The samples to be tested for inhibitory activity were preincubated with tissue sections at room temperature for 60 minutes. The degree of hemadsorption was determined as described above.

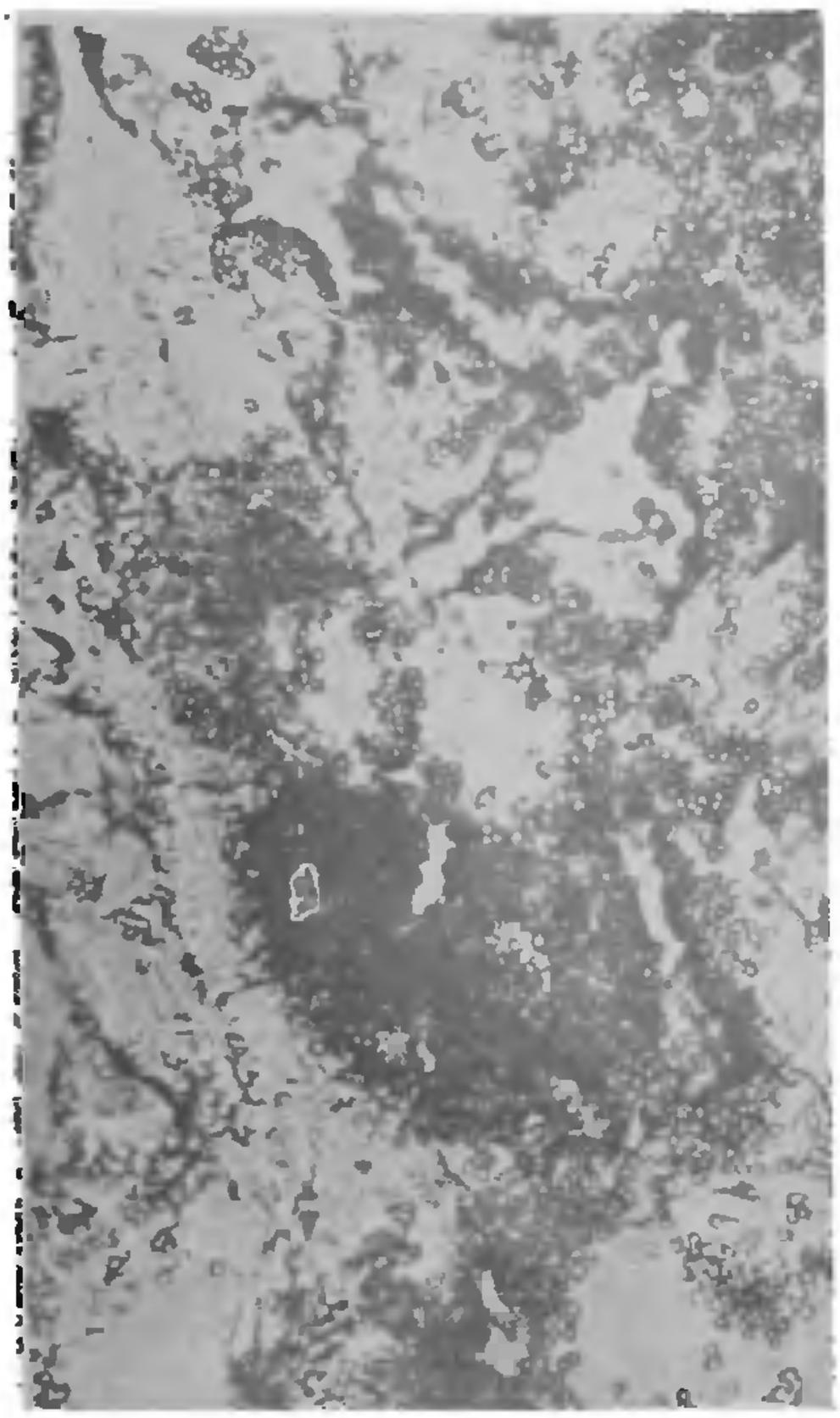

FIG. 1. Attachment of IgG Ab coated sheep erythrocytes to placental section. (3^+ focal reaction.)

Results and Discussion

Receptors for immunoglobulin G were found in all the placentas tested. There were strong reactions even at 1/8 agglutinating unit. Figure 1 shows a typical 3^+ reaction at 1/2 agglutinating unit. The reactions were inhibited by normal human IgG but not by bovine serum albumin or by pepsin digested $(Fab)_2$ fractions of human IgG. When pepsin digested $(Fab)_2$ fractions of IgG antibodies were used for sensitizing the indicator sheep blood cells, the reaction did not occur. This demonstrates that the receptors in the placenta are specific to immunoglobulin G and specifically to the Fc end of immunoglobulin G. In all these experiments we have used uncoated sheep red blood cells as a control. In many cases we conducted experiments using RPMI 1640 washed tissue sections. In the case of washed sections the reactivity was stronger. This is probably due to detachment of *in vivo* bound IgG molecules from the receptors, facilitating more receptors to bind with IgG molecules that are on sensitized sheep red blood cells. We have tested 26 full term placentas and the reaction was similar in all the cases. Further investigations are underway to characterize the population of cells involved in this receptor activity and to find its other immunological importance.

TABLE 1

Effect of various treatments on placental immunoglobulin receptors

	Untreated	IgG	Hetero-logus Ab	IgG $(Fab)_2$
PET 1	3^+	—	—	3^+
PET 2	3^+	—	—	3^+
PET 3	3^+	—	—	3^+
PET 4	3^+	—	—	3^+

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BACTERIA ASSOCIATED WITH PLANKTON OF PORTO NOVO REGION

BACTERIA not only help in the regeneration of nutrients in the aquatic environment but also serve as a source of food to plankters[1]. However, work on the bacteria associated with specific plankters is lacking in Indian waters. An attempt has therefore been made in the present study to investigate the bacterial flora associated with 2 species of phytoplankton, *viz.*, *Coscinodiscus jonesianus* and *Bacillaria paxillifer* and 2 species of zooplankton, *Oithona rigida* and *Lucifer hanseni* collected

from the mouth of Vellar estuary, Porto Novo (11° 29′ N; 79 46′ E) during June-July, 1977.

Species of zooplankton from net collections were isolated using sterile needles under a binocular microscope. For phytoplankton study, monospecific blooms were employed. Each plankton sample (1 to 2 ml) was gently ground in a sterile glass tissue grinder with a known volume of sterile aged sea water and was then serially diluted with the same diluent. Pourplate technique was employed with ZoBell's 2216e medium. The plates were incubated at 28° ± 2° C for 6 days. After the incubation period, the bacterial colonies were selected at random and were purified using the same medium. The density of bacterial population was calculated per mg of dried plankton. The dry weight of plankton was obtained following the method of Hopkins[2]. Water samples, collected, using sterile Meyer's sampler, in a sterile glass bottle, were used directly for plating. The total bacterial populaltion was calculated per ml of water sample. One gm fractions of the central portions of grab sediment samples were used for plating and the total population was calculated per gm of the dried sediment. Random colonies were selected and identified to the generic level using the scheme of Simidu and Aiso[3].

A total of 97 isolates were selected for the present study. The phytoplankton species, *viz.*, *Coscinodiscus jonesianus* and *Bacillaria paxillifer* showed 5·10 and 5·16 log. No. bacteria per mg dry weight respectively. Of the zooplankton, *Oithona rigida* showed a higher count (5·40 log. No. bacteria per mg dry weight) than the decapod *Lucifer hanseni* (2·34 log. No. bacteria per mg dry weight). Regarding the bacterial genera identified from plankton, *Lucifer hanseni and Bacillaria paxillifer* harboured larger number of genera than *Oithona rigida* and *Coscinodiscus jonesianus*. Among the bacterial genera, *Vibrio* and *Bacillus* were dominant though *Vibrio* was conspicuous by its absence in *Oithona rigida* and *Bacillus* in *Coscinodiscus jonesianus*. *Vibrio* alone constituted 80% of the total population. *Micrococcus* was present in all excepting *Coscinodiscus jonesianus*. Simultaneous observations, made in sediment and water samples, showed the absence of *Aeromonas* and *Pseudomoans* in them. *Corynebacterium* alone appeared in these samples. However, as in plankton these samples had the dominance of *Vibrio* and *Bacillus*. The percentage composition of the bacterial genera, identified from the different species of plankton, water and sediment samples are shown in Table I.

TABLE I

Percentage composition of bacterial genera identified from plankton, sediment and water samples

Genera	Phytoplankton		Zooplankton		Sediment	Water
	B. paxillifer	*C. jonesianus*	*L. hanseni*	*O. rigida*		
Vibrio	33·33	80·00	32·50	Nil	48·57	50·00
Bacillus	33·33	Nil	10·00	50·00	17·14	16·66
Micrococcus	11·11	Nil	25·00	50·00	14·28	Nil
Pseudomonas	Nil	Nil	10·00	Nil	Nil	Nil
Alcaligenes	11·11	Nil	10·00	Nil	8·57	16·66
Corynebacterium	Nil	Nil	Nil	Nil	2·87	16·66
Aeromonas	Nil	Nil	5·00	Nil	Nil	Nil
Unidentified	11·11	20·00	7·50	Nil	8·57	Nil
No. of strains	9	5	40	2	34	6

Higher number of bacteria noted in the diatoms might be due to the external metabolities which probably attract the organisms[4]. The dominant neritic forms, *viz.*, *Lucifer hanseni* and *Bacillaria paxillifer* showed a diversity of bacterial genera. The occurrence of *Corynebacterium* in water and sediment samples only, is also interesting. From estuarine sediments of Australian region, Wood[4] isolated *Corynebacterium* and from Porto Novo water Dhevendaran[5] and Mary[6] reported the same. Their presence might be due to specific nutrients being present in water and sediment to accelerate the growth of *Corynebacterium*. Those bacteria, pathogenic and hazardous to plankters, could alter the productivity of the waters and thus information on bacteria associated with plankters is very much needed.

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SEMINAR ON ECOSYSTEMS

A Seminar on "Ecosystems" will be held from 8th to 10th January 1979 at the Geography Department, University Colleges of Science and Technology, Waltair. The object of the Symposium is to initiate studies in depth on Ecosystems in certain parts of our Country forming natural units and reflecting certain environments. The Seminar aims to bring together (*i*) experts in this field who would be in a position to suggest methods of study and analyses of results obtained, based on their extensive work and experience, and (ii) Young workers who are deeply interested and are actively engaged in research in this field.

Further information may be had from: Prof. R. Vaidyanadhan, Co-ordinator, U.G.C. Seminar on Ecosystems, Geography Department, A.U. College of Science and Technology, Waltair 530003.

FIRST INTERNATIONAL CONGRESS ON HORMONES AND CANCER

The First International Congress on Hormones and Cancer will be held in Rome from 4th to 6th October 1979. The Congress is intended to be an interdisciplinary one and its scientific program will therefore cover as many fields of research as possible in Hormones and cancer. It will thus give workers in this field the opportunity to meet and discuss the manifold experimental, clinical and social aspects of subjects of mutual interest. The topics are: (1) Methods in hormone analysis, (2) Metabolism of steroids in neoplastic tissues, (3) Mechanism of action, (4) Steroid-receptor interactions, (5) Hormone action and malignancy, (6) Steroids, prostaglandis, cyclic nucleotides interrelationships, (7) Prolactin and mammary tumors, (8) Epidemiological aspect of breast and endometrical cancer, (9) Clinical significance of receptors assay. (10) Newer therapeutic approaches. All the topics will be covered under the following headings: Plenary lectures, Symposia, Free communication sessions, Poster sessions, Workshop sessions.

The Congress will be conducted in English. Simultaneous interpretation will be provided. The proceedings of the meeting will be published in a book form after the Congress.

Detailed information can be had from: Prof. S, Iacobelli, Laboratorio di Endocrinologia Molecolare, Instituto di Clinica Ostetrica e Ginecologia, Universita Cattolica, *via* Pineta Sacchetti, 644–00168 (Rome),