Marking Single Neurons by Staining with Intracellular Recording Microelectrodes: R. C. Thomas and V. J. Wilson ........................................ 1538

Aflatoxin B1: Binding to DNA in vitro and Alteration of RNA Metabolism in vivo: M. B. Sporn et al. .................................................. 1539

Actin-Myosin Interaction: Inhibition of the Myosin Adenosine Triphosphatase by Actin: S. Barron, E. Eisenberg, C. Moos .......................................................................................................................... 1541

Phospholipids of Bacteria with Extensive Intracytoplasmic Membranes: P.-O. Hagen, H. Goldfine, P. J. le B. Williams ............................................................... 1543


Electroretinogram of the Frog during Embryonic Development: F. C. Citelli and S. E. C. Nilsson ................................................................. 1545

Cutaneous Loss in Reptiles: P. J. Bentley and K. Schmidt-Nielsen ........................................................................................................ 1547

Residues of DDT in Brains and Bodies of Birds That Died on Dosage and in Survivors: L. F. Stickel, W. H. Stickel, R. Christensen .................................................................................... 1549

Association between Potassium Concentration and Serological Type of Sheep Red Blood Cells: B. A. Rasmussen and J. G. Hall ................................................................. 1551

Deamino-Oxytocin and l-β-Mercaptobutyric Acid-Oxytocin: X-ray Crystallographic Data: B. W. Low and C. H. Chen ............................................................................. 1552

Maximum Diving Capacities of the Weddell Seal, Leptonychotes weddelli: G. L. Kooyman ........................................................................................................... 1553

Incorporation of Tritiated Actinomycin D into Drug-Sensitive and Drug-Resistant HeLa Cells: M. N. Goldstein, K. Hammsn, E. Amrod .................................................. 1555

Chromosome Changes Induced by Infections in Tissues of Rhynchosciara angelaen: C. Pavan and R. Basile .......................................................... 1556

Dreaming Sleep in Man: Changes in Urine Volume and Osmolality: A. J. Mandell et al. ................................................................. 1558

Parturient Mice: Effect of Environment on Labor: N. Newton, D. Foshee, M. Newton ........................................................................................................ 1560

Technical Comments: Russian Luna IX Pictures: Provisional Analysis: G. P. Kuiper et al.: Water-Drop-Producing Equipment: H. E. Edgerton; Active Transport of 5,5-Dimethyl-2,4-Oxazolidinedione: T. C. Butler .................................................. 1561

MEETINGS Nitrogen Fixation: C. C. Delwiche; Forthcoming Events ................................................................. 1565

COVER Weddell seal (Leptonychotes weddelli) in ice hole near U.S. Antarctic base at McMurdo Sound. Investigations of the seal's diving capacities and behavior reveal that its deepest dive was 600 meters and its longest submergence was 43 minutes 20 seconds. See page 1553. [Gerald L. Kooyman, University of Arizona]
Support of Science in Underdeveloped Countries

There is a proverb to the effect that an alms-giver throws a starving man a fish, whereas a truly charitable man gives him a hook and line. The U.S. foreign aid program is in effect almsgiving. We have not recognized what has to be done to bring prosperity to the underdeveloped nations.

In a recent issue of Science (4 February), Homi Bhabha delineated the problem and suggested a means of solving it.

What the developed countries have and the underdeveloped lack is modern science and an economy based on modern technology. The problem of developing the underdeveloped countries is therefore the problem of establishing modern science in them and transforming their economy to one based on modern science and technology.

Bhabha went on to advance the thesis that the problem of establishing science as a live and vital force in a society is an inseparable part of the problem. Bhabha spoke authoritatively, for he was the key man in creating a self-reliant atomic energy industry in India. In 1943 no scientific institution in India had facilities for work in subjects at the frontiers of physics, including nuclear physics. Bhabha persuaded an industrialist, J. R. D. Tata, to establish the Tata Institute of Fundamental Research, which has been a constituent institution of Bombay University from the beginning “and has had close relations with many other universities in India, so that students of many of them have done work for the Ph.D. at the institute.” From a small start with a recurring annual budget of $16,000, the institute grew initially at the rate of 30 percent per year. Its current budget is $3 million.

Early in its history the institute had a key role in the development of atomic energy.

... groups were established at the institute to design and build all the electronics instrumentation without which atomic energy work is impossible. Thus, the Physics Division and the Electronics Division of the Atomic Energy Establishment at Trombay were both initially housed and built up in the institute. The electronics group of the Atomic Energy Establishment has today a staff of over 1300 people and is the strongest research and development group in electronics in the whole country.

In contrast to the fine performance in atomic energy, where a strong base in fundamental physics existed, Bhabha described the dismal performance of the steel industry. In turn, German, Russian, and British consultants have been called in, but India still does not have the capacity to design and build new steel plants.

... Unless powerful scientific and engineering groups are established during the construction and operation of existing steel plants as a matter of deliberate policy, the dependence on foreign technical assistance will continue, and the steel industry will not reach a stage of technical self-reliance. A similar situation exists in almost every other industry.

Had Bhabha lived and had his influence expanded, many of India’s problems might have been solved. Science and technology can expand faster than populations, thus providing time to solve the population problem. Bhabha and the Tata Institute have shown the profound effect of small sums spent wisely in support of fundamental research. If the United States wishes to be a true friend to the underdeveloped countries, it will find means of helping in the establishing and supporting of indigenous fundamental research institutes. Basic research is only one of several important prerequisites to obtaining optimal benefits from science, but competence in research provides a base from which the most complex technology can evolve when governments are alert and stable.

—PHILIP H. ABELSON