TABLE 1

The in vitro action of amoebicidal agents against trophozoites of E. histolytica in relation to the size of amoebic inocula (× 10^3) *in modified TPS-1 medium at 72 hours.*

Drug dilution µg/ml.	No. of trophozoites*							
	Emetine hydrochloride				Metronidazole			
	1	10	100	1,000	0·82	8·2	82	822
125	−	−	−	+	−	−	−	46
62·5	−	−	−	330	−	−	−	72
31·2	−	−	−	123	−	−	+	162
15·6	−	−	−	62	−	−	12	110
7·8	−	−	+	60	−	−	10	118
3·9	−	+	30	576	−	−	5	100
1·8	−	+	120	553	−	+	36	188
0·9	−	+	75	795	−	+	26	282
0·45	+	21	120	879	−	+	36	108
0·22	12	18		990	+	+	38	206
Control	+	37	1250	1980	15	42	1360	2410

(*) Average figures from duplicate sets of tubes, (+) = only a few motile trophozoites could be seen (−) = none present.

can also be attributed to the compounding effect of the drug with the lag phase of cultures which are most pronounced when only few amoebae are used for seeding purposes.

Payne reported that about 33% of cases of human intestinal amoebiasis after adequate treatment with emetine hydrochloride resulted in cures[7]. The rest of the cases either relapsed or failed to respond altogether to this form of treatment. The development of new amoebicidal agents too have failed to provide satisfactory results. One of the reasons[8] for the occurrence of relapse in human cases of intestinal amoebiasis is the possible *in vivo* failure of the drugs in eradicating the trophozoites of *E. histolytica* from their luminal habitat. The results of this investigation show that while the drugs possess amoebostatic action, yet, they are ineffective as amoebicidal agents. The in *vivo* efficacy of these drugs in the eradication of trophozoites of *E. histolytica* from the luminal habitat of experimentally infected rat cacca in relation to pH of the Caecal contents and degree of infection are under investigation.

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A COLLATERAL HOST FOR CITRUS *PHYTOPHTHORA*

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PHYTOPHTHORA nicotianae B. de Haan var. *parasitica* (Dast.) Waterh., inciting root rot, gummosis, leaf fall and fruit rot on citrus is widespread from July to September in high rainfall

areas. During May and early June, a *Phytophthora* infection on *Colocasia antiquorum* Schott. was observed in the form of yellow to dark brown, circular to irregular necrotic lesions on leaves. Examination of the pathogen revcaled it to be very close to citrus *Phytophthora* and distinct from *Phytophthora colocasiae* Rac. which indicated a possible role of the new host as a collateral host for citrus *Phytophthora*. Healthy plants of Coorg and Kinnow mandarins, Musambi and Pineapple sweet oranges and grapefruit were inoculated with the zoospore inoculum of the pathogen isolated from *Colocasia* and similarly healthy *Colocasia* plants with inoculum from the five isolates of citrus *Phytophthora*, by dipping healthy leaves in zoospore suspension. Inoculated plants were retained in moist chamber for 48 hr and later exposed to the open environment. Results of cross inoculation showed that inoculum from all isolates of the pathogen on citrus were pathogenic to *Colocasia* and similarly inoculum from *Colocasia* caused infection on citrus hosts, after 3-5 days of inoculation. The tests showed that the pathogen citrus and *Colocasia* are the same.

Colocasia antiquorum grows abundantly around ponds, on the banks of stream and stagnant water. Its susceptibility to citrus *Phytophthora* shows that it serves as an active collateral host in the spread of the disease. Also, it may act as one of the primary sources of the disease, as *Phytophthora* infection on *Colocasia* is noticed earlier than on citrus.

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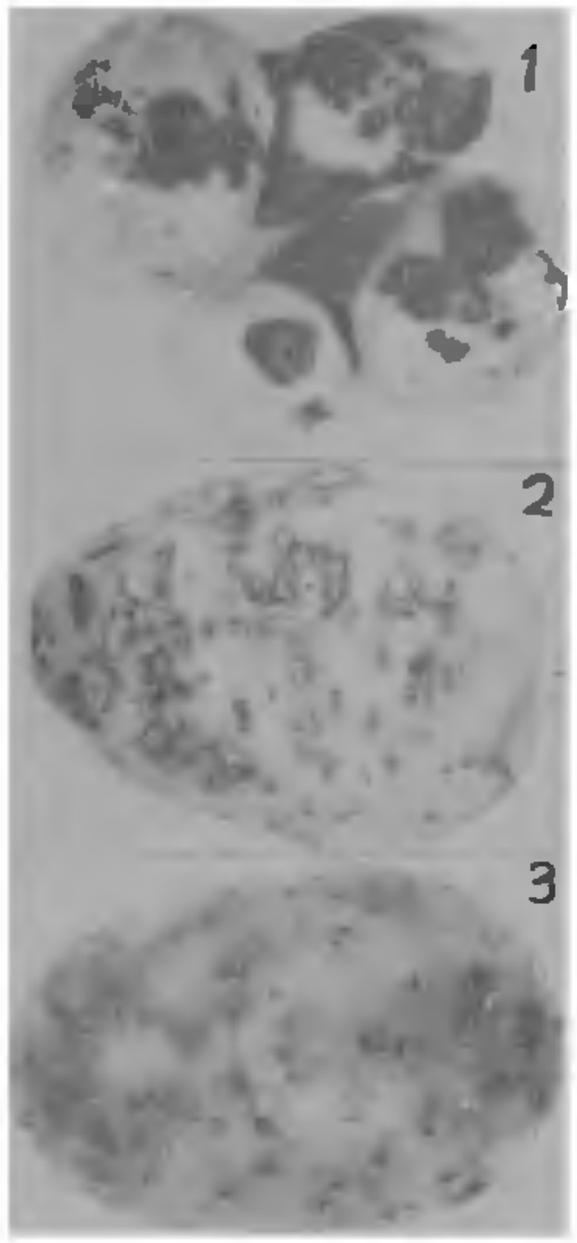

Figures 1-3. 1. Tuber showing individual and coalesced water soaked lesions. **2.** Tuber showing circular, oval and angular lesions which are dry in appearance. **3.** Infected tuber showing white star-like rays on the sites of initial foci of infections.

A NEW DISEASE OF POTATO TUBERS CAUSED BY A NON-SPORULATING FUNGUS

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DURING 1978-80, freshly harvested tubers of Kufri Jyoti from different localities of Himachal Pradesh, were found to be fully covered with mycelial mass. After removal of mycelia from the surface, brown to dark brown, circular or angular sunken lesions were clearly seen. These lesions were either water soaked (figure 1) or dry (figure 2) depending upon the soil moisture. Lesions also coalesced to form bigger patches covering the major portion of the tuber surface. At later stages, the old infection foci developed white star-like rays in the flesh visible through the skin (figure 3). When the affected tubers were cut open, the flesh was found to be dark brown to black.

The fungus was isolated on PDA and its growth was very fast covering 10 cm dia within 7 days at 20° C. The mycelia were white, silkly and ropy. The isolate developed tan coloured small sclerotia in the medium after one week. These sclerotia finally became hard dark bodies covering the whole agar surface. No sporulating structure developed in the isolate even after 12 months of maintenance on potato dextrose agar medium. Attempts to induce sporulation were made for two consecutive years but did not yield positive results. Three of the fungi isolated from different samples were deposited at the CMI, Kew, (IMI Nos. 238445, 242289 & 250995). At C.M.I. one of the isolates was tentatively considered to be a possible member of Xylariaceae (IMI 238445).

The pathogenicity of the isolate was confirmed on freshly harvested healthy tubers of Kufri Chandramukhi and Kufri Jyoti by inserting mycelium through minor injuries (1-2 mm deep). Dry lesions similar to those found in nature developed on tubers in 8-10 days. The lesions turned water-soaked when such tubers were incubated under high humidity for 3-4 days. On further incubation for 3-4 weeks, the lesions enlarged and covered a major part of the