugurated it on August 15th, 1970. We temporarily organised some classes also in the Library building as the entire building was not needed for the library then.

### **Construction of the College Hostel**

In the meanwhile the construction went on briskly in the new campus and we began to feel more and more optimistic that we would complete the buildings as we planned. Shri B.M. Birla, happened to visit Hyderabad during the period and he communicated through the telephone and expressed a desire that he would like to visit some of our welfare activities and the institutions here. We arranged for his visit on the day convenient to him and my husband and I personally took him round the various institutions in the old campus. We also showed him round the new campus, where the construction of the Library building was proceeding. We also acquainted him with our plans to construct a Hostel to accommodate atleast 75 students of the College. He voluntarily announced a donation of Rs.1,00,000/- which was a pleasant surprise and we felt very happy. Our confidence began to grow stronger in our ability to complete our building plans. We started acquiring the next ground which I mentioned earlier. It required a lot of filling up but we had no alternative for spending some amount only on the filling work. The plan for the hostel was drawn up and we lost no time in starting the construction.

## **Growth and Development of Arts & Science College and College of Education**

I now turn to the growth and development of our Colleges both the Arts and Science College and the College of Education. I have already mentioned earlier that the Evening Classes went on growing, ultimately receiving the recognition of the University as an Evening College and along with it receipt of a grant from the Department of Education. It was suggested by the University that the Evening College should change its character now and assume wider responsibilities and that it should be known as the Arts and Science College. The necessary steps were taken to get the recognition of the University first and it was not long after this that the College became known as the Arts and Science College. As the strength of the College began to grow and the Science section required laboratories we had to collect money for constructing the necessary buildings. Fortunately, we were able to collect nearly Rs. 10 lakhs that year and that was enough for the College not only to get the recognition and the necessary grants from the Department of Education of Andhra Pradesh but also to enable us to apply to the University Grants Commission for their grants. The U.G.C. sent its officers to examine the proposals and judge the possibilities of the College and ensure that land was available on which to construct the new buildings. We were lucky enough to get this grant sanctioned without much delay. We were very happy to hear one day that the University Grants Commission had examined our proposal thoroughly and decided to include our College in the list of Colleges recognised for the purposes of receiving grants from the U.G.C. under section 2-f-(g) of the Act. In the meanwhile realizing that we required more land for constructing the necessary be a continuous process providing for a complete chain of opportunity under which a girl joining at the Nursery stage of Education in the Manila Sabha should end with B.Ed, course after completing the Middle and Higher Secondary School stage go on to take a B.A., degree and finally join the Bachelor of Education Course. In the case of Andhra Mahila Sabha the dream

came to be realised in an even more complete manner in the sense that the children born in the Nursing Home of the Andhra Mahila Sabha were able to join the Nursery Classes, then Primary, Higher Secondary, then the College of Arts and Science and finally end with B.Ed, courses. Nothing would be a source of greater pleasure to us than to see our own children who were born in our own Nursing Home now studying in the Arts & Science College and also in the College of Education. In the formative stage of the B.Ed. College we did not apply for any grant. The management decided to run it with their own resources. They found that a reasonable fee collected from the individual students, who were only too ready and too anxious to give to the Sabha, would make the College viable. The management would be able to meet the necessary expenditure, and pay the salaries. Some of the members of the Sabha and other Social workers gave voluntary services in sorting out the applications and going about the various departments for getting the necessary recognition. As I said we did not apply for any grant in the beginning. Smt. K. Lakshmi who was an old student of the Andhra Mahila Sabha and who spent her childhood in the Andhra Mahila Sabha sub-junior and junior schools in Mahila Sabha's Mahila Vidyalaya in Madras was appointed as one of the lecturers in the Arts and Science College. She was originally teaching in Shri Madapati Hanumantha Rao Girls High School, Since she had the necessary qualification she was appointed as a lecturer of the Arts & Science College. She voluntarily offered her spare time to help the B.Ed. College in the early stages. She took her M.A. and also M.Ed, degrees. When applications were called and the selection committee met including the representatives of the Government, Department of Education and the University, Smt. K. Lakshmi was provisionally appointed as she did not have the necessary qualifications of having completed five years of teaching in a College. Her appointment was made with the provision that if any other suitable candidate could be secured with M.A. and M.Ed. plus five years of teaching experience then she might be replaced. Smt. K. Lakshmi was given a lien on her

original teaching post in the Andhra Mahila Sabha Arts & Science College. Any number of advertisements calling for applications with the requisite qualifications failed to produce a suitable incumbent for the Principal's post. Smt. Lakshmi continued to be the Principal and finally the Selection Committee confirmed her as the Principal of the College of Education as she had by then completed three years of teaching in this college. We had also a very good and qualified staff to assist Smt Lakshmi in the B.Ed. College. The College secured cent per cent results in the very first batch sent up for the examination, and also, two students secured University firsts and were awarded gold medals; the second batch also secured cent per cent results and so also the third.

The problem now arose where to accommodate the fast growing College. Temporarily we provided the necessary accommodation in the Institute of Adult and Social Education which we had built (and about which I shall give some information later). The B.Ed. College also has to have a big enough room for arranging the Audio-Visual and the Museum for which there was no place. As far as the practicals of the B.Ed., classes were concerned, the Mahila Vidyalaya provided the necessary facilities and Smt. K. Sugunamani the Secretary and Correspondent of Mahila Vidyalaya did her very best to help the Principal in having the practicals, in her School. The B. Ed. students had to take their practicals, i.e. teaching the students of the Upper Middle Classes as a part of their course. Smt. Lakshmi had also secured the permission of four or five other schools nearby. Since the Principal and staff all worked in a dedicated way and used the other facilities mainly from Andhra Mahila Sabha's Mahila Vidyalaya, it was no surprise to us that they achieved cent per cent results in their examinations.

### **Governing Bodies of both the Colleges**

Shri L.B. Deshpande, who had been the Registrar of the Osmania University and had helped us in that capacity in every possible way

in the establishment of our Colleges, at our request on his retirement took up the Honorary Correspondent's post and he did the work in more or less a voluntary spirit. We only paid him enough to cover his conveyance expenses. With all his experience and the knowledge of the rather complicated rules and regulations of the University and U.G.C. he helped us in making our task easy. Besides, we had to constitute a Governing Body for each of these Colleges according to the rules. Shri A. Gangadhar Rao, who was a lawyer and later became a judge, accepted our request to be the Chairman of the Governing Body. The Governing Body consisted of many experienced and public spirited men like Sarvasri P.V. Raghava Rao, Dr. P.G. Puranik, P.S. Rau, T. Chidanandam, Dr. C.B. Rao and others. My brother Narayana Rao, who is the Secretary of the Trust Board was also chosen as the Treasurer of the Governing Body of the Colleges. Except the representatives from the Osmania University and the Director of Higher Education, who changes from year to year all the other members of the Governing Body are appointed for a term of three years.

### **Examination Results and Scholarships**

The results of both the Colleges were so satisfactory that the Colleges started attracting a lot of students from outside. This success did not go un-noticed and people from far and wide sought to send their daughters to the Colleges for admission. Not only this, but some philanthropic and charitable trusts also offered financial assistance to be given to poor students who could not afford to pay their fees. One of our old students Smt. Gopalan had been a child widow whom we got married to Shri Varadachari a lecturer in the local University in Durban, Natal, South Africa. He taught Telugu and Sanskrit in that University for a long time. They became so popular that the people of Durban began to respect them and consult them in many matters. One day suddenly We received a letter from Shri Varadachari that one Smt. Narayanamma Naidu wanted to create an endowment and in her will she provided, that Rs. 10,000/- be given to any Voluntary Welfare

Organisation in India to be used for the Education or Medical Care of women and children. The Andhra Mahila Sabha had been selected for the purpose. We gratefully accepted this spontaneous offer of assistance and received the money later. Out of this money every year a few scholarships are given to the poor students of both Mahila Vidyalaya and also the Colleges. Rs.5,000/- out of this amount was allotted for purchasing some surgical equipments for the Maternity and Nursing Home. Smt. Naidu's relatives when they heard of this conveyed their satisfaction and pleasure that the aims and objectives of the Trust were truly fulfilled.

Another endowment of Rs. 10,000/- was constituted with the money allotted by Shri S.L.N. Sinha, Director of the Institute of Financial Management and Research, Madras, out of the sale proceeds of the book which they had brought out in honour of Dr. C.D. Deshmukh on the occasion of his 75th birthday. A very influential Committee had been constituted consisting of many eminent people like Shri R.G. Saraiya and others who had been the colleagues of Dr. C.D. Deshmukh when he was the Governor of the Reserve Bank of India. The book was entitled "Economic and Social Development" (essays in honour of Dr. C.D. Deshmukh). They arranged a special function for the presentation of this book in Madras and Dr. Deshmukh, who had completed 75 years of age, received this at that meeting. Not only were many members of the Committee present at the function but the Indian Statistical Institute of Calcutta also was represented by Dr. C.R. Rao, who was present at the meeting. Dr. C.D. Deshmukh had been the President of the Indian Statistical Institute, Calcutta, from 1945 to 1964; with the concurrence of the Committee Dr. Deshmukh donated this amount to the Sabha, and the Trust Board of the Sabha constituted an endowment and decided that the Sabha should organise and hold essay competitions every year and invite students from all the Colleges of the twin cities to send their representatives to participate in the competition. A subject has to be chosen concerning Mahatma Gandhi's life, work and thought. Out of the interest accruing from this amount

two prizes are to be awarded to the winners, one boy and one girl, who stands first in the competition. Three such competitions have already been held in the last three years and not less than 80 to 90 students of the Colleges of the twin cities have participated. The prize given to them was in the form of money, at the rate of Rs.300/- each for the two prize winners. For this purpose Rs.600/- was spent out of the interest accrued and the balance of the interest is spent on making the necessary arrangements to hold these competitions. A committee consisting of Professor M. Venkatarangaiah as the Chairman and Shri Avula Sambhasivarao as the member and\* Shri L.B. Deshpande as the Secretary, has been constituted and this Committee examines the essays and selects two best essays out of the whole lot. The candidates declared as the best by the Committee are awarded Rs.300/- each.

The book itself became so popular that a large number of copies have been sold and the sale proceeds went on increasing. Shri. Sinha sent further sums amounting to Rs.1,500/- to the Andhra Mahila Sabha to be used for the same purpose. The Andhra Mahila Sabha considered this as a great honour done to them and they were also gratified that they were enabled to encourage the study of Mahatma Gandhi's life, work and thought by students.

It is hoped that the original endowment consisting of 'Rs. 10,000/- may be gradually increased so as to enable the Andhra Mahila Sabha to extend the scope of the scheme and throw open the competition not only to the students of the twin cities of Hyderabad and Secunderabad but also to the students of other Colleges and Universities in Andhra Pradesh. I would like to record here that the corpus has already grown to Rs.15,500/-

### **Scholarships in memory of late Smt. Venkataramanamma Chandra Reddy to B.Com. Students of the Arts & Science College**

A third endowment was constituted out of the money received from Shri

P. Chandra Reddy, who was the former Chief Justice of the High Court of Andhra Pradesh. Late Smt. Venkataramanamma Chandra Reddy had been associated with the Sabha from its inception and also was its life member. Her children Ramalakshmi and Pramila, were the students of our dance classes organised by the 'Little Ladies of Brindavan' as early as 1938-39. Sri Chandra Reddy gave this amount to the Andhra Mahila Sabha in memory of his late wife and he desired that the interest on this amount should be constituted into an endowment and should be utilised for the purpose of giving scholarships to poor students of the Arts and Science College and particularly the ones studying in B.Com.

### **Help to poor Women and devoted workers of the Sabha**

Shri K. Brahmananda Reddy, who is now the Home Minister of the Government of India, is one of our trustees. He donated Rs.10,000/- to the Andhra Mahila Sabha for the purpose of helping poor women or such workers of the Andhra Mahila Sabha as had long been associated with the Sabha and had worked for the Sabha devotedly. The Sabha set apart this amount and out of it help was given to Shri C.T. Sastry's family for a year when the family was in a helpless condition as he died very young. Three or four women who were very poor and had no other sources of income coming regularly had some assistance given to them varying from Rs.50/- to Rs.100/- per month out of the interest accrued from this fund.

Shri D.V. Krishna Rao also gave some money to the Andhra Mahila Sabha to be utilized for awarding prizes, to the students of the Arts & Science College, College of Education and Mahila Vidyalaya for Essay and Elocution Competition.

I am happy and proud to say that though the College is known as the Andhra Mahila Sabha Arts and Science College for Women and the College of Education the students of both the Colleges come not only from groups speaking Telugu but also Urdu, Bengali, Marathi, Tamil, Gujarati and Punjabi. A large number of Muslim women join these



Colleges every year. They feel very happy that they are treated well here. As the Colleges are very close to the area where a large percentage of Muslim population lives in Bagh Amberpet, it was convenient to them to join these Colleges. Many among these Muslim students have brought credit to the Andhra Mahila Sabha by securing highest percentage of marks and also some University firsts and gold medals.

I also wish to record here the case of Kum. Bhavani, who is blind but very brilliant. She is the daughter of Dr. G. S. Murthy, a neighbour living in Bagh Amberpet very close to our house "Rachana". We got this girl admitted in our Arts and Science College and after two years of study she came out successfully and secured a high second class in Arts. We are happy that Kum. Bhavani is now appointed by the Arts & Science College as one of the Staff Members and is taking some Tutorials for the students and the students feel very satisfied and pleased with her teaching. Though handicapped Kum. Bhavani acquitted herself very well and proved herself as a very important and useful citizen of the country.

### **National Integration Samithi**

I must record here that the College of Arts and Science constituted among various committees a Committee for National Integration Samithi. The Government of India constituted a National Integration Samithi for working out various programmes for bringing about unity and integration among various communities in the country and also the people of India. As a part of this it was suggested that every College in India should have such a Committee. Accordingly the Arts and Science College lost no time in constituting one. The Committee also receives a grant from the Central Committee every year amounting to Rs.4,800/-. This amount is spent in organising a competition in essay-writing on National Integration and also inviting eminent people to give lectures on the subject of National Integration. Many other activities are also carried out under this programme every year.

## **Staff and Students' Canteen-Non Resident Students' Centre**

In the College campus the Sabha was able to raise some donations for the construction of a Staff & Students' Canteen and Non-Resident Students' Centre. The Ministry of Education and Social Welfare also granted some amount for this purpose. It is convenient for the students who came from long distances to have this Canteen where they could have their lunch or tiffin. Many of the staff members also find it convenient to have their lunch or tiffin at the Non-Resident Students' Centre. Indirectly it helps the staff and the students to come together and sit and chat and also to know each other more closely than they could do in the classes. Smt. Kamaladevi Chattopadhyaya laid the foundation for this Non-Resident Students' Centre on August 15, 1971. Shri R. P. Billimoria, who is the son in-law of the late Sir Jhangir Gandhi and who was also a high ranking official of TISCO, and later became the Managing Director of the Hindustan Steel Ltd, inaugurated this small building on November 18, 1971. By this time the Hostel of the Arts and Science College also started working. Though in the beginning there were only 15 students in the hostel the strength began to grow later and at present it is more than 50. There was growing demand for obtaining admission to the hostel. The Sabha had to give accommodation to some of the students who could not get accommodation here in Andhra Mahila Sabha College Hostel. Smt. Leela GouriBaji the Secretary of the Nursing Home who is also incharge of the Hostel is able to give accommodation every year to not less than 10 to 15 students of both the Colleges.

## **Expansion of the Mahila Vidyalaya and the Construction Programme in the Mahila Sabha Campus**

The Construction programme in the Mahila Sabha campus also expanded at this time as the Nursing Home went on receiving grants for increasing the Hostel accommodation. They were able to put up a building in which the ground floor is being utilised for the use of medical experts and doctors such as the Heart, Eye, Skin and Throat

specialists etc., to have their consultation and treatment to the patients. The first floor is utilised for holding classes for A.N.M. Training and also for General Nurses. The foundation stone for this building was laid by Acharya Mamidipudi Venkatarangiah on June 27, 1964 and the building was inaugurated by Shri Devulapalli Venkata Krishna Sastry on February 2, 1966 and Dr. V.K.R.V. Rao Presided.

### **Library building of the Mahila Vidyalaya**

The Mahila Vidyalaya has also in the meanwhile improved and developed and was in a position to utilise some of its funds for the construction of a separate Library building. Smt. Chandramati Devi's donation of Rs.5,000/- added to this amount and this building was built at a total cost of about Rs.22,000/-. Smt. K. Sugunamani and her colleagues worked very hard in collecting donations for this purpose, enlisted many life members and also arranged for benefit shows and the total amount was used for construction of this Library building. This building came to be known as "Saraswati Nilayam" and was inaugurated by Dr. C.D. Deshmukh, on November 14, 1973. The library books of our Saraswati Nilayam have become very popular both among the students and also the members who read regularly. At least a hundred books are added every year. The library today has about 2,000 books.

### **Gift of Library books from Ranfurly Library, London**

I should be failing in my duty if I did not acknowledge the handsome gift of nearly 7,000 books by Ranfurly Library of the Women's Indian Association and the Women's Council in the United Kingdom and thanks to the efforts of my sister-in-law Smt. Kamalini Deshmukh who happened to be in London at that time and some of her friends, who were able to get the shipment of these books to India free of charge. The books are by various authors and are of great interest to children. There were a few volumes like Encyclopedias on birds, flowers and other interesting subjects which particularly attracted the children. We

shall always remember with gratitude this spontaneous and precious gift of the Ranfurly Library, London.

### **Scheme of Condensed Course of Education**

Besides having a regular High School for the girls the Manila Vidyalaya has also accepted the Scheme of Condensed Course of Education for Adult Women and another course for the women who were drop-outs and who left their education while they were very young and were forced to seek a living by various circumstances. In both these classes each scheme consists of 25 women and we receive a grant for each one of the schemes from the Central Social Welfare Board on the recommendation of the State Social Welfare Advisory Board. These courses are very popular and also very useful for these unfortunate and socially handicapped women as they open a way out for them to qualify themselves for higher education or in other courses such as Nursing, Mukhya Sevikas or Nutrition Educators etc. to ultimately help them to earn their living and lead a happy and healthy life.

# Transgenesis

– Dr. D. Rajeswari

Reader in Zoology

**Mrs. P. Sandhya Rani**

Secretary, Alumni Association

**Transgenesis** is the process of introducing an exogenous gene – called a transgene – into a living organism so that the organism will exhibit a new property and transmit that property to its offspring. Transgenesis can be facilitated by liposomes, plasmid vectors, viral vectors, pronuclear injection, protoplast fusion, and ballistic DNA injection.

Transgenic organisms are able to express foreign genes because the genetic code is similar for all organisms. This means that a specific DNA sequence will code for the same protein in all organisms. Due to this similarity in protein sequence, scientists can cut DNA at these common protein points and add other genes. An example of this is the "super mice" of the 1980s. These mice were able to produce the human protein TPA to treat blood clots.

- **Using plasmids from bacteria**

The most common type of transgenesis research is done with bacteria and viruses which are able to replicate foreign DNA.

- The plasmid DNA is cut using restriction enzymes, while the DNA to be copied is also cut with the same restriction enzyme, producing complementary sticky-ends.
- This allows the foreign DNA to hybridise with the plasmid DNA and be sealed by DNA ligase enzyme, creating a genetic code not normally found in nature.
- Altered DNA is inserted into plasmids for replication.

## **Gene transfer technology**

### **DNA microinjection**

The Desired gene construct is injected in the pronucleus of a reproductive cell using a glass needle around 0.5 to 5 micrometers

in diameter. The manipulated cell is cultured invitro to develop to a specific embryonic phase, is then transferred to a recipient female. DNA microinjection does not have a high success rate (roughly 2% of all injected subjects), even if the new DNA is incorporated in the genome, if it is not accepted by the germ-line the new traits will not appear in their offspring. If DNA is injected in multiple sites the chances of over-expression increase.

## **Retrovirus-mediated gene transfer**

A retrovirus is a virus that carries its genetic material in the form of RNA rather than DNA. Retroviruses are used as vectors to transfer genetic material into the host cell. The result is a chimera, an organism consisting of tissues or parts of diverse genetic constitution. Chimeras are inbred for as many as 20 generations until homozygous genetic offspring are born.

## **Stem cell transgenesis**

- 1) Multipotent stem cell transgenesis**
- 2) Pluripotent stem cell transgenesis**
- 3) Totipotent stem cell transgenesis**

### **1) Multipotent stem cell transgenesis**

Multipotent stem cells can only differentiate into a limited number of therapeutically useful cell types, nevertheless their safety and relative lack of complexity to us have resulted in the vast majority of current personalized cellular therapeutics involving multipotent stem cells (typically mesenchymal stem cells from adipose tissue).

### **2) Pluripotent stem cell transgenesis**

Transgenic vectors can be delivered randomly, or targeted to a specific genomic location, such as a safe harbor. Scientists have performed research and technology development to provide the tools necessary to permit safe and effective pluripotent stem cell (PSC) transgenesis.

### 3) Totipotent stem cell transgenesis

The manipulated gene construct is inserted into totipotent stem cells, cells which can develop into any specialized cell.

Cells containing the desired DNA are incorporated into the host's embryo, resulting in a chimeric animal. Unlike the other two methods of injection which require live transgenic offspring for testing, embryonic cell transfer can be tested at the cell stage.

### Applications

- Pharming is a portmanteau of “farming” and “pharmaceutical” and refers to the use of genetic engineering to insert genes that code for useful pharmaceuticals into host animals or plants that would otherwise not express those genes, thus creating a genetically modified organism (GMO).
- Pharming has gained application in biotechnology since the development of transgenic “super mice” in 1982.
- “Super mice” were genetically altered to produce the human drug, TPA (tissue plasminogen activator to treat blood clots), in 1987.
- Since then “super mice” pharming has come a long way. Using RNA interference scientists have produced a cow whose milk contains increased amounts of casein, a protein used to make cheese and other foods, and almost no beta-lactoglobulin, a component in milk whey protein that causes allergies.

### “Pharming Examples”

1. Haemoglobin as a blood substitute
2. Human protein C anticoagulant
3. Alpha-1 antitrypsin (AAT) for treatment of AAT deficiency
4. Insulin for **DIABETES TREATMENT**
5. Vaccines (antigens)
6. Growth hormones for treatment of deficiencies

7. Factor VIII blood clotting factor
8. Factor IX blood clotting factor
9. Fibrinogen blood clotting factor
10. Lactoferrin as an infant formula additive

## **Medical**

Transgenesis can be used to neutralize genes that would normally prevent xenotransplantation.

For example, a protein found in pigs can cause humans to reject their transplanted organs. This protein can be replaced by a similar human genome to prevent the rejection.

### Ethical Concerns

Transgenesis has created certain ethical concerns.

Examples include rights for animals that have been improved intellectually, legal ramifications, and possible health risks.





# Mental Health

– Dr. D. Rajeswari

Reader in Zoology

**Mrs. P. Sandhya Rani**

Secretary, Alumni Association

**Mental health** is a level of psychological well-being, or an absence of a mental disorder; it is the “psychological state of someone who is functioning at a satisfactory level of emotional and behavioral adjustment”. From the perspective of positive psychology or holism, mental health may include an individual’s ability to enjoy life, and create a balance between life activities and efforts to achieve psychological resilience. According to World Health Organization (WHO) mental health includes “subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one’s intellectual and emotional potential, among others.” WHO further states that the well-being of an individual is encompassed in the realization of their abilities, coping with normal stresses of life, productive work and contribution to their community. However, cultural differences, subjective assessments, and competing professional theories all affect how “mental health” is defined.

Mental health is also used as a consumerist euphemism for mental illness, especially when used in conjunction with “concerns”, “problems”, or “clinic”. Consequently, “mental health” is now being equated with mental illness without reference to the positive strengths associated with mental health, as above. Similarly, the term “behavioral health” is being used, incorrectly, to refer to mental illness, as a consumerist approach to avoiding the stigma associated with the words “mental” and “illness”. Consequently, some mental illness clinics are now identified by the inaccurate phrase *behavioral wellness*.

A person struggling with his or her mental health may experience stress, depression, anxiety, relationship problems, grief, addiction,

ADHD or learning disabilities, mood disorders, or other mental illnesses of varying degrees. Therapists, life coaches, psychologists, nurse practitioners or physicians can help manage mental illness with treatments such as therapy, counseling, or medication.

## **Meditation**

Yoga and meditation when practiced together strengthen the mind body connection, improving overall fitness and well-being. Many styles of yoga combine meditation with the physical routines, which use controlled breathing throughout the yoga poses. You can meditate without practicing yoga by simply relaxing, clearing your mind and concentrating on controlled breathing. Both yoga and meditation, when used consistently, have proven health benefit

## **Stress Management**

Regular yoga practice helps to reduce stress responses in your body, according to a study in the 2010 issue of “Psychosomatic Medicine.” Reducing the inflammatory response to stressors on your body will help reduce your chance of stress-related conditions such as high blood pressure and cardiovascular disease. Meditation is also an effective stress reducer that is used to help reduce anxiety, panic disorders and agoraphobia, an anxiety disorder.

## **Increased Flexibility**

Western society is plagued by sedentary jobs where workers sit most of the day. This leads to reduced muscle mass, fitness and flexibility. In addition, office work increases neck and shoulder strain from hunching over in front of a computer all day. Yoga poses focus on stretching and lengthening the muscles. Increased flexibility will help you with daily movements such lifting and bending, while improving sports performance. Many athletes incorporate yoga into their workout schedules to improve or maintain flexibility.

## **Emotional Boost**

Both yoga and meditation improve mental focus and provide a general feeling of well-being. Many yoga disciplines are based around an upbeat theme. For example, Anusara yoga's philosophy looks for the good in all things and is created for an uplifting experience focused on the celebration of the heart. A 2012 control study published in "Alternative Therapies in Health and Medicine" found yoga participants happy, peaceful and upbeat in contrast to the control group who had a decrease in general well-being. Meditation provides an emotional boost through deep relaxation, and it can be done anywhere. You can give yourself an emotional boost by taking a 10-minute meditation break right at your desk. Just simply shut your eyes, focus on relaxing your muscles and practice deep breathing.

## **Better Diet**

Studies suggest that practicing yoga improves fitness and body awareness, leading to better eating habits. This in turn leads to increased self-esteem and the desire to take care of your body. Practicing meditation or yoga is a behavior modification technique that can help you improve your overall fitness.

## **Improved Health**

Reducing your stress level, eating healthier and getting more exercise can only lead to better health. Modern life is full of stressful situations, fatigue from long hours and little sleep, allergies, anxiety disorders and a long list of stress-related diseases. Adding yoga or meditation to your life will improve the quality and possibly the quantity of your life. Improved health means you can participate in more physical activities and just feel better in the things you do daily.

## **Stress relief**

A few minutes of yoga during the day can be a great way to get rid of stress that accumulates daily - in both the body and mind. Yoga postures, pranayama and meditation are effective techniques

to release stress. You can also experience how yoga helps de-tox the body and de-stress the mind at the Art of Living Yoga Level 2 Course.

### **Inner peace**

We all love to visit peaceful, serene spots, rich in natural beauty. Little do we realize that peace can be found right within us and we can take a mini-vacation to experience this any time of the day! Benefit from a small holiday every day with yoga and meditation. Yoga is also one of the best ways to calm a disturbed mind.

### **Improved immunity**

Our system is a seamless blend of the body, mind and spirit. An irregularity in the body affects the mind and similarly unpleasantness or restlessness in the mind can manifest as an ailment in the body. Yoga poses massage organs and strengthen muscles; breathing techniques and meditation release stress and improve immunity.

### **Living with greater awareness**

The mind is constantly involved in activity – swinging from the past to the future – but never staying in the present. By simply being aware of this tendency of the mind, we can actually save ourselves from getting stressed or worked up and relax the mind. Yoga and pranayama help create that awareness and bring the mind back to the present moment, where it can stay happy and focused.

### **Better relationships**

Yoga can even help improve your relationship with your spouse, parents, friends or loved ones! A mind that is relaxed, happy and contented is better able to deal with sensitive relationship matters. Yoga and meditation work on keeping the mind happy and peaceful; benefit from the strengthened special bond you share with people close to you.

## **Increased energy**

Do you feel completely drained out by the end of the day? Shuttling between multiple tasks through the day can sometimes be quite exhausting. A few minutes of yoga everyday provides the secret to feeling fresh and energetic even after a long day. A 10-minute online guided meditation benefits you immensely, leaving you refreshed and recharged in the middle of a hectic day.

## **Better flexibility & posture**

You only need to include yoga in your daily routine to benefit from a body that is strong, supple and flexible. Regular yoga practice stretches and tones the body muscles and also makes them strong. It also helps improve your body posture when you stand, sit, sleep or walk. This would, in turn, help relieve you of body pain due to incorrect posture.

## **Better intuition**

Yoga and meditation have the power to improve your intuitive ability so that you effortlessly realize what needs to be done, when and how, to yield positive results. It works. You only need to experience it yourself.



# Zika Virus

– Dr. D. Rajeswari

Reader in Zoology

**Mrs. P. Sandhya Rani**

Secretary, Alumni Association

**Zika virus** is a member of the virus family *Flaviviridae* and the genus *Flavivirus*, transmitted by daytime active *Aedes* mosquitoes, such as *A. aegypti* and *A. albopictus*.

The infection, known as Zika fever, often causes no or only mild symptoms. Since the 1950s, it has been known to occur within a narrow equatorial belt from Africa to Asia. In 2014, the virus spread eastward across the Pacific Ocean to French Polynesia, then to Easter Island and in 2015 to Mexico, Central America, the Caribbean, and South America, where the Zika outbreak has reached pandemic levels.

Zika virus is related to dengue, yellow fever, Japanese encephalitis, and West Nile viruses.<sup>[4]</sup> The illness it causes is similar to a mild form of dengue fever is treated by rest and cannot yet be prevented by drugs or vaccines. There is a possible link between Zika fever and microcephaly in newborn babies by mother-to-child transmission, as well as a stronger one with neurologic conditions in infected adults, including cases of Guillain–Barré syndrome.

In January 2016, the U.S. Centers for Disease Control and Prevention (CDC) issued travel guidance on affected countries, including the use of enhanced precautions, and guidelines for pregnant women including considering postponing travel. Other governments or health agencies soon issued similar travel warnings, while Colombia, the Dominican Republic, Ecuador, El Salvador, and Jamaica advised women to postpone getting pregnant until more is known about the risks.

The Zika virus belongs to *Flaviviridae* and the genus *Flavivirus*, and is thus related to the dengue, yellow fever, Japanese encephalitis,

and West Nile viruses. Like other flaviviruses, Zika virus is enveloped and icosahedral and has a nonsegmented, single-stranded, positive-sense RNA genome. It is most closely related to the Spondweni virus and is one of the two viruses in the Spondweni virus clade.

There are two lineages of the Zika virus: the African lineage, and the Asian lineage. Phylogenetic studies indicate that the virus spreading in the Americas is most closely related to the Asian strain, which circulated in French Polynesia during the 2013 outbreak. The complete genome sequence of the Zika virus has been published. Recent preliminary findings from sequences in the public domain uncovered a possible change in nonstructural protein 1 codon usage that may increase the viral replication rate in humans.

## **Transmission**

The vertebrate hosts of the virus were primarily monkeys in a so-called enzootic mosquito-monkey-mosquito cycle, with only occasional transmission to humans. Before the current pandemic began in 2007, Zika virus “rarely caused recognized ‘spillover’ infections in humans, even in highly enzootic areas”. Infrequently, other arboviruses have become established as a human disease though, and spread in a mosquito–human–mosquito cycle, like the yellow fever virus and the dengue fever virus (both flaviviruses), and the chikungunya virus (a togavirus).

## **During pregnancy**

In 2015, Zika virus RNA was detected in the amniotic fluid of two pregnant women whose fetuses had microcephaly, indicating that the virus had crossed the placenta and could have caused a mother-to-child infection.

According to the WHO on 5 February 2016, a causal link between the Zika virus and microcephaly is “strongly suspected but not yet scientifically proven” and “Although the microcephaly cases in Brazil are spatio-temporally associated with the Zika outbreak, more robust

investigations and research is needed to better understand this potential link.

On 5 February 2016, the United States CDC updated its health care provider guidelines for pregnant women and women of reproductive age. The new recommendations include offering serologic testing to pregnant women without Zika fever symptoms who have returned from areas with ongoing Zika virus transmission in the last 2-12 weeks; and for pregnant women without Zika symptoms living in such areas, they recommend testing at the beginning of prenatal care and follow-up testing in the fifth month of pregnancy.

## **Symptoms**

- About 1 in 5 people infected with Zika virus become ill (i.e., develop Zika).
- The most common symptoms of Zika are fever, rash, joint pain, or conjunctivitis (red eyes). Other common symptoms include muscle pain and headache. The incubation period (the time from exposure to symptoms) for Zika virus disease is not known, but is likely to be a few days to a week.
- The illness is usually mild with symptoms lasting for several days to a week.
- People usually don't get sick enough to go to the hospital, and they very rarely die of Zika.
- Zika virus usually remains in the blood of an infected person for about a week but it can be found longer in some people.

## **Diagnosis**

- The symptoms of Zika are similar to those of dengue and chikungunya, diseases spread through the same mosquitoes that transmit Zika.
- See your healthcare provider if you develop the symptoms described above and have visited an area where Zika is found.



- If you have recently traveled, tell your healthcare provider when and where you traveled.
- Your healthcare provider may order specialized blood tests to look for Zika or other similar viruses like dengue or chikungunya.

## **Treatment**

- There is no vaccine to prevent or specific medicine to treat Zika infections.
- Treat the symptoms:
  - ★ Get plenty of rest.
  - ★ Drink fluids to prevent dehydration.
  - ★ Take medicine such as acetaminophen (Tylenol®) to relieve fever and pain.
  - ★ Do not take aspirin and other non-steroidal anti-inflammatory drugs.
  - ★ If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication.
- If you have Zika, prevent mosquito bites for the first week of your illness.
  - ★ During the first week of infection, Zika virus can be found in the blood and passed from an infected person to a mosquito through mosquito bites.

An infected mosquito can then spread the virus to other people.



# Benefits of Growing Fruits and Vegetables in our own Garden

– Dr. A. Pramila  
Reader in Botany

*Start Exploring Today*

## For our own benefits

- Fruits and vegetables from our own garden are higher in nutrients than the ones that have traveled several thousands miles to get to grocery store.
- Children assisting you in the garden can increase the chance that they will eat more of the fruits and vegetables they have helped to grow.
- Growing own fruits and vegetables can offer you the opportunity to reduce the amount of pesticides, making them healthier.
- Growing fruits and vegetables will save money at the grocery store.
- Gardening increases physical activity of the whole family.
- The fruits and vegetables grown in the garden will promote health because they are rich in nutrients, especially in phytochemicals, anti-oxidants, vitamin C, vitamin A folate etc
- Gardening gives a real sense of appreciation when we can see the bounty of efforts.
- Growing a garden gives a new appreciation for nature, when we can have the opportunity to see how things grow.
- Gardening may stimulate many new interests, learning more about botany, landscape architecture, photography, nutrition, and farmer's markets.
- Gardening gives the opportunity to give back, If you have an abundant garden, you might give some of your produce to the local soup kitchen or food bank.

- Your garden can lead to new skills, and knowledge for you and your family.
- **For Society and Community**
- Gardens can foster a great sense of community through parent to parent connections, teacher to student or student to student.
- Schools and community may decide to build a community or school garden. This is a tremendous learning tool for all involved as well as providing a source of nutritious fruits and vegetables..
- Neighborhood Community Gardens beautify landscape, support local farmers and create a food secured community where residents do not need to rely on vendors to supply fresh produce.

## **Environment**

- Tall trees provide shade.
- We can use less pesticides or use natural pesticides and this will be less contamination to the environment.
- Produce peels and waste can create a lot of green waste, which can be recycled to make our own compost which is less expensive than buying fertilizers.
- Turning barren lands into attractive landscapes.
- There is a potential to grow innovative gardens like futuristic horticulture gardens that are very cost-effective and require substantially less space.

**HENCE GET CREATIVE AND  
START EXPLORING TODAY !!!!**

# Chelation Therapy

Department of Chemistry

**Dr. K. Kiranmai**

**Dr. K.B. Shanthi Sudha**

**Chelation therapy** is a medical procedure that involves the administration of chelating agents to remove heavy metals from the body. Chelation therapy has a long history of use in clinical toxicology and remains in use for some very specific medical treatments, although it is administered under very careful medical supervision due to various inherent risks. Chelation therapy must be administered with care as it has a number of possible side effects. In response to increasing use of chelation therapy as alternative medicine of heavy metal poisoning.

## Medical uses

Chelation therapy is the preferred medical treatment for metal poisoning, including acute mercury, iron (including in cases of thalassemia), arsenic, lead, uranium, plutonium and other forms of toxic metal poisoning. The chelating agent may be administered intravenously, intramuscularly, or orally, depending on the agent and the type of poisoning. Any urine testing for metals should be done before, and not after, the administration of any chelation therapy. Healthy individuals have normal amounts of metal in their bodies which would be removed by chelation therapy, and urine testing after chelation therapy cannot reliably diagnose metal poisoning.

## Chelating Agents

There are a variety of common chelating agents with differing affinities for different metals, physical characteristics, and biological mechanism of action. For the most common forms of heavy metal intoxication – lead, arsenic, or mercury – a number of chelating agents are available. Dimercaptosuccinic acid (DMSA) has been recommended for the treatment of lead poisoning in children by

poison control centers around the world.<sup>[11]</sup> Other chelating agents, such as 2,3-dimercaptopropanesulfonic acid (DMPS) and alpha lipoic acid (ALA), are used in conventional and alternative medicine. Some common chelating agents are ethylenediaminetetraacetic acid (EDTA), 2,3-dimercaptopropanesulfonic acid (DMPS), and thiamine tetrahydrofurfuryl disulfide (TTFD). Calcium-disodium EDTA and DMSA are only approved for the removal of lead by the Food and Drug Administration while DMPS and TTFD are not approved by the FDA. These drugs bind to heavy metals in the body and prevent them from binding to other agents. They are then excreted from the body. The chelating process also removes vital nutrients such as vitamins C and E, therefore these must be supplemented. The German Environmental Agency (Umweltbundesamt) listed DMSA and DMPS as the two most useful and safe chelating agents available.

Chelator	Used in
Dimercaprol (British anti-Lewisite; BAL)	<ul style="list-style-type: none"> <li>● acute arsenic poisoning</li> <li>● acute mercury poisoning</li> <li>● lead poisoning (in addition to EDTA)</li> <li>● Lewisite poisoning (for which it was developed as an antidote)</li> </ul>
Dimercaptosuccinic acid (DMSA)	<ul style="list-style-type: none"> <li>● lead poisoning</li> <li>● arsenic poisoning</li> <li>● mercury poisoning</li> </ul>
Dimercapto-propane sulfonate (DMPS)	<ul style="list-style-type: none"> <li>● severe acute arsenic poisoning</li> <li>● severe acute mercury poisoning</li> </ul>
Penicillamine	<p><i>Mainly in:</i></p> <ul style="list-style-type: none"> <li>● copper toxicity</li> </ul> <p><i>Occasionally adjunctive therapy in:</i></p> <ul style="list-style-type: none"> <li>● gold toxicity</li> <li>● arsenic poisoning</li> <li>● lead poisoning</li> <li>● rheumatoid arthritis</li> </ul>

Chelator	Used in
Ethylenediamine tetraacetic acid (calcium disodium versenate) (CaNa <sub>2</sub> -EDTA)	<ul style="list-style-type: none"> <li>● lead poisoning</li> </ul>
Deferoxamine and Deferasirox	<ul style="list-style-type: none"> <li>● acute iron poisoning</li> <li>● iron overload</li> </ul>

## Side effects

When used properly in response to a diagnosis of harm from metal toxicity, side effects of chelation therapy include dehydration, low blood calcium, harm to kidneys, increased enzymes as would be detected in liver function tests, allergic reactions, and lowered levels of dietary elements. When administered inappropriately, chelation therapy brings risk of cancer, neurodevelopmental disorder from toxicity, and death.

## History

Chelation therapy can be traced back to the early 1930s, when Ferdinand Munz, a German chemist working for I.G. Farben, first synthesized ethylenediaminetetraacetic acid (EDTA). Munz was looking for a replacement for citric acid as a water softener. Chelation therapy itself began during World War II when chemists at the University of Oxford searched for an antidote for lewisite, an arsenic-based chemical weapon. The chemists learned that EDTA was particularly effective in treating lead poisoning.

Following World War II, chelation therapy was used to treat workers who had painted United States naval vessels with lead-based paints. In the 1950s, Norman Clarke, Sr. was treating workers at a battery factory for lead poisoning when he noticed that some of his patients had improved angina pectoris following chelation therapy. Clarke subsequently administered chelation therapy to patients with angina pectoris and other occlusive vascular disease.

and published his findings in *The American Journal of the Medical Sciences* in December 1956 hypothesized that “EDTA could dissolve disease-causing plaques in the coronary systems of human beings. In a series of 283 patients treated by Clarke et al. From 1956-1960, 87% showed improvement in their symptomatology. Other early medical investigators made similar observations of EDTA’s role in the treatment of cardiovascular disease (Bechtel, 1956; Bessman, 1957; Perry, 1961; Szekely, 1963; Wenig, 1958; and Wilder, 1962).

In 1973, a group of practicing physicians created the Academy of Medical Preventics (now the American College for Advancement in Medicine). The academy trains and certifies physicians in the safe administration of chelation therapy.<sup>[20]</sup> Members of the academy continued to use EDTA therapy for the treatment of vascular disease and developed safer administration protocols.

In the 1960s, BAL was modified into DMSA, a related dithiol with far fewer side effects. DMSA quickly replaced both BAL and EDTA as the primary treatment for lead, arsenic and mercury poisoning in the United States. Esters of DMSA have been developed which are reportedly more effective; for example, the monoisoamyl ester (MiADMSA) is reportedly more effective than DMSA at clearing mercury and cadmium. Research in the former Soviet Union led to the introduction of DMPS, another dithiol, as a mercury-chelating agent. The Soviets also introduced ALA, which is transformed by the body into the dithiol dihydrolipoic acid, a mercury- and arsenic-chelating agent. DMPS has experimental status in the United States, while ALA is a common nutritional supplement.

Since the 1970s, iron chelation therapy has been used as an alternative to regular phlebotomy to treat excess iron stores in people with haemochromatosis.<sup>[22]</sup> Other chelating agents have been discovered. They all function by making several chemical bonds with metal ions, thus rendering them much less chemically reactive. The resulting complex is water-soluble, allowing it to enter the bloodstream and be excreted harmlessly.

Calcium-disodium EDTA chelation has been studied by the U.S. National Center for Complementary and Alternative Medicine for treating coronary disease.<sup>[23]</sup> In 1998, the U.S. Federal Trade Commission (FTC) pursued the American College for Advancement in Medicine (ACAM), an organization that promotes “complementary, alternative and integrative medicine” over the claims made regarding the treatment of atherosclerosis in advertisements for EDTA chelation therapy. The FTC concluded that there was a lack of scientific studies to support these claims and that the statements by the ACAM were false. In 1999, the ACAM agreed to stop presenting chelation therapy as effective in treating heart disease, avoiding legal proceedings. over-the-counter (OTC) chelation products and stated that such “products are unapproved drugs and devices and that it is a violation of federal law to make unproven claims about these products. There are no FDA-approved OTC chelation products

## **Cardiovascular disease**

The U.S. National Center for Complementary and Alternative Medicine (NCCAM) conducted a trial on the chelation therapy’s safety and efficacy for patients with coronary artery disease. NCCAM Director Stephen E. Straus cited the “widespread use of chelation therapy in lieu of established therapies, the lack of adequate prior research to verify its safety and effectiveness, and the overall impact of coronary artery disease” as factors motivating the trial. The study has been criticized by some who said it was unethical, unnecessary and dangerous, and that multiple studies conducted in prior to it demonstrated that the treatment provides no benefit

In 2001, researchers at the University of Calgary reported that cardiac patients receiving chelation therapy fared no better than those who received placebo treatment.

According to the findings of a 1997 systematic review, EDTA chelation therapy is not effective as a treatment for coronary artery disease and this use is not approved in the United States by the US



Food and Drug Administration (FDA). Several possible mechanisms for its efficacy have been proposed, though none have been scientifically validated.

In 1988, a retrospective study of 2870 patients treated with EDTA chelation found that 77% of patients with ischemic heart disease showed “marked” improvement and 91% of patients with peripheral heart disease also showed “marked” improvement. A 1993 retrospective study of 470 patients who underwent EDTA chelation noted that 80% had objective evidence of improvements of their symptoms.

A systematic review published in 2005 found that controlled scientific studies did not support chelation therapy for heart disease. It found that very small trials and uncontrolled descriptive studies have reported benefits while larger controlled studies have found results no better than placebo.

The US National Center for Complementary and Alternative Medicine began the Trial to Assess Chelation Therapy (TACT) in 2003. Patient enrollment was to be completed around July 2009 with final completion around July 2010 but enrollment in the trial was voluntarily suspended by organizers in September 2008 after the Office for Human Research Protections began investigating complaints such as inadequate informed consent.<sup>[41]</sup> Additionally, the trial was criticized for lacking prior Phase I and II studies, and critics summarized previous controlled trials as having “found no evidence that chelation is superior to placebo for treatment of CAD or PVD.” The same critics argued that methodological flaws and lack of prior probability made the trial “unethical, dangerous, pointless, and wasteful. The American College of Cardiology supported the trial and research to explore whether chelation therapy was effective in treating heart disease. Evidence of insurance fraud and other felony convictions among (chelation proponent) investigators further undermined the credibility of the trial. The final results of TACT were published in November 2012. The authors concluded that disodium

EDTA chelation “modestly” reduced the risk of adverse cardiovascular outcomes among stable patients with a history of myocardial infarction.<sup>[43]</sup> The study also showed a “marked” reduction in cardiovascular events in diabetic patients treated with EDTA chelation. An editorial published in the *Journal of the American Medical Association* said that “the study findings may provide novel hypotheses that merit further evaluation to help understand the pathophysiology of secondary prevention of vascular disease.”<sup>[45]</sup> Critics of the study characterized the study as showing no support for the use of chelation therapy in coronary heart disease, particularly the claims to reduce the need for coronary artery bypass grafting. The American Heart Association stated in 1997 that there is “no scientific evidence to demonstrate any benefit from this form of therapy.” The United States Food and Drug Administration (FDA), the National Institutes of Health (NIH) and the American College of Cardiology “all agree with the American Heart Association” that “there have been no adequate, controlled, published scientific studies using currently approved scientific methodology to support this therapy for cardiovascular disease.” They speculate that any improvement among heart patients undergoing chelation therapy can be attributed to the placebo effect and generally recommended lifestyle changes such as “quitting smoking, losing weight, eating more fruits and vegetables, avoiding foods high in saturated fats and exercising regularly.” They also are concerned that patients could put off proven treatments for heart disease like drugs or surgery.

The Mayo Clinic says in 2009 that “chelation studies have found that chelation didn’t work as a heart disease treatment. In 2009, the Montana Board of Medical Examiners issued a position paper concluding that “chelation therapy has no proven efficacy in the treatment of cardiovascular disease, and in some patients could be injurious.

**UBHAYA KUSALOPARI : ఉభయకుశలోపరి**  
(పూర్వవిద్యార్థినుల పలకరింపు)

***"Building better lives for women" has and is always the motto of Andhra Mahila Sabha***



**Kum. D.V. Vidya Lakshmi**  
(B.Sc. Biotech 2013-16)

I, D .V. Vidya Lakshmi, am proud to have been a part of this prestigious and mission-oriented institution which has been empowering thousands of women since 1968. I joined this prestigious institution right after the completion of my intermediate course. As I was not yet exposed to the society, I was really not aware of the outside world. I was shy, introvert and lacked self-confidence. But, fortunately I was guided by my supportive and experienced teachers, to the path of success. I received tons of love and support from this college. After the completion of my graduation in B.Sc Biotechnology, I'm pursuing my B.Ed (Bachelor of Education) in College of Teacher Education, Andhra Mahila Sabha. I'm very fortunate to get an opportunity to pursue my double degree from the same college. This institution has built my life. I express my sincere gratitude to this college, from the bottom of my heart.

# **CAMPUS NEWS**

## **September 2015**

- Our NCC cadets ten members attended IGC State camp at Visakhapatnam from 9<sup>th</sup> sep 2015 to 20<sup>th</sup> sep 2015. In this camp our cadets secured overall Championship Runner- up in the all the events like Boat pulling, Regging and they secured Gold & Silver medals in cultural and sports.
- Dr.Shaaradha has attended Hindi Maha Sabhalu at Bhopal from 9<sup>th</sup> to 13<sup>th</sup> September, 2015.
- On September 11<sup>th</sup> Dr.K.Manjula Rani & Dr.K.Karuna Devi attended NSS Youth convention on universal brother hood day at RTC Kala Bhawan organized by Ministry of Youth Affairs and Sports Govt. of India.
- Dr.K.Manjula Rani was invited as guest speaker to Gandhi Satabdi Bhavan organized by chemistry department.
- Eco Club has organized safe & Eco friendly Ganesh Idols in AMS ASCW College Campus on 16<sup>th</sup> September, 2015.

## **October 2015**

- Dr M. Sridevi, Head Dept of Physical Education received Dr. A.P.J. Abdul Kalam Gold Medal Award on 15<sup>th</sup> October 2015 at Chennai by Global Economic Progress and Research Association, for her outstanding achievements and service in the field of Physical Education.
- NCC Cadet N .Vishnavi, B.Sc MSCS IIyr (Navy) participated in Navasaink National camp from 26<sup>th</sup> to 29<sup>th</sup> Oct 2015 held at Goa.
- NCC cadets M. Jhansi, B.Com Computer final year, S. Sai Bhavani and J. Kalki Padmini, B.Sc/MSCs II yr, participated in National Tracking camp from 20<sup>th</sup> to 30<sup>th</sup> Oct, 2015 at Rishikesh, Dehradun.

## **November 2015**

- Physical Education Department Organized Osmania University, Inter College Kho- Kho Tournament on 18<sup>th</sup> November 2015 in OU grounds. 20 Colleges were participated.

## **December 2015**

- NSS Students participated in Anti corruption rally from Exhibition grounds to Gun Park Assembly road on 3<sup>rd</sup> Dec, 2015, organized by A.C.T.S Govt. in collaboration with NSS OU.

- NSS Students participated in “World disabled day” awareness walk at Necklace Road on 3<sup>rd</sup> December, 2015.
- Dr. Lavanya Dept. of Statistics has attended National Conference on 13<sup>th</sup> Dec, 2015 at Vignana Bharathi Institute of Technology at Ghatkesar.
- D. Beulah B.Sc Bio-Tec final year & M. Lalitha, B.Sc, MSCs II yr, secured silver medals in National level Dragon Boat competition (Water Sports) from 15<sup>th</sup> to 22<sup>nd</sup> Dec, 2015 held at Assam.
- Results of I, III and V semesters were declared on 30<sup>th</sup> Dec, 2015.
- Mrs. J. Saritha Head Dept. of Commerce attended Orientation course in Academic Staff College, OU from 7<sup>th</sup> Dec, 2015 to 5<sup>th</sup> Jan, 2016.

### January 2016

- Mrs.J.Saritha, Head Dept. of Commerce attended orientation course in Academic Staff College, O.U from 7<sup>th</sup> Dec, 2015 to 5<sup>th</sup> January, 2016.

### February 2016

- The Department of Botany organised one day workshop on “Bonsai” on 22<sup>nd</sup> February, 2016 in the college premises.
- The Dept. of Zoology, Chemistry & Biotech organised one day Annual seminar *Focus 2016* on “**Current trends in Chemical, Animal Biotechnology**”, in MV Hall on 23<sup>rd</sup> February, 2016,
- Dr.Pramila, faculty Department of Botany, attended one day orientation programme on “**Environmental Science for University and college Teachers of Telangana**” at JNT, Masabtank,Hyderabad on 23<sup>rd</sup> February, 2016.
- Dr.GN.Bhagya Rekha attended National Seminar on “**Science Technology for Indigenes Development in India**” organised by the Indian Science Congress Association Hyderabad in Association with RBVRR Women’s college, Narayanaguda ,Hyderabad from 22<sup>nd</sup> and 24<sup>th</sup> February, 2016.
- Education trip was organised by Dept. of Botany with 30 students at Narayanaguda on 25<sup>th</sup> February, 2016
- Dept.of Physical Education celebrated Annual sports day at MV Hall on 29<sup>th</sup> February, 2016, Mr. CH. Lakshminarayana, ACP, Kachiguda, Hyderabad was the Chief Guest to the function.

### March 2016

- Dept.of Telugu organised a one day seminar on 1<sup>st</sup> March, 2016 at MV Hall on “Dalitha Sahityam - Jashuva Vishistata”.

- Academic audit 2015-16 Commissionerate of Collegiate Education on 4<sup>th</sup> March 2016. Audit team Sri S. Rangaratnam Giriraj Government College Nizambad, Dr. B. Madhuri SR & BGNR GDC Khammam and Dr. V. Vijayalakshmi GDC Begumpet (women). Obtained overall weightage 'A' grade.
- Collage Annual Day was celebrated on 5<sup>th</sup> March at college premises. Dr.R.S.Praveen Kumar, IPS, was the Chief Guest.
- **“Save the girl child”** 3K run was conducted by Women’s Cell in Coordination with Voluntary organization at Tank bund on 6<sup>th</sup> March 2016. The run was inaugurated by speaker of State Assembly & Health Minister nearly 2000 Students and teachers participated.
- The Women’s Cell had conducted International Women’s day on March 8<sup>th</sup> Coordinated by Voluntary organizations with a slogan “Gender parity”.
- Gandhi Bhavan Meeting was organised by Dept. of Botany, Dept. of Zoology and Dept. of Biotechnology on 11<sup>th</sup> March, 2016.
- Practical exams were held from 15<sup>th</sup> March to 26<sup>th</sup> March, 2016.
- Gandhi Shatabdhi Bhavan Foundation day organised a talk on *Relevance of Gandhi Ideas in today’s context* on 14<sup>th</sup> March, 2016.
- **“Mahila Siromani”** award on 13<sup>th</sup> March, 2016 on the occasion of International Women’s celebrations at Saraswath Parishad was awarded to Dr.K.Manjula Rani, Dept.of Telugu, AMS ASCW by Telangana citizen’s Council, Hyderabad.
- On 18<sup>th</sup> March G.N.Bhagya Rekha has taken over charge of principal of Art’s / Science Degree College. Dr.K.Divakara Chary has Secretary & Correspondent, Veerabhadraiah I.A.S (Retd.) has taken charge as chairman of Art’s / Science College.
- The 3<sup>rd</sup> Mini convocation was held on 21<sup>st</sup> March, 2016 at 4pm, in MV Hall. The convocation Address was given Prof. Sunaina singh, vice chancellor, EFLU, Hyderabad. The convocation was declared open by Smt.P.Vimala, President, AMS. The chief guest presented the gold medals to the candidates. The total no. of gold medals for the 2011 & 2012 are 21. The following are the medals as per subjects.

**Gold Medals:**

Telugu – 2	Eco – 1
Political science – 3	Public Administration – 4
B.Com – 3	BA & BSc (overall) – 2 (1+1)
Botany – 2	
Computer science – 2	

Disaster Management – 1

Good Governance – 1

- Dept. of Public Administration organised one day National Seminar on the topic “**Public Institutions in India: governance & governability**” 26<sup>th</sup> March, 2016. Prof. V.S. Prasad, Former Director , NAAC was the Chief Guest, and P.Eshwaraiah, Dept. of Political Science HCU & Prof. Y. Pardhasaradhi, Director, Regional Centre for Urban & Environment Studies,O.U were the Guest of Honours. Prof. Madabhushi Sridhar, Commissioner Central Information Commission, New Delhi was the chief guest for Valedictory.

### May 2016

- On the Occasion of Durgabai Deshmukh death day on 9<sup>th</sup> May, 2016 clothes to all attenders were distributed.

### June 2016

- On account of world Environment day 5<sup>th</sup> June the department of Botany has Organized cleanness Programme in the Botanical Garden and outside the Campus.
- II, IV & VI Semester results are declared on 14<sup>th</sup> June, 2016.
- World Music day was organized on 21<sup>st</sup> June by Dept. of Telugu and Maths under cultural club.
- International Yoga Day was organized by Dept. Of Physical Education on 21<sup>st</sup> June, 2016.
- In connection with International “Yoga” day NCC Students of various groups participated in the programme, at Parade Grounds, Secunderabad, on 21<sup>st</sup> June, 2016.
- Dr.K.Sridevi & P.Rajya Lakshmi attended International workshop on “**Recent – Trends in Physical Education and Sports Industry**” on 26<sup>th</sup> & 27<sup>th</sup> June.
- 20 students of II & III years of B.Sc (MSCs) students participated in essay writing competitions & PPT presentations on the account of “Statistics Day” on 29<sup>th</sup> June, 2016, conducted by NSSO at Ramireddy distance education

### July 2016

- In connection with the “Telangana ku Haritha Haram” Programme the Eco Club & Dept. of Botany organised plantation and Rally programmed by

the staff (Teaching & Non teaching) and the students on 1<sup>st</sup> July, 2016 in the college premises. The Eco Club convenor Dr.A.Pramila organised this programme. NSS Po's, NCC Cadets, NSS Students and the staff participated in the programme

- In connection with Smt.Dr.Padmavibhushan Durgabai Deshmukh birth celebrations advisors conducted essay writing competition. Our students C.Akhila B.Sc (BZC) II yr and won 1st prize.
- NSS Volunteer P.Sarada from B.Com II Yr has been selected representing in National integration camp at Bhuvanewar from 10<sup>th</sup> July to 17<sup>th</sup> July, 2016.
- From 25<sup>th</sup> July 2016 internal assessment examinations are conducted for III sem V sem students.
- AQAR submitted on 31<sup>st</sup> July 2016.

### **August 2016**

- IQAC has conducted a Talk on "Stress Management" by Dr.Sri Lakshmi, Famous Psychologist, Mental Hospital, Erragadda and she has conducted interaction session with students on 1<sup>st</sup> Aug 2016 at MV Hall.
- Standing Committee meeting was conducted on 24<sup>th</sup> August, 2016 at board room Member Secretary Dean's of various faculties and Committee members attended and approved BOS minutes
- Staff meeting was conducted on 16<sup>th</sup> August, 2016 in the Board room at 2.30 PM discussed with Academic issues
- "Environment Protection" Rally programme was inaugurated by Dr. S.V. Sathyanarayana Vice-Chancellor of Telugu University, Public gardens eminent Prof. Environment Scientist Purushotham Reddy & B.N.Reddy, Principal, IQAC Coordinator Eco club Convenor & NSS units participated on 20<sup>th</sup> August, 2016.
- International youth day was organised by (APCACS) NICC on 22<sup>nd</sup> Aug, 2016 at Sundaraiah Vignan Bhavan on the occasion of Youth Day programme they honour (Appreciation Award) NSS PO Dr.K.Karuna Devi
- Thiranga Rally on 26<sup>th</sup> August, 2016 NSS Units have participated near See, Hyderabad Boards Club.