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APPENDICES

APPENDIX A

QUESTIONNAIRE

มกราคม 2550

ID code ❑❑ ❑❑❑

การวิจัยปฏิสัมพันธ์ระหว่างพันธุศาสตร์ของยีน *GSTM1, GSTT1, CYP1A1, NQO1* และ *XRCC1* และการสัมผัสสารป้องกันกำจัดศัตรูพืชและควันบุหรี่ กับความเสี่ยงในการเกิดโรคมะเร็งเม็ดเลือดขาวชนิด acute lymphoblastic leukemia ในเด็กไทย

กรอกใบยินยอมด้วยความสมัครใจให้ทำการวิจัยในมนุษย์ ❑

ได้รับการเก็บเซลล์จากตัวอย่างเลือด ❑

วันที่สัมภาษณ์ ❑❑/ ❑❑ / ❑❑❑❑

สถานที่สัมภาษณ์

❑1 บ้าน ❑2 โรงพยาบาล ❑3 อื่นๆ _____

ส่วนที่ 1: ข้อมูลเบื้องต้น

1. ท่านคือมารดาผู้ให้กำเนิดของเด็กใช่หรือ?
   - ❑1 ใช่
   - ❑2 ไม่ใช่ → หยุดการสัมภาษณ์
   - ❑3 ไม่ทราบ
2. วันเดือนปีเกิดของท่าน (มารดา) คือ ❑❑/ ❑❑ / ❑❑❑❑
3. สถานะภาพการสมรสของมารดาคือ
   - ❑1 แต่งงาน
   - ❑2 อยู่ด้วยกัน
   - ❑3 แยกกันอยู่
   - ❑4 หย่าร้าง
   - ❑6 ไม่เคยแต่งงาน
   - ❑9 ไม่ทราบ

ส่วนที่ 2: ข้อมูลการใช้สารป้องกันกำจัดศัตรูพืชในการเกษตร และสารกำจัดแมลงภายในบ้าน

คำถามเกี่ยวกับการใช้สารป้องกันกำจัดศัตรูพืช และสารกำจัดแมลง กรุณาบอกชนิดหรือชื่อสารที่ท่านใช้และช่วงเวลาที่ใช้สารเคมีดังกล่าวตามช่วงระยะเวลาที่ได้กำหนดไว้ตามตาราง

1. ท่านเคยใช้สารกำจัดวัชพืช, สารกำจัดแมลง, สารป้องกันกำจัดโรคพืชหรือไม่ สารชื่ออะไร และเมื่อไร?

   ❑1 เคย ❑2 ไม่เคย ❑3 ไม่ทราบ

1) ชนิดของสารป้องกันกำจัดศัตรูพืช	2) ใครเป็นผู้ใช้สารเคมี	3) ช่วงเวลาที่ใช้สารเคมี									4) ใช้กี่ครั้ง/ช่วง	
1= สเปร์ฉีดกันยุงและแมลง 2= ยาจุดกันยุง 3= สารทากันยุง 4= สารฆ่าปลวก 5= อื่นๆ	1 = มารดา 2 = บิดา 3 = เด็ก 7 = อื่นๆ : ระบุ____________	1 = 3 เดือนก่อนมารดาตั้งครรภ์ 2 = 3 เดือนแรกที่มารดาตั้งครรภ์ 3 = 3-6 เดือน 4 = 6-9 เดือน 5 = ช่วงมารดาให้นมบุตร 6 = เด็กแรกเกิดจนอายุ 1 ปี 7 = เด็กอายุ 1-2 ปี 8 = เด็กอายุ 2-3 ปี 9 = ช่วงก่อนสัมภาษณ์ 1 ปี									2 = ≥ 5 ครั้ง 3 = ≤ 5 ครั้ง	
			Trimester				อายุ					
		3 mo	1st trim	2nd trim	3rd trim	BF	0-1	1-2	2-3	12 mo	≥ 5	≤ 5
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		1	2	3	4	5	6	7	8	9	2	3
		3 mo	1st trim	2nd trim	3rd trim	BF	0-1	1-2	2-3	12 mo	≥ 5	≤ 5

ส่วนที่ 3: ข้อมูลอาชีพของมารดา

1. ท่านเคยทำอาชีพดังต่อไปนี้หรือไม่?

1) ทำสวนผักหรือผลไม้	❑1 ใช่ → ช่วงระยะเวลาที่ทำงานปี พ.ศ. _____ถึง _____ ❑2 ไม่ใช่
2) ทำนา	❑1 ใช่ → ช่วงระยะเวลาที่ทำงานปี พ.ศ. _____ถึง _____ ❑2 ไม่ใช่
3) ทำไร่	❑1 ใช่ → ช่วงระยะเวลาที่ทำงานปี พ.ศ. _____ถึง _____ ❑2 ไม่ใช่
4) รับจัดสวนคนหรือดูแลสวน	❑1 ใช่ → ช่วงระยะเวลาที่ทำงานปี พ.ศ. _____ถึง _____ ❑2 ไม่ใช่
5) อาชีพที่เกี่ยวข้องกับการเกษตรอื่นๆ	❑1 ใช่ → ช่วงระยะเวลาที่ทำงานปี พ.ศ. _____ถึง _____ ❑2 ไม่ใช่

APPENDIX B

BUFFERS AND REAGENTS

1. 10% SDS solution

Sodium dodecyl sulfate	10	g
Distilled water to	100	ml

Mix the solution and store at room temperature

2. 0.5 M EDTA (pH 8.0)

Disodium ethylenedimine tetraacetate.$2H_2O$	186.6	g

Dissolve in distilled water and adjust pH to 8.0 with NaOH

Distilled water to	1,000	ml

Sterilize the solution by autoclaving and store at room temperature

3. 50X Tris acetate buffer (50X TAE buffer)

Tris base	242	g
Glacial acetic	57.1	ml
0.5 M EDTA pH 8.0	100	ml
Distilled water to	1,000	ml

4. 6X loading dye

Bromphenol blue	0.25	g
Xylene cyanol	0.25	g
Glycerol	50	ml
1 M Tris (pH 8.0)	1	ml
Distilled water to	100	ml

Mix and stored at 4°C

5. 2% agarose gel (w/v)

Agarose	1.6	g
1X TAE buffer	80	ml

Dissolve by heating in microwave oven and mix occasionally until no granules of agarose are visible

6. Ethydium bromide

Ethydium bromide	10	mg
Distilled water	1	ml

Mix the solution and store at 4°C

7. Denature solution

NaOH 0.5 M	10	g
NaCl 1.5 M	43.8	g
Distilled water to	500	ml

Mix the solution and store at room temperature

8. Neutralizing solution

NaCl 1.5 M	43.8	g
Tris base 1M pH 7.2	60.5	g
Distilled water to	500	ml

Mix the solution and store at room temperature

APPENDIX C

CHEMICAL AGENTS AND INSTRUMENTS

Materials

1. Pipette tip: 10 µl. 200 µl, 1000 µl (Axygen Scientific, USA and Euro Lab® Labortechnik KG, German)
2. Microcentrifuge tube: 0.2 ml, 0.5 ml, 4.5 ml (Axyge Scientific, USA)
3. Polypropylene conical tube: 15 ml, 50 ml (Corning, USA)
4. Beaker: 50 ml, 100 ml, 200 ml, 500 ml, 1,000 ml (Pyrex)
5. Flask: 250 ml, 500 ml, 1,000 ml (Pyrex)
6. Reagent bottle: 100 ml, 250 ml, 500 ml, 1,000 ml (Duran, USA)
7. Cylinder: 25 ml, 50 ml, 100 ml, 250 ml, 500 ml, 1,000 ml (Witeg, German)
8. Glass pipette: 5 ml, 10 ml (Witeg, German)
9. Pipette rack (Eppendorf, German)
10. Thermometer (Precision, German)
11. PARAFILM (American National Can, USA)
12. Plastic wrap
13. Aluminum foil
14. Stirring-magnetic bar
15. Combs (Bio-RAD)
16. Electrophoresis chamber set (Bio-RAD)
17. Timer (Canon, China)

Equipment

1. Automatic adjustable micropipette: P2 (0.1-2.5 µl), P10 (0.5-10 µl), P20 (2-20 µl), P100 (10-100 µl), P200 (10-200 µl), P1000 (0.1-1 ml) (Eppendorf, German)
2. Pipette boy (Tecnomara, Switzerland)
3. Vertex (Scientic Industry, USA)

4. pH meter (Ecomet, UK)
5. Stirring hot plate (Corning, USA)
6. Microcentrifuge (Eppendorf, German)
7. Thermal centrifuge (Heraeus, German)
8. DNA Thermal cycler 480 (Applied Biosystems, USA)
9. Heat block (Boekel Scientic, UK)
10. Shaker (Armed)
11. Incubator (Memmert, German)
12. Spectrophotometers (Bio-RAD, USA)
13. Gel-doc (Bio-RAD, USA)
14. Refrigerator 4 °C (Hitachi, Sanyo, Japan)
15. Deep freeze -20 °C, -80 °C (Sanyo, Japan)
16. Water Bath

Reagents

1. General reagents
    1.1 Hydrochloric acid (Merck)
    1.2 Sodium chloride (Merck)
    1.3 Tris base (USB)

2. Reagents for PCR analysis
    2.1 10X PCR buffer (500 mM KCl, 200 m tris-Hcl pH 8.4)
    2.2 Magnesium Chloride
    2.3 Deoxynucleotide triphosphates (dNTPs)
    2.4 Oligonucleotide primers (BSU)
    2.5 Taq DNA polymerase (Fermentus)

3. Reagents for electrophoresis

    3.1 Agarose, molecular grade (Promega)

    3.2 Ethydium bromide (Sigma, USA)

    3.3 6X loading dye

    3.4 50X TAE

    3.5 100 base pair DNA ladder (Fermentas)

BIOGRAPHY

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