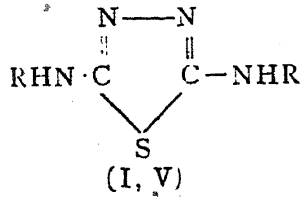
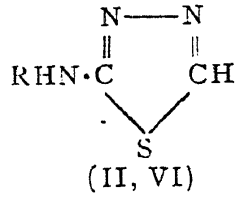
ON SULPHANILAMIDE DERIVATIVES POSSESSING HETEROCYCLIC RINGS: SULPHANILAMIDOTHIOBIAZOLES

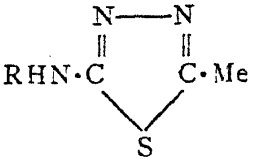
p-ACETAMINO-BENZENE-SULPHONYL CHLORIDE reacts with (*i*) 2:5-diamino-1:3:4-thiodiazole, (*ii*) 2-amino-1:3:4-thiodiazole, (*iii*) 5-methyl-2-amino-thiodiazole and (*iv*) 5-methylthiol-2-amino-1:3:4-thiodiazole, to yield the corresponding heterocyclic sulphanilamido compounds (I), (II), (III) and (IV) melting respectively at 250-54°, above 300°, 200° (decomp.), and 216-18°. The four acetyl sulphanilamides have been hydrolysed to the corresponding sulphanilamido compounds (V), (VI), (VII) and (VIII),



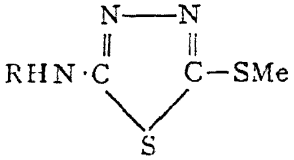
(I, V)



(II, VI)



(III, VII)



(IV, VIII)

[I–IV, R = $-SO_2 \cdot C_6H_4-NHAc$)
V–VIII, R = $-SO_2 \cdot C_6H_4-NH_2$)]

melting respectively at 223°, 213-14°, 186-87° and 198°. Their toxicity and therapeutic efficiency are under investigation.

Organic Chemistry Section,
Dept. of Pure & Applied Chemistry,
Indian Institute of Science,
Bangalore, P. C. GUHA.
March 12, 1943. D. B. DAS GUPTA.

CHANGE OF THE GENERIC NAME *PISIONELLA* AIYAR AND ALIKUNHI, 1940, INTO *PISIONIDENS* (*POLYCHAETA*)

SINCE the genus *Pisionella* was erected in 1940[1] for a new Pisionid from the Madras beach, we have found from the *Zoological Records* for 1940, received here in November 1942, that a genus of the same name and family proposed by Hartman[2] for a Peruvian polychæte worm has priority. We are satisfied from a comparison of the descriptions of the worms given by Hartman and ourselves that the Indian worm is entirely different from the Peruvian. We, therefore, propose for our genus the new name *Pisionidens*, which will be the fourth genus of the family Pisionidæ. The Madras Picionid will, therefore, be known as *Pisionidens indica*.

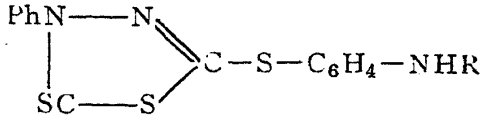
University Zoological Research
Laboratory, Madras, R. GOPALA AIYAR.
April 2, 1943. K. H. ALIKUNHI.

1. *Rec. Ind Mus.*, March 1940, **42**, pt. 1, 89–107.
2. *Rept. Allan Hancock Pacific Exped.*, August 1939, **7**, Nos. 1 and 2, 91–93.

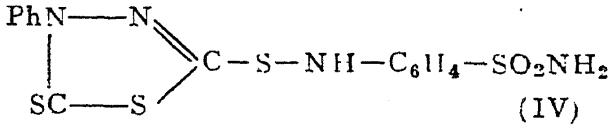
SYNTHESIS OF SULPHANILAMIDE DERIVATIVES OF MIXED SULPHIDES POSSESSING HETEROCYCLIC RINGS

THE disulphide of phenyldithiobiazolonyl mercaptan gives the aminophenyl sulphide (I) by the action of aniline, and (I) by reacting with *p*-acetaminobenzene sulphochloride, furnishes the sulphanilamido derivative of the mixed sulphide, *viz.*, (II), m.p. 222°; the deacetylated compound (III) melts at 173°. Phenyl dithiobiazolonyl-*o*-amino-tolyl sulphide, however, does not react with the sulphochloride.

Phenyldithiobiazolonyl disulphide reacts with sulphanilamide to yield *p*-sulphonamido phenyl derivative of phenyldithiobiazolone sulphamine (IV), m.p. 155°.



I, R = H; II, R = $SO_2-C_6H_4-NH_2$;
III, R = $SO_2 \cdot C_6H_4-NH_2$);



(IV)

Organic Chemistry Section,
Dept. of Pure & Applied Chemistry,
Indian Institute of Science,
Bangalore, P. C. GUHA.
March 12, 1943. V. M. DOKRAS.

THE PRESENCE OF A HITHERTO UNDESCRIBED TYPE OF MUSCLE-FIBRES IN THE SEPTA OF *PHERETIMA POSTHUMA* (VAILLANT)

THE occurrence of various kinds of muscle-fibres has already been noted in the septa of Oligochæta by several workers (de Ribacourt, 1901[1]; Kuhlmann, 1908[2]; Pointner, 1911[3]; Nomura, 1913[4], 1915[5]; Bahl, 1919[6]; and Stephenson, 1925[7], 1930[8]), and Bahl (1919) has given a fairly detailed account of the septa in *Pheretima* with particular reference to the sphincter ed apertures. Our knowledge of the derivation of the muscle-fibres in the septa of the Oligochæta, however, is all but too incomplete, being limited to only a few observations. According to Pointner (1911), some of the septal muscular fibres in *Isochœta* (*Limnodrilus*) *virulenta* can be referred to the longitudinal and circular muscular layers of the parietes, while the others cannot. Bahl (1919) finds that the muscular strands in the anterior five septa (5/6, 6/7, 7/8, 8/9 or 9/10, and 10/11) in *Pheretima posthuma* pass to the body-wall or to other septa in order to support them and keep them in position. Stephenson (1930) remarks that the muscular fibres in the septa of the Oligochæta are mainly derived from the longitudinal muscular layer of the parietes.

While engaged in studying the role of septa in ingestion, peristalsis and egestion in Indian earthworms last year, I noted peculiar muscular fibres in the septa of *Pheretima posthuma* (L. Vaillant), which have apparently escaped

observation so far. These fibres (Fig. 1, *p.e.f.*) are not continuations of the longitudinal muscular fibres of the parietes, as might be expected, but after traversing the septa, pass over into the wall of the intestine and actually form part of the longitudinal muscular layer of that organ. As far as I have been able to ascertain, such a continuation of septal muscle-fibres from the parietal musculature to the enteric musculature has not been recorded hitherto. Their disposition, particularly their

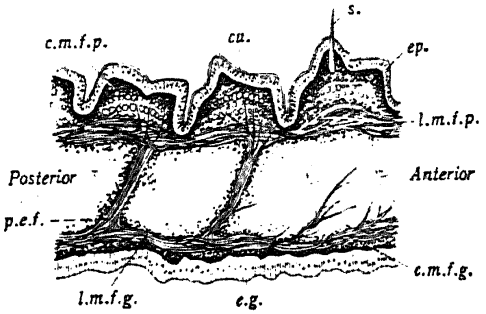


FIG. 1

Longitudinal section through the mid-body of *Pheretima posthuma*, showing the region dorsal to the gut.

c.m.f.g., circular muscle fibres of the gut; *c.m.f.p.*, circular muscle fibres of the parietes; *cu.*, cuticle; *e.g.* epithelium of the gut; *ep.*, epidermis; *l.m.f.g.*, longitudinal muscle fibres of the gut; *l.m.f.p.*, longitudinal muscle fibres of the parietes; *p.e.f.*, parieto-enteric fibres; *s.* seta.

relation to the longitudinal muscular layers of both the body-wall and the gut, indicates a special significance in peristalsis, and one might perhaps justifiably assign to them the role of co-ordinating the muscular contractions of the body-wall with the peristaltic movements of the enteric canal. In view of their peculiar relations, these fibres may be called the *parieto-enteric fibres.*

In this connection one might also mention another relation between the parietal and the enteric longitudinal muscle-fibres which occurs in the anal segment and has not been recorded so far. In this segment (Fig. 2) the longitudinal muscular fibres of the body-wall curve round towards the proctodæum and pass over into the enteric wall as part of its longitudinal layer.

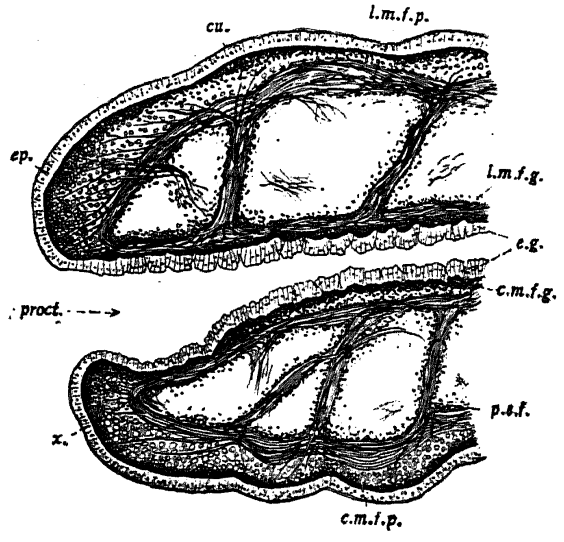


FIG. 2

Longitudinal section of the last three segments of *Pheretima posthuma.*

proct., proctodæum; *x*, the place where the longitudinal muscle fibres of the body-wall curve round to pass on into those of the gut. (Other abbreviations as in Fig. 1.)

My best thanks are due to Mr. Beni Charan Mahendra for his help and guidance in the preparation of this note, as well as to Dr. R. K. Singh, Principal, Balwant Rajput College, for much encouragement.

Dept. of Zoology,
B. R. College,
Agra, RAMESHWAR DAYAL SAKSENA.
January 25, 1943.

1. Ribacourt, E. de, *Bull. Sci. France Belg.*, 1901, **35.** 2. Kuhlmann, W., *Dissert. Göttingen*, 1908. 3. Pointner, H., *Z. wiss. Zool.*, 1911, **98.** 4. Nomura, E., *J. Coll. Sci. Tokyo*, 1913, **35.** 5. —, *Ibid.*, 1915, **35.** 6. Bahl, K. N., *Quart. Jour. Micr. Sci.*, 1919, 65. 7. Stephenson, J., *Rec. Ind. Mus.*, 1925, **27.** 8. —, *The Oligochæta*, Oxford, 1930.

ON THE THALIACEA OF THE MADRAS PLANKTON

THE only collection of Salps made previously from the different regions of the Bay of Bengal is that by the R.I.M.S. *"Investigator"* Expedition. The collections were mostly from the Burma Coast, Mergui Archipelago, Revello Channel and Nankauri Harbour and comprise twelve species of *Salpa* and four species of *Cyclosalpa* (Bomford, Oka and Sewell). The German Deep Sea *"Valdivia"* Expedition, while passing from Sumatra to Colombo, collected six species of *Salpa*, three species of *Cyclosalpa* (Apstein), five species of *Doliolum* and Nurse Forms (Neumann). Herdman has also recorded three species of *Salpa, Doliolum* sp. and Nurse Forms in the Ceylon waters.

Thetys vagina, Salpa fusiformis and *Ritteriella hexagona* were collected from the Madras Coast by the *"Investigator"* Expedition during the months of January and February 1894, from depths ranging from 133 to 250 fathoms. As a result of intensive study of the Plankton collections made in this Laboratory, a large number of forms previously unrecorded from this Coast have been brought to light and it is very likely that these forms will be found to have a wider distribution though it is disconcerting to note that the three species mentioned above do not find a place in this collection. The following forms have been obtained from the Madras Plankton:—

HEMIMYARIA—

1. *Cyclosalpa pinnata* var. *sewelli* Metcalf. (Solitary.)
2. *Cyclosalpa pinnata* var. *polæ* (Sigl). (Solitary and Aggregate.)
3. *Brooksia rostrata* (Traustedt). (Solitary.)
4. *Ritteriella amboinensis* (Apstein). (Solitary.)
5. *Salpa maxima* Forskål. (Aggregate.)
6. *Salpa maxima* var. *tuberculata* Metcalf. (Aggregate.)
7. *Salpa cylindrica* Cuvier. (Solitary and Aggregate.)