

Dr. Yellapragada SubbaRow (1895-1948): He Transformed Science; Changed Lives Pushpa Mitra Bhargava, Journal, Indian Academy of Clinical Medicine Vol. 2, No. 1 and 2 January-June 2001 Polymyxin

HN

H₃C

H₃C

HN

NH₂

NH2

 H_2N

H₃Q

H₃C

OHO

H₂N







Vitamin B12 (cyanocobalamin)



Hetrazan, or diethyl carbamazine



Used against malaria and elephantiasis

Yellapragada SubbaRow was not born great; his mother had to sell the little jewellery she possessed to provide for his education. Nor was greatness thrust upon him. He achieved greatness by imagination, self-confidence, love of fellow humans, and an inner compulsion to alleviate human suffering. And he did what no other Indian had ever done till then on foreign soil: he made some of the most important and seminal contributions that were destined to transform a whole range of basic and applied sciences and save innumerable human lives. If there were a Nobel Prize for those who died virtually unknown but whose accomplishments lit the path of many who came later, SubbaRow would surely be among the first to receive it. Even today in our country very few people know of him. The efforts of the Centenary Committee succeeded in getting the government issue a stamp in his honour in 1995. But he has not been given the appropriate recognition by the nation till today. We have given the Bharat Ratna posthumously to others. Why not to Yellapragada SubbaRow? – Dr. Bhargava.





There were 12 empires that colonized the entire world, see above

And today there are more than 200 independent countries across the world

SIXTY- YEAR STORY

1950s, 60s, 70s, 80s, 90s and the current decade

1950s SMALLPOX VACCINATION, NMEP 2000 x 2000 km; 300 million people, sustained campaign, disease eliminated Alas, malaria has hit back!





"Lab to Land" Green Revolution"ship to mouth" → "silo to ship"

1960s





 WHEAT: YIELD 2003-04 = 78 MTons
 93

 RICE
 93

 SUGARCANE
 320

 OILSEEDS
 27

The Government of India have accordingly decided that the aims of their scientific policy will be -

to foster, promote, and sustain, by all appropriate means, the cultivation of science,
and scientific research in all its aspects

-- pure, applied, and educational;

•to ensure an adequate supply, within the country,

•of research scientists of the highest quality, and to recognize their work
•as an important component of the strength of the nation;

to encourage, and initiate, with all possible speed, programmes for the
training of scientific and technical personnel, on a scale adequate
to fulfil the country's needs in science and education, agriculture and industry,
and defence;

to ensure that the creative talent of men and women is encouraged and
finds full scope in scientific activity;

•to encourage individual initiative for the acquisition and dissemination of knowledge,
•and for the discovery of new knowledge,
•in an atmosphere of academic freedom ;

and, in general, to secure for the people of the country all the benefits that can accrue from the acquisition and application of scientific knowledge

6. Science has developed at an ever-increasing pace since the beginning of the century, so that the gap between the advanced and backward countries has widened more and more.

It is only by adopting the most vigorous measures and by putting forward our utmost effort into the development of science that we can bridge the gap. It is an inherent obligation of a great country like India, with its traditions of scholarship and original thinking and its great cultural heritage, to participate fully in the march of science, which is probably mankind's greatest enterprise today.



THE NUTRITION RESEARCH LABORATORIES GIVES BIRTH TO THE NATIONAL INSTITUTE OF NUTRITION IN 1969, ALONG WITH

1970s

THE FOOD AND TOXICOLOGY RESEARCH CENTRE (FTRC) IN 1971 AND THE NATIONAL NUTRITION MONITORING BUREAU IN 1972

1970s: DECADE OF TRANSLATIONAL NUTRITION



IODIZED SALT PROPAGATION

VITAMIN A MEGADOSE

1970s also important because of the revised Indian Patents Act- the process patent regime

NO MORE DEPENDENT ON DRUG IMPORTS OVER

COSTS OF DRUGS AND PHARMACEUTICALS FAR LOWER THAN OTHER COUNTRIES

MEETING STRICTEST QUALITY STANDARDS

EMPLOYMENT TO OVER 500,000

PHARMA INDUSTRY GROWS REMARKABLY

HEALTH CARE BECOMES ACCESSIBLE TO MANY

1990s- BIOTECH BOOM IN INDIA

RECOMBINANT VACCINES: "BENCH TO AVOID BEDSIDE"

Vaccines manufactured DPT BCG MMR OPV HepB Rabies Leprosy, Rotavirus

Poultry vaccines (FMD, Blue Tongue)

Vaccines under clinical trial HPV HIV JEV TypBar