on biological effects of organic chlorine compounds. The effect of chlor compounds on the carcinogenic action of benzpyrene is rather complicated and varies with their concentration, type and time of application. Application of low concentrations of chloracetone alternately with benzpyrene to the skin of mice reduces the carcinogenic action, but if a higher concentration of chloracetone is applied after discontinuing the applications of benzpyrene, the carcinogenic action is enhanced. The effect of a series of chlor compounds can be correlated to some extent with their chemical and physical properties.

Tumours can be induced in animals either with biologically produced agents or with synthetic carcinogenic compounds. Some time ago Dr. R. J. Ludford described the transformation of normal chick fibroblasts into malignant cells induced by treating tissue cultures of fibroblasts with filtrates of fowl sarcomas. It has so far not been possible to produce an analogous change with carcinogenic compounds. Cultures of cells from pure-line mice were grown in the presence of methyl cholanthrene or 3 : 4-benzpyrene for times varying up to six months without producing malignant cells.

Dr. W. J. Purdy and Dr. R. J. Ludford have continued to investigate the factors present in birds with retrogressing filterable tumours. The blood of ducks in which the Fujinami tumour was retrogressing did not neutralize the corresponding virus, nor did it inhibit the growth of the tumour cells in tissue culture. Thus it has not been possible to determine the nature of circulating antitumour factors, if indeed such occur, when multiple tumours retrogress. It is probable that the action of the effect on tumours is indirect. Dr. R. J. Ludford has grown fragments of rat uterus and vagina in culture and treated the isolated tissues with œstradiol. Neither in these experiments nor in others, in which cultures of combs from chick embryos were grown in the presence of testosterone, did the hormones have any effect on growth. The hormones must therefore act indirectly.

The Fund has continued to co-operate with other laboratories and is still particularly helpful in maintaining and supplying many strains of transplantable animal tumours. During the past year the Fund has been fortunate in having received more than £17,000 in legacies; the whole of which has been added to the endowment fund.

[1] *Amer. J. Cancer*, **39**, 1 (1940).

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned :

LECTURER IN GEOGRAPHY at the Brighton Municipal Training College for Women—The Education Officer, 54 Old Steine, Brighton (July 12).

LECTURER IN MATHEMATICS and A WOMAN LECTURER IN GEOGRAPHY—The Principal, Derby Technical College, Normanton Road, Derby (July 12).

INSTRUCTOR IN WORKSHOP PRACTICE AND PROCESSES in the Schools of Technology, Art and Commerce (Engineering Department)—The Chief Education Officer, City Education Office, 77 George Street, Oxford (July 15).

PRINCIPAL of the Lancaster Storey Institute Technical College and Junior Technical School—The Director of Education, Education Offices, High Street House, Lancaster (July 19).

TEACHER OF ENGINEERING SUBJECTS—The Acting Principal, Technical Institute, Ashford, Kent.

LECTURER IN ENGINEERING for the Achimota College, Gold Coast—The Crown Agents for the Colonies, 4 Millbank, London, S.W.1 (quoting M/9687).

ASSISTANT ENGINEER for the Malayan Government Public Works Service—The Crown Agents for the Colonies, 4 Millbank, London, S.W.1 (quoting M/9306).

HEAD OF THE CHEMISTRY AND APPLIED CHEMISTRY DEPARTMENT of the Royal Technical College, Salford—The Director of Education, Education Office, Chapel Street, Salford, 3.

ASSISTANT ENGINEER in the Government of Zanzibar Public Works and Electricity Department—The Crown Agents for the Colonies, 4 Millbank, London, S.W.1 (quoting M/9634).

MAINTENANCE ENGINEER in the Government of British Guiana Transport and Harbours Department—The Crown Agents for the Colonies, 4 Millbank, London, S.W.1 (quoting M/9393).

FORTHCOMING EVENTS

[*Meeting marked with an asterisk is open to the public.*]

Friday, July 18

INSTITUTE OF PHYSICS (MANCHESTER BRANCH) (in the Physics Department, University, Manchester), at 7 p.m.—Dr. H. Spencer Jones, F.R.S. : "Problems connected with the Construction of Large Telescopes, with special reference to the 200-inch Instrument".*

REPORTS AND OTHER PUBLICATIONS.

(not included in the monthly Books Supplement)

Great Britain and Ireland

Report of the Astronomer Royal to the Board of Visitors of the Royal Observatory, Greenwich, read at the Annual Visitation of the Royal Observatory, 1941, June 7. Pp. 16. (London : Royal Observatory, Greenwich.) [106

London Bird Report for 1940 : Being an Annual Report on Bird-Life within Twenty Miles of St. Paul's Cathedral. Compiled by R. S. R. Fitter. Pp. 20. (London : London Natural History Society.) 1*s.* 6*d.* [126

University of Bristol. The Annual Report of the Agricultural and Horticultural Research Station (The National Fruit and Cider Institute), Long Ashton, Bristol, 1940. Pp. 150. (Bristol : The University.) [126

Transactions of the Royal Society of Edinburgh. Vol. 60, Part 2, No. 12 : On *Salpingostoma dasu*, a New Carboniferous Seed from East Lothian. By Prof. W. T. Gordon. Pp. 427–464+6 plates. (Edinburgh and London : Oliver and Boyd.) 7*s.* [136

Annual Report of the Council of the Yorkshire Philosophical Society for the Year 1940, presented to the Annual Meeting, 10th March, 1941. Pp. 12. (York : Yorkshire Museum.) [136

Reports of the Progress of Applied Chemistry. Issued by the Society of Chemical Industry. Vol. 25, 1940. Pp. 609. (London : Society of Chemical Industry.) 16*s.*; to Members, 7*s.* 6*d.* [166

Other Countries

India Meteorological Department. Scientific Notes, Vol. 8, No. 89 : Synoptic and Aerological Study of a Thunderstorm-day at Agra, December 3rd, 1936. By S. Basu and Ram Sahay. Pp. 67–76+6 plates. (Delhi : Manager of Publications.) 1 rupee ; 1*s.* 6*d.* [106

Annual Report of the United States Commissioner of Education for the Fiscal Year ended June 30, 1940. Pp. v+105. (Washington, D.C. : Government Printing Office.) 20 cents. [126

U.S. Treasury Department : Coast Guard. Bulletin No. 29 : International Ice Observation and Ice Patrol Service in the North Atlantic Ocean, Season of 1939. Pp. v+133. (Washington, D.C. : Government Printing Office.) [126

U.S. Office of Education : Federal Security Agency. Bulletin, 1940, No. 7 : Laws Affecting School Libraries. By Edith A. Lathrop and Ward W. Keesecker. Pp. viii+136. (Washington, D.C. : Government Printing Office.) 20 cents. [126

The Meteorology of Great Floods in the Eastern United States. By Charles F. Brooks and Alfred H. Thiessen. (From the Smithsonian Report for 1938.) (Publication 3506.) Pp. 325–348. (Washington, D.C. : Government Printing Office.) [126

Hurricanes into New England—Meteorology of the Storm of September 21, 1938. By Charles F. Brooks. (From the Smithsonian Report for 1939.) (Publication 3563.) Pp. 241–251. (Washington, D.C. : Government Printing Office.) [126

Records of the Geological Survey of India. Vol. 75, 1940, Professional Paper No. 8 : Manganese-Ore in Bamra State. By Dr. M. S. Krishnan and Dr. P. K. Ghosh. Pp. 22+iv+3 plates. 14 annas ; 1*s.* 3*d.* Vol. 75, 1940, Professional Paper No. 12 : An Earthquake in the Great Pamir. By Dr. A. L. Coulson. Pp. 11+2 plates. 7 annas ; 8*d.* (Calcutta : Geological Survey of India.) [166

U.S. Office of Education : Federal Security Agency. Bulletin, 1940, No. 5 : Bibliography of Research Studies in Education, 1938–1939. By Ruth A. Gray. Pp. xiv+411. (Washington, D.C. : Government Printing Office.) 35 cents. [166

Bulletin of the American Museum of Natural History. Vol. 77, Art. 9 : The Birds of Mt. Auyantepui, Venezuela. By E. Thomas Gilliard. Pp. 439–508. (New York : American Museum of Natural History.) [166