

## Diarrheal Diseases

Principal Investigator : Chiraphun Duangmani, M.D.

**OBJECTIVE:** To monitor the occurrence of enteric pathogenic bacteria in diarrheal diseases in Thailand.

**BACKGROUND:** This laboratory continues to serve as a reference laboratory for complete identification of enteric bacteria. Specimens (including clinical materials and pure cultures) are sent to this facility for complete biochemical and serologic testing. Such a service insures complete training of technicians at this facility and enables students from other medical facilities to train here.

Of the 1610 specimens examined during the past year, some 382 were from infants being treated at Children's Hospital, Bangkok. 517 specimens were from Thai military and dependent patients being examined at the Thai Army Hospital in Bangkok, while 113 came from US Peace Corps volunteers at stations throughout Thailand.

**RESULTS:** Table 1-5 reports the finding of our examinations for enteric pathogens.

Table 1.  
Enterobacteriaceae Isolated from Patients with Acute Diarrhea in Thailand  
3 April 1972 — 30 March 1973

Month	Thai National						American National					
	No. of Specimens	No. of Patients	Salmonella	Shigella	E. coli	Vibrio parahaemolyticus	No. of Specimens	No. of Patients	Salmonella	Shigella	E. coli	Vibrio parahaemolyticus
Apr	34	32	1	2	11	2	10	10	—	—	1	4
May	83	80	2	2	20	2	33	31	—	4	—	4
Jun	88	83	7	3	22	3	17	15	2	1	—	—
Jul	75	69	6	4	15	—	9	9	1	1	—	—
Aug	89	87	6	5	19	—	32	32	—	12	—	—
Sep	111	99	13	7	20	1	16	16	—	—	—	1
Oct	108	103	8	9	23	—	6	6	—	2	—	3
Nov	114	114	5	17	11	—	19	18	—	1	—	1
Dec	94	88	2	12	12	—	14	14	3	2	1	—
Jan	137	129	9	20	29	—	10	9	4	—	1	1
Feb	65	61	5	7	23	1	5	5	1	1	1	—
Mar	106	93	4	12	39	—	9	9	1	—	—	2
Total	1104	1038	68	100	239	9	180	174	12	24	4	16

Table 2.  
Salmonella Species Isolated from Patients with Acute Diarrhea in Thailand  
3 April 1972 – 30 March 1973

Species	Thai National				American National			
	Children	Adult	Unknown	Total	Children	Adult	Unknown	Total
paratyphi B	3	—	—	3	—	1	—	1
derby	14	1	—	15	—	5	—	5
san diego	1	—	—	1	—	—	—	—
typhimurium	1	—	—	1	—	—	—	—
stanley	1	1	—	2	—	—	—	—
saint paul	1	—	—	1	—	1	—	1
bovis morbificans	2	1	—	3	—	—	—	—
tananarive	2	—	—	2	—	2	—	2
newport	1	—	—	1	—	—	—	—
montevideo	—	1	—	1	—	—	—	—
mikowasina	—	1	—	1	—	—	—	—
virchow	—	—	—	—	—	1	—	1
typhi	6	3	—	9	—	—	—	—
moscow	—	1	—	1	—	—	—	—
jamaica	1	—	—	1	—	—	—	—
weltevreden	10	—	—	10	—	—	—	—
anatum	—	2	—	2	—	2	—	2
meleagridis	3	—	—	3	—	—	—	—
Salm. Gr. B spp.	1	—	—	1	—	—	—	—
Salm. Gr. C <sub>2</sub> spp.	3	—	—	3	—	—	—	—
Salm. Gr. D spp.	3	—	—	3	—	—	—	—
Salm. Gr. E spp.	2	—	—	2	—	—	—	—
Salmonella spp. (not identified)	2	—	—	2	—	—	—	—
<b>Total</b>	<b>53</b>	<b>11</b>	<b>—</b>	<b>64</b>	<b>—</b>	<b>11</b>	<b>—</b>	<b>11</b>

Table 3.  
 Shigella Species Isolated from Patients with Acute Diarrhea in Thailand  
 3 April 1972 — 28 February 1973

Species	Thai National				American National			
	Children	Adult	Unknown	Total	Children	Adult	Unknown	Total
dysenteriae 4	—	1	—	1	—	—	—	—
dysenteriae 5	1	—	—	1	—	—	—	—
flexneri 1	1	—	—	1	—	—	—	—
flexneri 2	15	1	—	16	—	2	—	2
flexneri 3	30	3	—	33	—	1	1	2
flexneri 4	2	1	—	3	—	—	—	—
boydii 2	4	1	—	5	—	1	—	1
boydii 4	1	—	—	1	—	—	—	—
sonnei form I	32	—	—	32	—	18	—	18
sonnei form II	3	1	—	4	—	1	—	1
Alkalescens — Dispar 01	—	1	—	1	—	—	—	—
Shigella Gr. A spp.	1	—	—	1	—	—	—	—
Shigella Gr. B spp.	1	—	—	1	—	—	—	—
<b>Total</b>	<b>79</b>	<b>9</b>	<b>—</b>	<b>88</b>	<b>—</b>	<b>23</b>	<b>1</b>	<b>24</b>

Table 4.  
 Pathogenic *Escherichia coli* Isolated from Patients with Acute Diarrhea  
 in Thailand  
 3 April 1972 — 28 February 1973

	Thai National				American National			
	Children	Adult	Unknown	Total	Children	Adult	Unknown	Total
055 : B5	8	1	—	9	—	—	—	—
026 : B6	13	—	—	13	—	—	—	—
0111 : B4	6	1	—	7	—	—	—	—
0127 : B8	8	1	—	9	—	—	—	—
0112 : B11	5	—	—	5	—	—	—	—
0119 : B14	49	—	—	49	—	2	—	2
086 : B7	3	—	—	3	—	—	—	—
025 : B19 : B23	14	—	—	14	—	—	—	—
0125 : B15	13	—	—	13	—	—	—	—
0126 : B16	5	—	—	5	—	—	—	—
334a	25	—	—	25	—	2	—	2
B 2 C	81	1	—	82	—	—	—	—
B 7 A	5	—	—	5	—	—	—	—
<b>Total</b>	<b>201</b>	<b>4</b>	<b>—</b>	<b>205</b>	<b>—</b>	<b>4</b>	<b>—</b>	<b>4</b>

Table 5.

*Vibrio parahaemolyticus* Isolated from Patients with Acute Diarrhea  
in Thailand from 3 April 1972—28 February 1973

Species	Thai National				American National			
	Children	Adult	Unknown	Total	Children	Adult	Unknown	Total
<i>V. parahaemolyticus</i> K4	—	1	—	1	—	—	—	—
<i>V. parahaemolyticus</i> K9	—	1	—	1	—	—	—	—
<i>V. parahaemolyticus</i> K11	—	—	—	—	—	2	—	2
<i>V. parahaemolyticus</i> K12	—	—	—	—	—	1	—	1
<i>V. parahaemolyticus</i> K13	—	—	—	—	—	1	—	1
<i>V. parahaemolyticus</i> K15	—	1	—	1	—	—	—	—
<i>V. parahaemolyticus</i> K25	—	—	—	—	—	1	—	1
<i>V. parahaemolyticus</i> K39	—	—	—	—	—	1	—	1
<i>V. parahaemolyticus</i> K56	—	1	—	1	—	—	—	—
<i>V. parahaemolyticus</i> untyped	—	5	—	5	—	10	—	10
Total	—	9	—	9	—	16	—	16