of Marais[2] who investigated the toxic principle of *Dichapetalum* (*Chailletia*) *cymosum* (Hook) Engl., called "Gifblaar" and known as one of the most poisonous plants of South Africa. Following the previous attempts by Steyn[3] and Rimington,[4] Marais succeeded in the isolation of a toxic substance and identified it as fluoroacetic acid. The high toxicity of this fluorinated acid led him to suggest that the simple fluorinated organic acids might be a source of valuable poisons and insecticides.

A further search of the literature on the genus, Dichapetalum, revealed that both Renner[5] and Power and Tutin[6] had examined the toxic properties of *Chailletia toxicaria* Don, a species notorious for poisonings among the natives of Sierra Leone, where the colonists had used it in poisoned baits for the control of rats, but the compound responsible for the lethal action of the plant was not found.

It is of considerable interest that the toxic fluoroacetic acid has been isolated from a plant source and that the work of the Fish and Wildlife Service on sodium fluoroacetate as an economic poison has progressed along parallel but entirely independent lines.

CLARENCE W. KLINGENSMITH
ECONOMIC INVESTIGATIONS LABORATORY,
FISH AND WILDLIFE SERVICE,
BOWIE, MD.

EARLY OBSERVATIONS ON ANTIBIOTIC SUBSTANCES IN PENICILLIUM GLAUCUM AND OTHER ORGANISMS AGAINST A VIRUS

THE quotation cited below was stumbled upon by the author, whose field is far removed from antibiotics, and is given for the benefit of the many hunters in the field of antibiotics.

The quotation is from a Russian paper by M. G. Tartakovskii, entitled "Ekssudatny tiff ili chuma kur" ("Exudative Typhus or Fowl Plague), published in *Arkhiv Veterinarnyki Nauk* (*Archives of Veter. Sci.*) v. 34 (1904), pp. 545–75, 617–66. The quotation following is from p. 642:

> Maggiora and Valenti report a mould contaminant that destroyed fowl plague contagion in a test-tube containing blood (mixed with a physiologic solution of NaCl) of a chicken that died of the disease. The kind of mould is not stated by the authors. I observed that under the influence of *Penicillium glaucum* the contagion of exudative typhus was destroyed if the blood was diluted in a physiologic solution of NaCl. Thick blood in a test-tube, covered with a heavy growth of mould, remained virulent.
>
> Especially instructive are the experiments of Centanni. If blood of chickens that died of fowl plague were added to bouillon media and inoculated with the intestinal bacteria of chickens (a form of *B. coli communis-Bacterium coli gallinarum*, which easily penetrates into the organs and blood and infrequently has given occasion to false discoveries) the contagion of exudative typhus perished within 24 hours. Centanni explained the rapid loss of virulence of excrements from birds that died of fowl plague due to the destructive action of the intestinal rods.
>
> It is possible that the action of intestinal bacteria hindered even intravitam accumulation of large numbers of microbes of fowl plague in the intestines, especially in the lower sections where *B. coli* is found in large numbers and where best conditions prevail for its development. Only in the intestinal form of fowl plague, when the local infection is the strongest, there is a prevailing accumulation of fowl plague microbes over the intestinal.
>
> It is interesting that, according to Centanni, a culture of bacilli of fowl cholera, under conditions described as *in vitro*, also destroyed the contagion of fowl plague.

J. S. JOFFE
NEW JERSEY AGRICULTURAL EXPERIMENT STATION,
NEW BRUNSWICK

DANGERS INHERENT IN SCATTERED CATHODE RAYS

AN incident which occurred in the department of radiology at the Massachusetts General Hospital in December, 1944, is particularly pertinent at the present time inasmuch as it has to do with burns caused by scattered cathode rays.

Six men, after very brief exposure to scattered electrons from a 1,200 kilovolt electrostatic generator which was under repair, experienced burns of varying severity. These burns had certain similarities to, but differed from, x-ray reactions, sunburn and thermal burns. Certain factors characterized them, one being an apparently limited depth of penetration. (Relatively thin layers of clothing appeared to stop many of the electrons.) The burns showed three distinct phases of reaction, the latter phases making their appearance as the earlier ones were healing. The second and third phases developed both in areas previously uninvolved and in old healing areas.

The extent of scattering of cathode rays had not been appreciated, nor had the medical literature contained articles dealing with that phase of cathode irradiation. In order that this experience at the Massachusetts General Hosiptal may not be duplicated, publication of a detailed account seems necessary, and this report will appear in the January, 1946, issue of *Radiology*.

LAURENCE L. ROBBINS

[2] J. S. C. Marais, *Onderstepoort Jour. Vet. Sci. Animal Ind.*, 18: 203, 1943; 20: 67, 1944.
[3] D. G. Steyn, "Digest of Vet. Education and Research," 13th and 14th Reports, Part 1, 187, 1928.
[4] C. Rimington, *Onderstepoort Jour. Vet. Sci. Animal Ind.*, 5: 81, 1935.
[5] Renner, *Jour. African Soc.*, 1904: 109.
[6] F. B. Power and F. Tutin, *Jour. Am. Chem. Soc.*, 28: 1170, 1906.