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จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX

ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



Appendix 1

STATUS PENELITIAN

Nama : \_\_\_\_\_ Tgl.& Kode : \_\_\_\_\_  
Jenis Kelamin : \_\_\_\_\_  
Umur : \_\_\_\_\_  
Ras : Bapak \_\_\_\_\_ Ibu \_\_\_\_\_  
Alamat : Jl. \_\_\_\_\_ No. \_\_\_\_\_  
Kode pos \_\_\_\_\_, Kota \_\_\_\_\_  
atau  
RT \_\_\_\_\_ RW \_\_\_\_\_, Dusun \_\_\_\_\_  
Kelurahan \_\_\_\_\_, Kecamatan \_\_\_\_\_,  
Kabupaten \_\_\_\_\_, Kode pos \_\_\_\_\_

HASIL PEMERIKSAAN

Hb A2 : \_\_\_\_\_ %  
Hb F : \_\_\_\_\_ %  
Elektroforesis Hb : \_\_\_\_\_  
Ferritin plasma : \_\_\_\_\_  $\mu$ g/L  
Bilirubin total : \_\_\_\_\_ mg/dL  
Fragilitas Osmotik eritrosit (F.O.E.) : \_\_\_\_\_ % hemolisis  
Modifikasi F.O.E. : positive/negative

Morfologi eritrosit :

- Normositik, normokromik - Anisositosis  
- Mikrositik, hipokromik - Poikilositosis  
- Target cell - Basophilic stipling  
- Tear drop - Lain-lain \_\_\_\_\_

Riwayat keluarga mikrositik, hipokromik : ada / tidak ada

Pengecatan lain : \_\_\_\_\_ Hasil \_\_\_\_\_



**SURAT PERNYATAAN**

Yang bertanda tangan dibawah ini :

Nama : \_\_\_\_\_  
Umur : \_\_\_\_\_  
Jenis Kelamin : \_\_\_\_\_  
Alamat : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Menyatakan bersedia ikut berpartisipasi dengan menyumbangkan darah saya sebanyak 10 mL. untuk penelitian yang berjudul A MODIFIED OSMOTIC FRAGILITY TEST (O.F.T.) : AN ALTERNATIVE FOR SCREENING FOR HEMOGLOBINOPATHIES. Dengan ini pula saya nyatakan bahwa saya tidak berkeberatan apabila nantinya hasil penelitian ini di publikasikan untuk kepentingan ilmu pengetahuan dan pelayanan kesehatan.

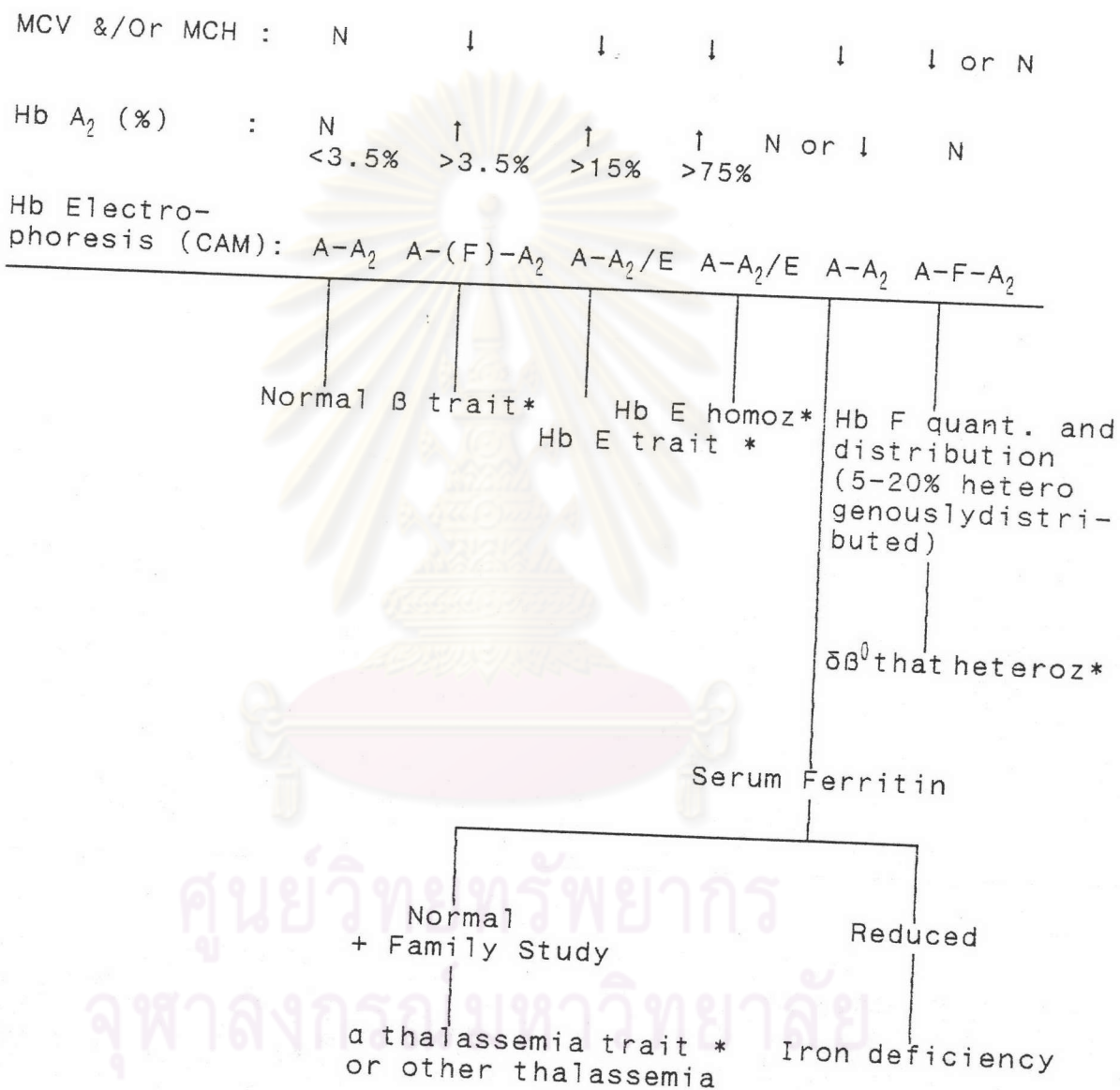
Yogyakarta, \_\_\_\_\_, 19 —

Yang menyatakan,

\_\_\_\_\_

APPENDIX 3

SCREENING PROCEDURE OF HEMOGLOBINOPATHIES



Note : \* is classified as hemoglobinopathies  
 Normal and Iron deficiency are classified  
 as non-hemoglobinopathy

APPENDIX 4

Data of the modified O.F.T. for inter observer agreement

NO	1 <sup>ST</sup> OBSERVER	2 <sup>ND</sup> OBSERVER	DIAGNOSIS
1	0	0	Normal
2	+	+	Hb E trait
3	0	0	Normal
4	0	0	Normal
5	0	0	Normal
6	0	0	Normal
7	0	0	Normal
8	0	0	Normal
9	+	+	$\beta$ thalassemia trait Iron deficiency
10	+	+	$\beta$ thalassemia trait
11	0	0	Normal
12	0	0	Normal
13	0	0	Normal
14	+	+	Hb E trait
15	0	0	Normal
16	+	+	$\beta$ thalassemia trait
17	0	0	Normal
18	0	0	Normal

19	+	+	Normal
20	0	0	Normal
21	+	0	Normal
22	0	0	Normal
23	+	+	Normal
24	0	0	Normal
25	+	+	Normal
26	+	+	Normal
27	0	0	Normal
28	+	0	Normal
29	0	+	Normal
30	+	+	Normal
31	0	0	Normal
32	0	0	Normal
33	0	0	Normal
34	0	0	Normal
35	0	0	Normal
36	0	0	Normal
37	0	0	Normal
38	+	+	Iron deficiency
39	0	0	Normal
40	0	0	Normal
41	0	0	Normal
42	0	0	Normal
43	+	+	Normal

44	0	0	Normal
45	0	0	Normal
46	0	0	Normal
47	0	0	Normal
48	+	+	Hb E trait
49	0	0	Normal
50	0	0	Normal
51	+	+	Hb E trait
52	0	0	Normal
53	0	0	Normal
54	0	+	Hb E trait Iron deficiency
55	0	+	Normal
56	0	0	Normal
57	0	0	Normal
58	0	0	Normal
59	+	+	Hb E trait
60	+	+	Hb E trait
61	0	0	Normal
62	0	0	Normal
63	0	0	Normal
64	0	0	Normal
65	+	+	Iron deficiency
66	0	0	Normal

APPENDIX 5

Data of hemolysis level of the previous O.F.T. for I.C.C.  
Calculation

NO	1 <sup>ST</sup> OBSERVER	2 <sup>ND</sup> OBSERVER
1.	98.71	97.14
2.	93.49	95.79
3.	91.16	93.71
4.	94.44	89.12
5.	93.03	89.16
6.	88.62	93.49
7.	99.40	98.17
8.	89.14	92.02
9.	89.21	91.66
10.	99.44	99.23

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APPENDIX 6

Data of Hemoglobin level for I.C.C. Calculation

NO	1 <sup>ST</sup> OBSERVER	2 <sup>ND</sup> OBSERVER
1.	2.94	3.23
2.	2.84	2.95
3.	2.85	2.98
4.	2.88	3.15
5.	2.94	3.27

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APPENDIX 7

Data of MCV and MCH Values as well as hemoglobin level for CV Calculation

NO	MCV (fL.)	MCH (pg.)	Hb (g/dL.)
1.	86.7	29.4	16.0
2.	86.9	29.0	16.3
3.	86.6	29.0	16.2
4.	86.0	30.1	16.3
5.	86.6	29.3	16.2
6.	86.4	29.4	16.3
7.	86.4	29.3	16.2
8.	86.3	29.3	16.4
9.	86.8	29.3	16.3
10.	86.1	29.9	16.4

Mean = 86.48      Mean = 29.40      Mean = 16.26  
 SD = 0.29      SD = 0.35      SD = 0.12  
 CV = 0.3 %      CV = 1.2 %      CV = 0.7 %



APPENDIX 8

DATA OF MCV AND MCH VALUES AMONG THOSE WHO SUFFER FROM HEMOGLOBIN E TRAIT

Code number	Sex	MCV	MCH
023	M	75.70	22.60
030	M	80.90	26.50
040	M	72.10	22.50
057	M	72.10	22.60
069	M	73.50	23.60
115 *	M	77.70	30.70
135	M	71.80	23.20
139	M	73.50	23.00
178	M	78.40	23.80
180	M	78.00	23.80
183	M	74.80	22.40
217	M	78.20	24.80
268	M	67.20	21.00
299	M	74.90	24.30
319	M	75.80	24.50
365	M	77.60	26.20
387	M	75.10	25.70
390	M	76.50	26.00
391	M	75.70	25.90
392	M	76.50	25.80
043	F	76.90	24.30
080	F	73.70	24.70
100	F	77.20	25.40
155	F	72.80	22.60
162	F	76.10	23.30
174	F	76.40	23.60
194	F	73.90	23.90
231	F	76.40	24.60
252	F	76.80	24.80
257	F	68.00	22.00
263	F	74.70	23.90
281	F	79.50	25.90
295 *	F	80.80	26.10
335	F	75.30	24.80
338	F	74.30	25.40
373 *	F	79.80	27.20
375 *	F	83.60	28.30
463	F	74.30	24.90
304	F	75.60	23.80
Mean		75.70	24.60

APPENDIX 9

TEST RESULTS OF THE MODIFIED AND THE PREVIOUS O.F.T. AS WELL AS THE DIAGNOSIS

CODE	PREVIOUS O.F.T.	MODIFIED O.F.T.	DIAGNOSIS
001	+	+	Normal
002	0	0	Normal
003	+	0	Normal
004	0	0	Normal
005	+	0	Normal
006	0	0	Normal
007	+	0	Normal
008	+	+	Normal
009	+	0	Normal
010	+	0	Normal
011	+	+	Normal
012	+	0	Normal
013	+	+	$\beta$ thal. trait
014	0	0	Normal
015	0	+	$\beta$ thal. trait Iron deficiency
016	+	0	Iron deficiency
017	+	0	Normal

018	0	+	Normal
019	+	0	Normal
020	+	0	Normal
021	+	+	Iron deficiency
022	0	0	Normal
023	+	+	Hb E trait
024	+	+	Normal
025	+	+	Normal
026	+	+	Normal
027	+	+	Normal
028	+	0	Normal
029	+	+	Normal
030	+	+	Hb E trait
031	+	0	Normal
032	+	0	Normal
033	+	+	$\beta$ thal. trait Iron deficiency
034	0	0	Normal
035	0	0	Normal
036	+	0	Normal
037	+	+	Microcytosis
038	+	0	Normal
039	+	0	Normal
040	+	+	Hb E trait
041	+	+	Iron def. anemia

042	+	0	Normal
043	+	+	Hb E trait Iron deficiency
044	+	0	Normal
045	+	+	Normal
046	+	0	Normal
047	0	0	Normal
048	+	+	$\beta$ thal. trait Iron def. anemia
049	0	0	Normal
050	+	0	Normal
051	0	+	Normal
052	+	0	Normal
053	+	+	Normal
054	+	+	Iron def. anemia
055	+	+	Normal
056	+	0	Normal
057	+	+	Hb E trait
058	+	0	Normal
059	0	0	Normal
060	+	+	Iron deficiency
061	+	+	Echinocytosis
062	+	0	Normal
063	0	0	Normal
064	+	0	Normal



065	+	0	Normal
066	0	+	Normal
067	+	0	Normal
068	+	0	Normal
069	+	+	Hb E trait
070	+	+	Normal
071	+	0	Normal
072	+	+	Normal
073	0	0	Normal
074	+	+	Normal
075	0	0	Iron def. anemia
076	0	0	Normal
077	0	0	Normal
078	+	0	Normal
079	+	+	Iron deficiency
080	+	+	Hb E trait
081	+	+	Polycythemia
082	0	0	Normal
083	+	0	Normal
084	+	+	Iron def. anemia
085	+	+	$\beta$ thal trait
086	+	+	Normal
087	+	+	Ovalocytosis
088	+	0	Normal
089	0	0	Iron deficiency

090	0	0	Hypoplastic anemia
091	0	0	Normal
092	0	+	Iron def. anemia
093	0	0	Iron deficiency
094	+	0	Normal
095	+	+	$\beta$ thal. trait
096	+	0	Normal
097	+	+	Echinocytosis
098	+	+	Ovalocytosis
099	0	0	Normal
100	+	+	Hb E trait
			Iron deficiency
101	+	0	Normal
102	+	0	Normal
103	0	0	Normal
104	+	0	Normal
105	0	+	Normal
106	0	+	Normal
107	0	0	Normal
108	0	+	Normal
109	0	0	Normal
110	0	0	Normal
111	0	0	Normal
112	0	0	Normal
113	0	+	HPFH

114	0	+	HPFH
115	+	0	Hb E trait
116	+	+	$\beta$ thal trait iron deficiency
117	0	0	Normal
118	+	0	Normal
119	+	0	Normal
120	+	+	HPFH
121	+	+	Normal
122	0	+	Normal
123	+	0	Normal
124	+	+	Normal
125	0	0	Normal
126	+	+	Normal
127	+	+	Normal
128	0	+	Normal
129	+	+	Echinocytosis
130	0	0	Normal
131	0	0	Normal
132	+	0	Normal
133	0	0	Normal
134	0	0	Normal
135	+	+	Hb E trait
136	+	+	Iron def. anemia
137	0	0	Normal



138	+	+	$\beta$ thal trait
139	+	+	Hb E trait
			Iron deficiency
140	0	0	Normal
141	0	0	Normal
142	0	0	Normal
143	+	+	Normal
144	+	+	Normal
145	0	0	Normal
146	+	0	Normal
147	+	0	Normal
148	0	0	Normal
149	0	0	Normal
150	0	0	Normal
151	0	0	Normal
152	+	0	Normal
153	+	+	$\beta$ thal trait
154	+	0	Normal
155	+	+	Hb E trait
			Iron deficiency
156	+	+	Normal
157	0	0	Normal
158	+	+	Iron def. anemia
159	0	0	Normal
160	+	0	Normal



161	+	+	Polycythemia
162	+	+	Hb E trait
			Iron deficiency
163	0	+	Iron deficiency
164	+	+	$\beta$ thal trait
165	+	+	Normal
166	+	0	Polycythemia
167	0	0	Normal
168	+	0	Normal
169	+	0	Normal
170	+	+	Normal
171	+	+	Normal
172	+	+	Normal
173	0	0	Normal
174	+	+	Hb E trait
175	0	0	Normal
176	0	0	Normal
177	+	+	Iron def. anemia
178	+	0	Hb E trait
179	+	0	Normal
180	+	+	Hb E trait
181	+	0	Normal
182	0	0	Normal
183	+	+	Hb E trait
184	0	0	Normal

185	0	0	Normal
186	+	0	Normal
187	0	0	Normal
188	+	0	Normal
189	0	0	Normal
190	+	+	$\beta$ thal trait Iron deficiency
191	0	0	Normal
192	0	0	Normal
193	0	0	Normal
194	+	+	Hb E trait
195	0	0	Normal
196	0	0	Normal
197	+	0	Normal
198	0	0	Normal
199	0	0	Normal
200	+	+	Normal
201	0	0	Normal
202	+	+	Normal
203	0	0	Normal
204	+	+	Normal
205	+	0	Normal
206	+	0	Normal
207	+	0	Normal
208	+	0	Normal

209	0	0	Normal
210	0	0	Normal
211	+	0	Normal
212	+	+	Normal
213	0	0	Normal
214	+	0	Normal
215	+	+	Iron def. anemia
216	0	0	Normal
217	+	+	Hb E trait
218	0	0	Normal
219	+	+	Normal
220	+	+	Iron def. anemia
221	+	0	Normal
222	+	+	Normal
223	+	+	Normal
224	0	0	Normal
225	0	0	Normal
226	+	0	Normal
227	+	0	Normal
228	0	0	Normal
229	+	0	Normal
230	+	+	Normal
231	+	+	Hb E trait
			Iron deficiency
232	+	+	Normal

233	0	0	Normal
234	+	+	Normal
235	+	0	Normal
236	+	+	Normal
237	0	0	Normal
238	+	+	Normal
239	+	+	Normal
240	+	0	Normal
241	+	+	Normal
242	+	0	Normal
243	+	+	Normal
244	0	0	Normal
245	+	+	Normal
246	+	0	Normal
247	0	0	Normal
248	+	0	Normal
249	0	0	Normal
250	0	+	Normal
251	0	0	Normal
252	+	+	Hb E trait Iron deficiency
253	+	+	Iron def. anemia
254	+	0	Normal
255	0	0	Normal
256	+	0	Iron def. anemia

257	+	+	Hb E trait Iron def. anemia
258	+	+	Normal
259	+	+	Normal
260	0	0	Normal
261	0	0	Normal
262	+	0	Normal
263	+	+	Hb E trait Iron deficiency
264	0	0	Normal
265	+	0	Normal
266	0	0	Normal
267	0	0	Normal
268	+	+	Hb E trait Iron deficiency
269	0	0	Normal
270	0	0	Normal
271	0	0	Normal
272	0	0	Normal
273	0	0	Normal
274	+	0	Normal
275	+	+	Iron deficiency
276	0	0	Normal
277	0	0	Normal
278	+	+	Iron def. anemia

279	+	0	Normal
280	0	0	Normal
281	0	+	Hb E trait
282	0	0	Normal
283	0	0	Normal
284	+	0	Normal
285	+	0	Normal
286	0	0	Normal
287	0	0	Normal
288	0	0	Normal
289	0	0	Normal
290	+	+	Normal
291	0	0	Normal
292	0	0	Normal
293	0	0	Normal
294	0	0	Normal
295	+	+	Hb E trait
296	0	0	Normal
297	0	0	Normal
298	0	0	Normal
299	+	+	Hb E trait
300	0	0	Normal
301	0	0	Normal
302	0	0	Normal
303	+	0	Normal

304	+	+	Hb E trait Iron def. anemia
305	0	0	Normal
306	+	0	Iron def. anemia
307	0	0	Normal
308	0	0	Normal
309	0	0	Normal
310	+	0	Normal
311	0	0	Normal
312	0	0	Normal
313	0	0	Normal
314	0	0	Normal
315	0	0	Normal
316	0	0	Normal
317	0	0	Normal
318	+	0	Normal
319	+	+	Hb E trait Iron deficiency
320	0	0	Normal
321	0	0	Normal
322	0	0	Normal
323	+	+	Iron deficiency
324	+	+	Iron def. anemia
325	0	0	Normal
326	0	0	Normal

327	0	0	Normal
328	0	0	Normal
329	+	0	Normal
330	0	0	Normal
331	0	0	Normal
332	+	0	Normal
333	+	+	Normal
334	+	+	Iron def. anemia
335	0	0	Hb E trait
			Iron deficiency
336	0	+	$\beta$ thal trait
			Iron deficiency
337	+	0	Normal
338	+	0	Hb E trait
339	0	0	Normal
340	+	0	Normal
341	0	0	Normal
342	+	0	Normal
343	+	+	Normal
344	0	0	Normal
345	+	0	Normal
346	+	0	Normal
347	0	0	Normal
348	0	0	Normal
349	+	0	Normal



350	0	+	Normal
351	+	0	Iron deficiency
352	0	0	Normal
353	0	0	Normal
354	+	0	Normal
355	0	0	Normal
356	+	+	Normal
357	0	0	Normal
358	0	0	Normal
359	0	0	Normal
360	0	0	Normal
361	+	0	Normal
362	0	0	Normal
363	0	0	Normal
364	0	0	Normal
365	+	+	Hb E trait
366	0	0	Normal
367	0	0	Normal
368	0	0	Normal
369	+	+	Iron def. anemia
370	0	+	Normal
371	0	0	Normal
372	0	0	Normal
373	0	0	Hb E trait
			Iron deficiency

374	0	0	Normal
375	+	+	Hb E trait
376	0	+	Microcytosis
377	0	0	Normal
378	+	0	Normal
379	0	+	Normal
380	0	0	Normal
381	0	+	Normal
382	+	0	Normal
383	0	0	Normal
384	0	0	Normal
385	0	0	Normal
386	0	0	Normal
387	+	+	Hb E trait
388	0	0	Normal
389	0	0	Normal
390	0	0	Hb E trait
391	+	0	Hb E trait
392	+	+	Hb E trait
393	0	0	Normal
394	+	+	Normal
395	0	0	Normal
396	0	0	Normal
397	+	0	Normal
398	0	0	Normal

399	0	+	Normal
400	+	+	Normal
401	0	0	Normal
402	+	+	Iron deficiency
403	0	+	Normal
404	0	0	Normal
405	+	0	Normal
406	+	+	Microcytosis
407	0	+	Normal
408	0	0	Normal
409	0	0	Normal
410	0	0	Normal
411	0	0	Normal
412	+	0	Microcytosis
413	+	+	Normal
414	+	0	Normal
415	0	0	Normal
416	0	0	Normal
417	0	0	Normal
418	0	0	Normal
419	0	0	Normal
420	0	0	Normal
421	0	0	Normal
422	0	0	Normal
423	0	0	Normal

424	0	0	Normal
425	0	0	Normal
426	0	0	Normal
427	0	0	Normal
428	0	0	Normal
429	0	0	Normal
430	0	0	Normal
431	+	0	Normal
432	+	0	Normal
433	+	+	Normal
434	0	0	Normal
435	+	0	Normal
436	0	+	Normal
437	+	0	Normal
438	+	0	Normal
439	0	0	Normal
440	0	0	Normal
441	0	0	Normal
442	0	0	Normal
443	0	0	Iron deficiency
444	0	0	Normal
445	0	0	Normal
446	0	0	Normal
447	0	0	Normal
448	+	0	Normal

449	0	0	Normal
450	+	0	Normal
451	+	0	Iron deficiency
452	0	0	Normal
453	0	0	Normal
454	0	0	Normal
455	0	0	Normal
456	0	0	Iron deficiency
457	+	0	Normal
458	0	0	Normal
459	0	0	Normal
460	0	0	Normal
461	0	0	Iron deficiency
462	0	0	Normal
463	+	+	Hb E trait
464	0	0	Normal
465	0	0	Normal
466	0	0	Normal
467	0	0	Normal
468	0	0	Normal

ศูนย์วิทยทรัพยากร  
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## VITAE

Osman Sianipar was born on the 2<sup>nd</sup> of October, 1959 in Trenggalek, Indonesia. He graduated from School of Medicine, Gadjah Mada University, Yogyakarta, Indonesia in 1987 with a Medical Doctor degree. Subsequently, in 1992 he got certificate of Diploma in Medical Microbiology from Institute for Medical Research, Kuala Lumpur, Malaysia. He has been a lecturer in School of Medicine, Gadjah Mada University, Yogyakarta, Indonesia since 1988.



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