

vacAs1 gene (201 bp)

Links

U05676. Reports Helicobacter pylo...[gi:471727]

LOCUS HPU05676 4738 bp DNA linear BCT 15-APR-1994

DEFINITION Helicobacter pylori 60190 cysteinyl-tRNA synthetase homolog gene, partial cds, and vacuolating cytotoxin (vacA) gene, complete cds.

ACCESSION U05676

VERSION U05676.1 GI:471727

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales; Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 4738)

AUTHORS Cover, T.L., Tummuru, M.K., Cao, P., Thompson, S.A. and Blaser, M.J.

TITLE Divergence of genetic sequences for the vacuolating cytotoxin among Helicobacter pylori strains

JOURNAL J. Biol. Chem. 269 (14), 10566-10573 (1994)

PUBMED 8144644

REFERENCE 2 (bases 1 to 4738)

AUTHORS Cover, T.L.

TITLE Direct Submission

JOURNAL Submitted (26-JAN-1994) Timothy L. Cover, Division of Infectious Disease, Vanderbilt University School of Medicine, A3310 Medical Center North, Nashville, TN 37232, USA

FEATURES
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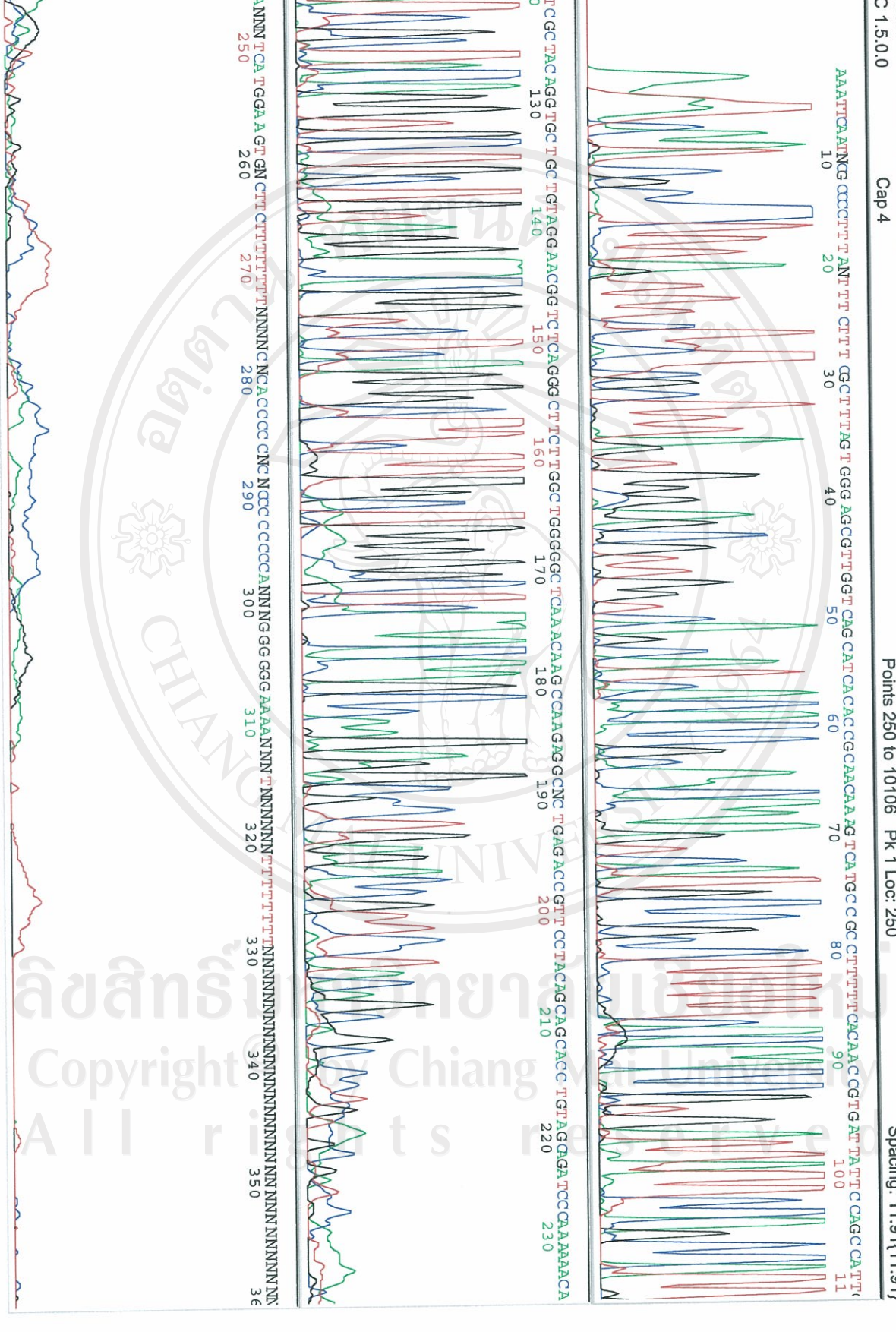
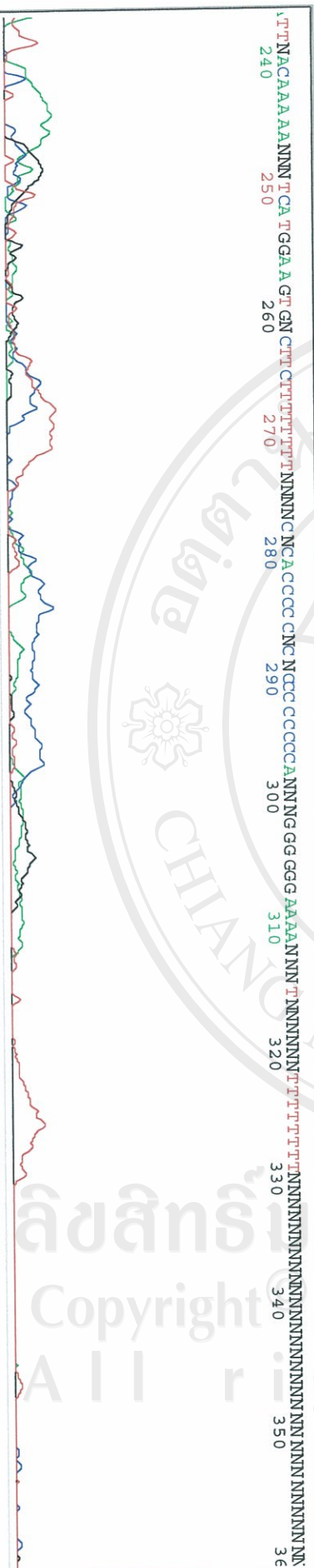
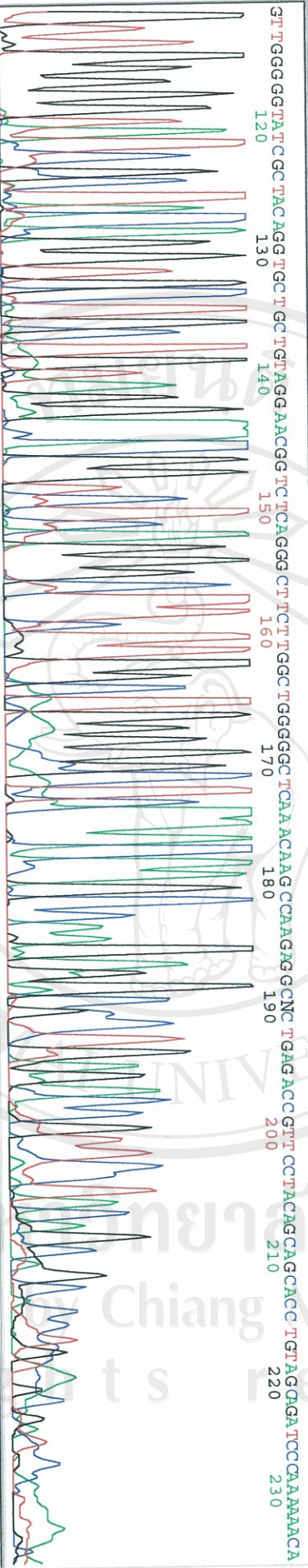
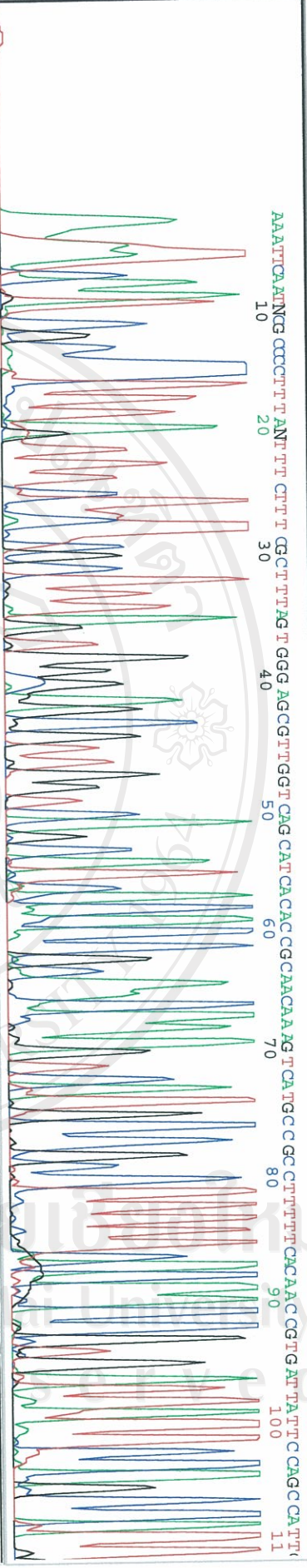
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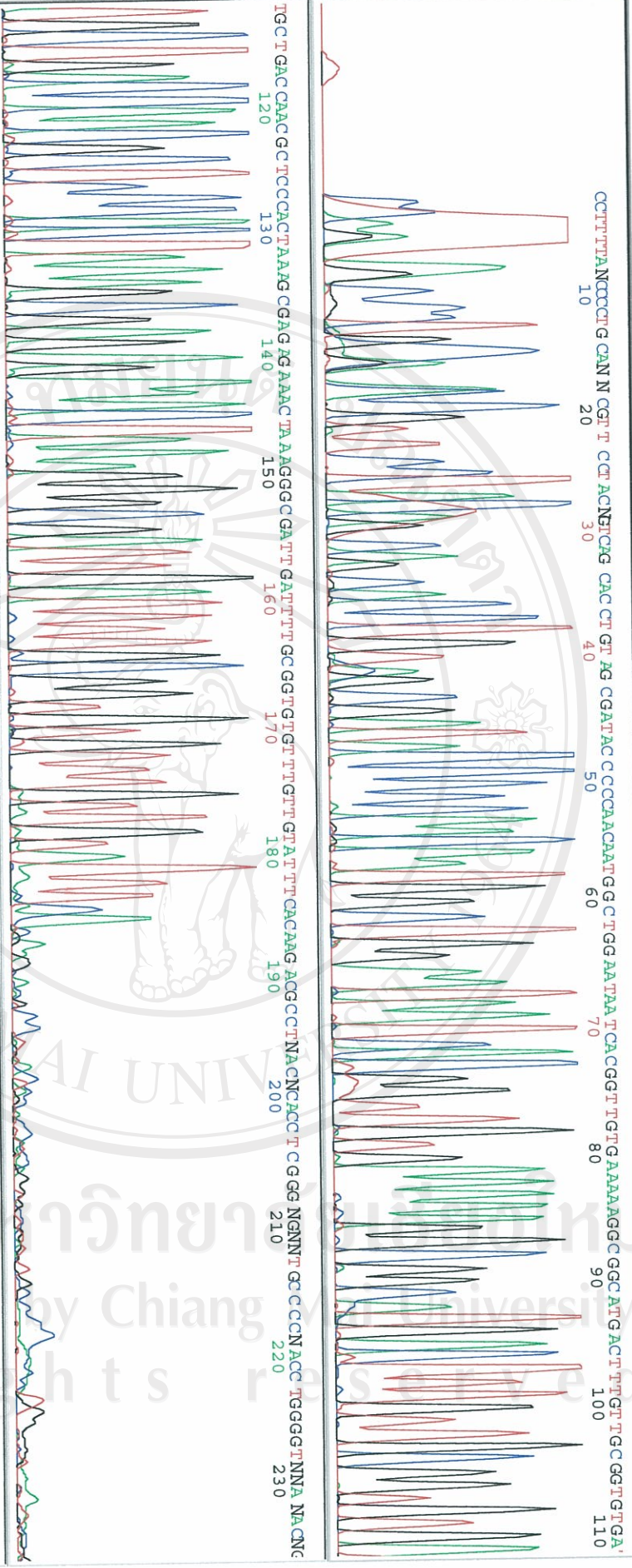


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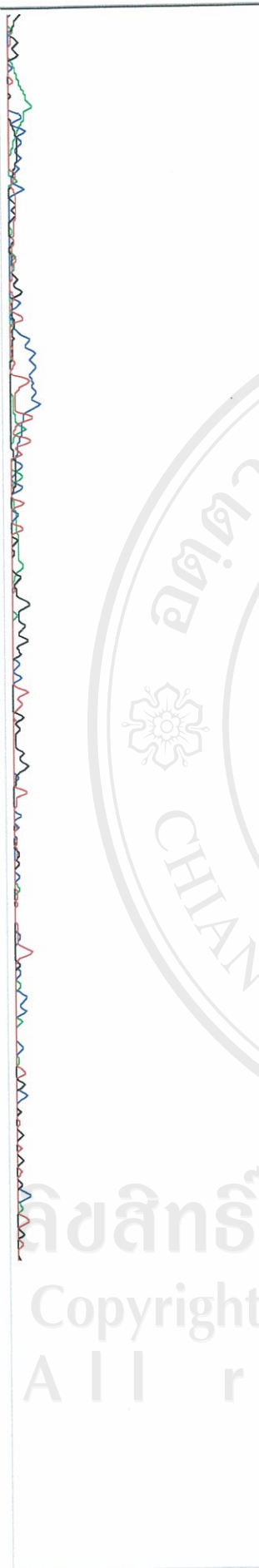
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vacAs1 gene (259 bp)

U05676. Reports *Helicobacter pylori*...[gi:471727] Links

LOCUS HPU05676 4738 bp DNA linear BCT 15-APR-1994

DEFINITION *Helicobacter pylori* 60190 cysteinyl-tRNA synthetase homolog gene, partial cds, and vacuolating cytotoxin (vacA) gene, complete cds.

ACCESSION U05676

VERSION U05676.1 GI:471727

KEYWORDS .

SOURCE *Helicobacter pylori*

ORGANISM *Helicobacter pylori*
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales; Helicobacteraceae; *Helicobacter*.

REFERENCE 1 (bases 1 to 4738)

AUTHORS Cover, T.L., Tummuru, M.K., Cao, P., Thompson, S.A. and Blaser, M.J.

TITLE Divergence of genetic sequences for the vacuolating cytotoxin among *Helicobacter pylori* strains

JOURNAL J. Biol. Chem. 269 (14), 10566-10573 (1994)

PUBMED 8144644

REFERENCE 2 (bases 1 to 4738)

AUTHORS Cover, T.L.

TITLE Direct Submission

JOURNAL Submitted (26-JAN-1994) Timothy L. Cover, Division of Infectious Disease, Vanderbilt University School of Medicine, A3310 Medical Center North, Nashville, TN 37232, USA

FEATURES

source Location/Qualifiers

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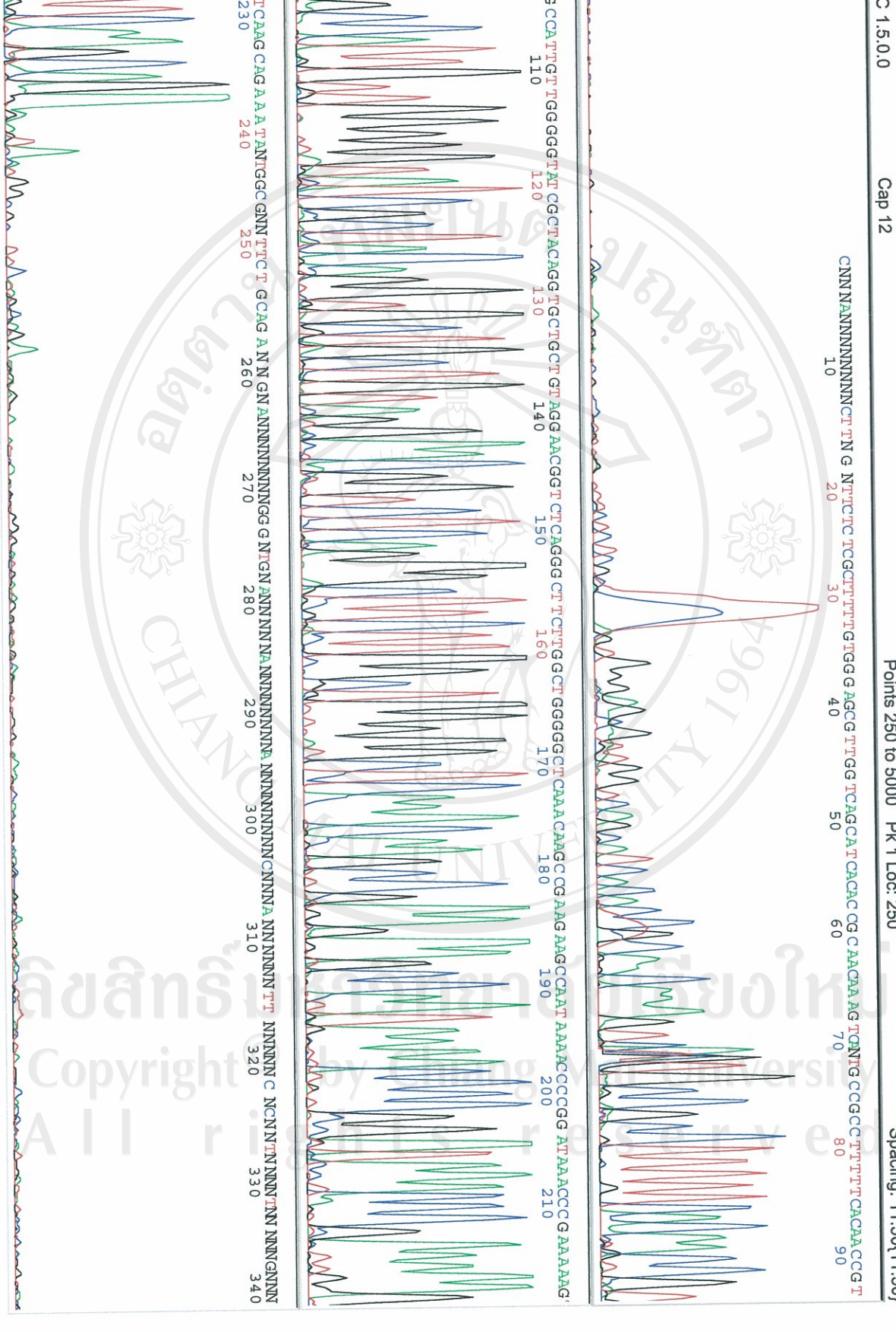
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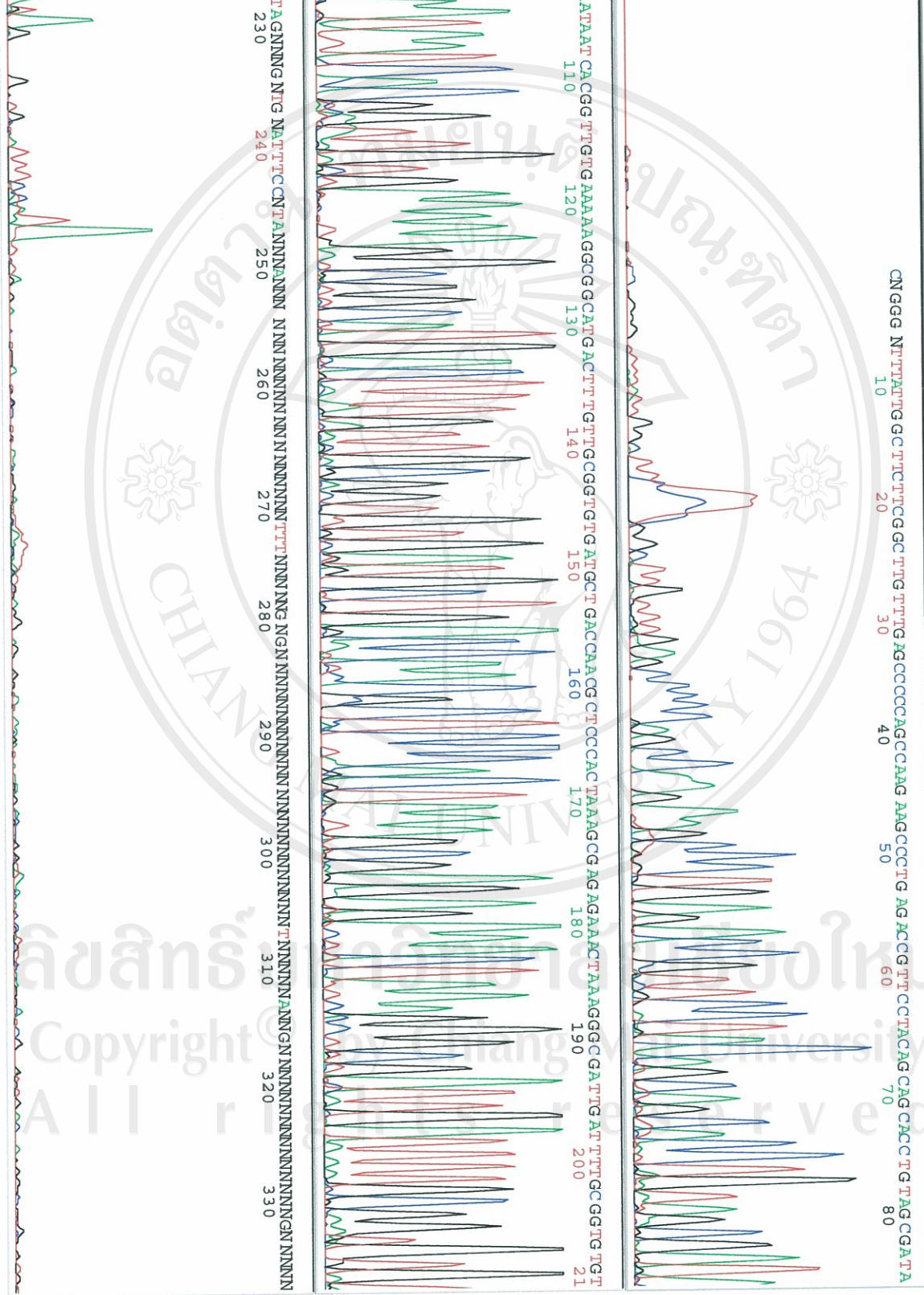
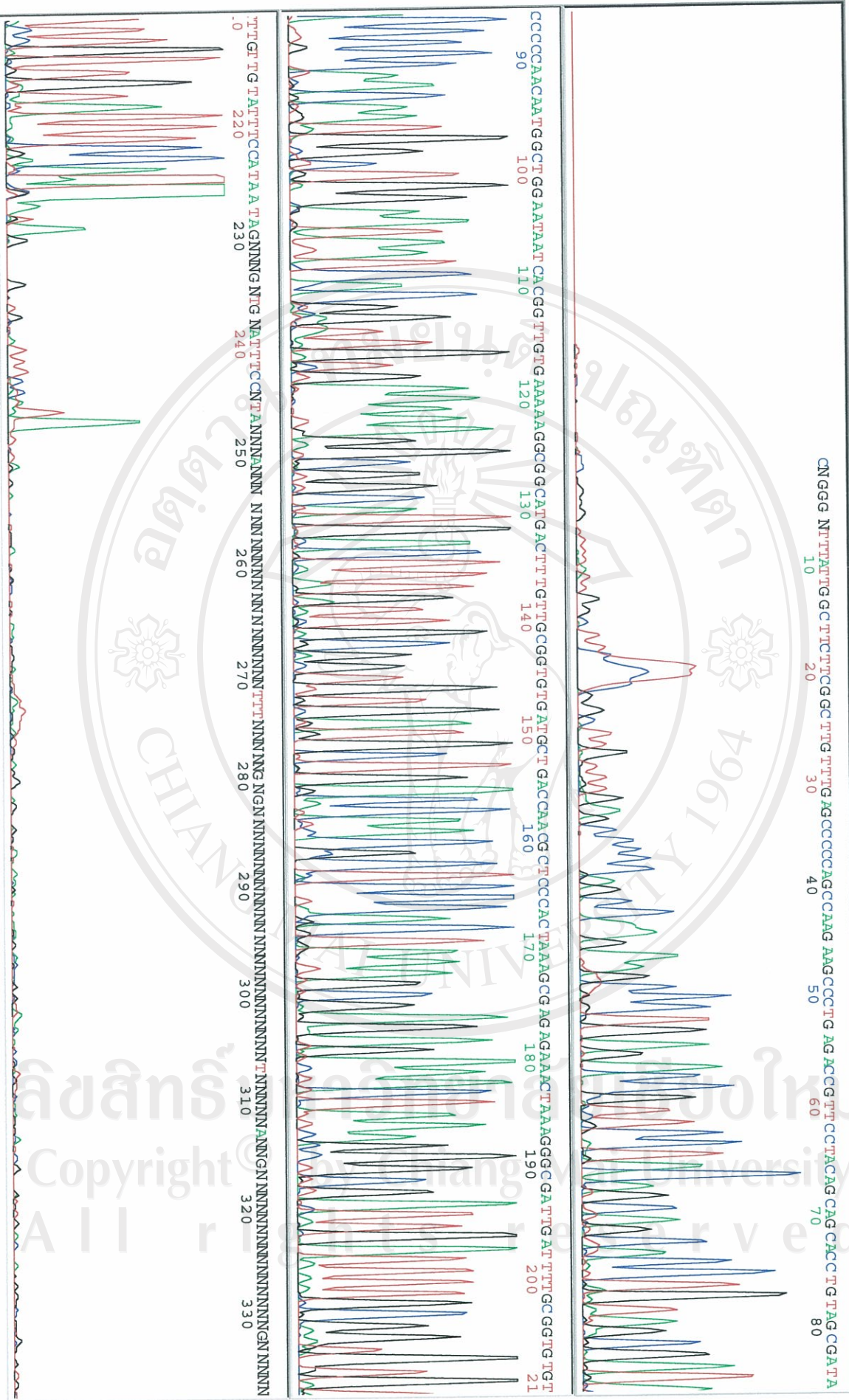
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vacAs1a gene

U05676. Reports Helicobacter pylo...[gi:471727]

Links

LOCUS HPU05676 4738 bp DNA linear BCT 15-APR-1994

DEFINITION Helicobacter pylori 60190 cysteinyl-tRNA synthetase homolog gene, partial cds, and vacuolating cytotoxin (vacA) gene, complete cds.

ACCESSION U05676

VERSION U05676.1 GI:471727

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales; Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 4738)

AUTHORS Cover, T.L., Tummuru, M.K., Cao, P., Thompson, S.A. and Blaser, M.J.

TITLE Divergence of genetic sequences for the vacuolating cytotoxin among Helicobacter pylori strains

JOURNAL J. Biol. Chem. 269 (14), 10566-10573 (1994)

PUBMED 8144644

REFERENCE 2 (bases 1 to 4738)

AUTHORS Cover, T.L.

TITLE Direct Submission

JOURNAL Submitted (26-JAN-1994) Timothy L. Cover, Division of Infectious Disease, Vanderbilt University School of Medicine, A3310 Medical Center North, Nashville, TN 37232, USA

FEATURES Location/Qualifiers

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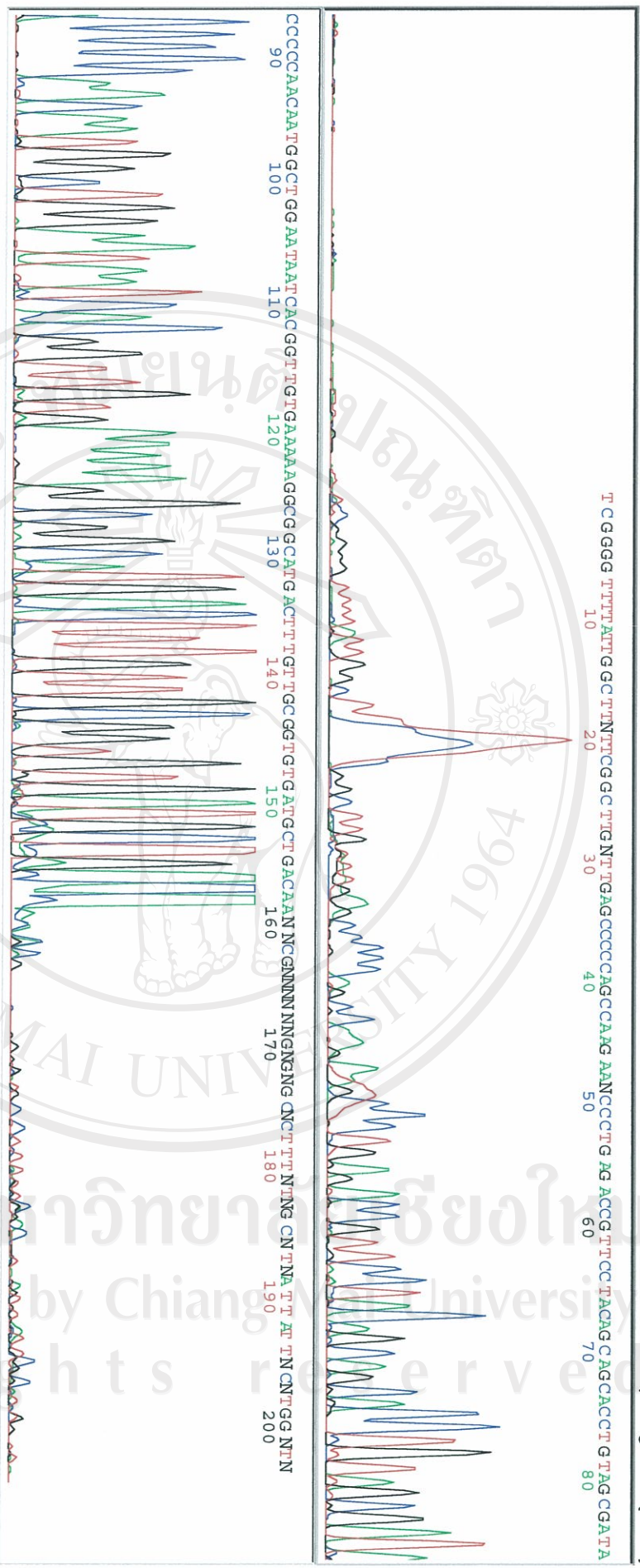
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vacAs2 gene

U29401. Reports Helicobacter pylo...[gi:984359]

Links

LOCUS HPU29401 4350 bp DNA linear BCT 06-FEB-1996

DEFINITION Helicobacter pylori vacuolating cytotoxin homolog precursor (vacA)

gene, complete cds.

ACCESSION U29401

VERSION U29401.1 GI:984359

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori

Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales;

Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 4350)

AUTHORS Atherton, J.C., Cao, P., Peek, R.M. Jr., Tummuru, M.K., Blaser, M.J. and

Cover, T.L.

TITLE Mosaicism in vacuolating cytotoxin alleles of Helicobacter pylori.

Association of specific vacA types with cytotoxin production and

peptic ulceration

JOURNAL J. Biol. Chem. 270 (30), 17771-17777 (1995)

PUBMED 7629077

REFERENCE 2 (bases 1 to 4350)

AUTHORS Cover, T.L.

TITLE Direct Submission

JOURNAL Submitted (16-JUN-1995) Timothy L. Cover, Medicine, Vanderbilt University, A3310 Medical Center North, Nashville, TN 37332,

USA

FEATURES Location/Qualifiers

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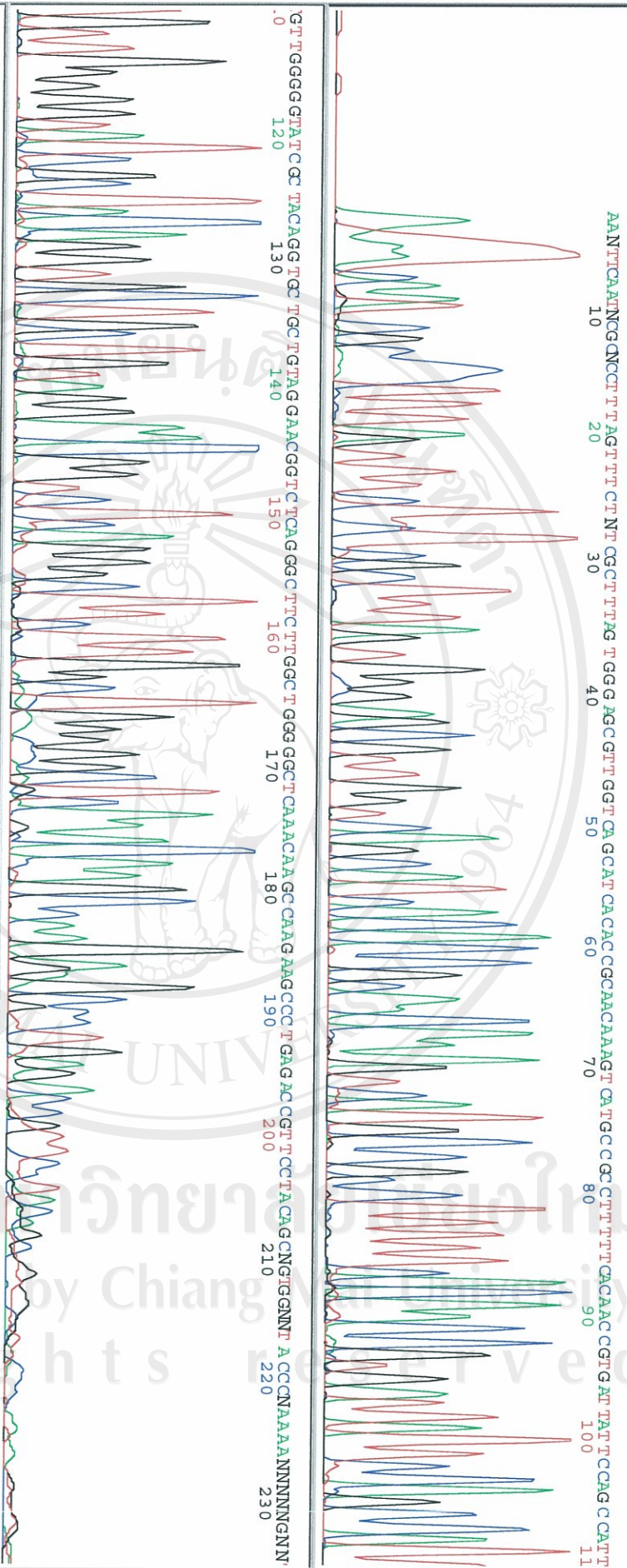
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ORIGIN

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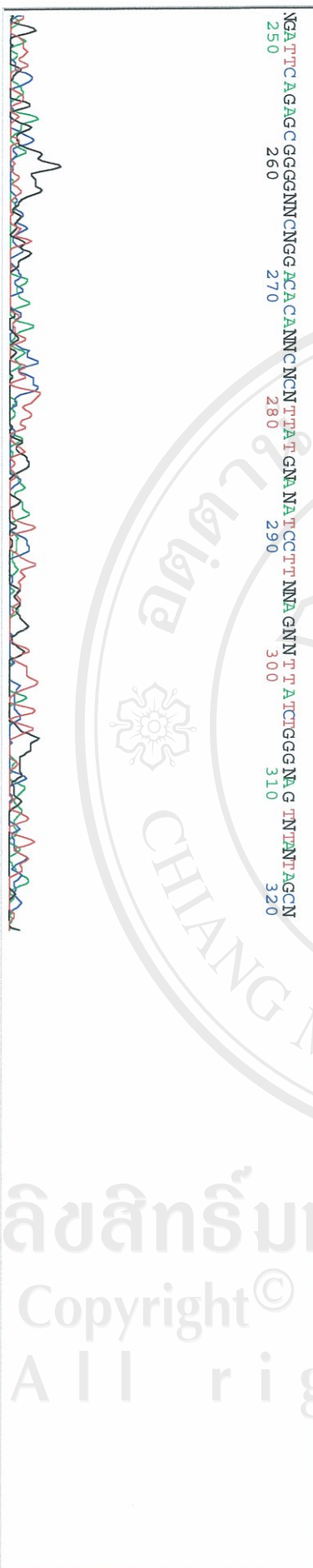
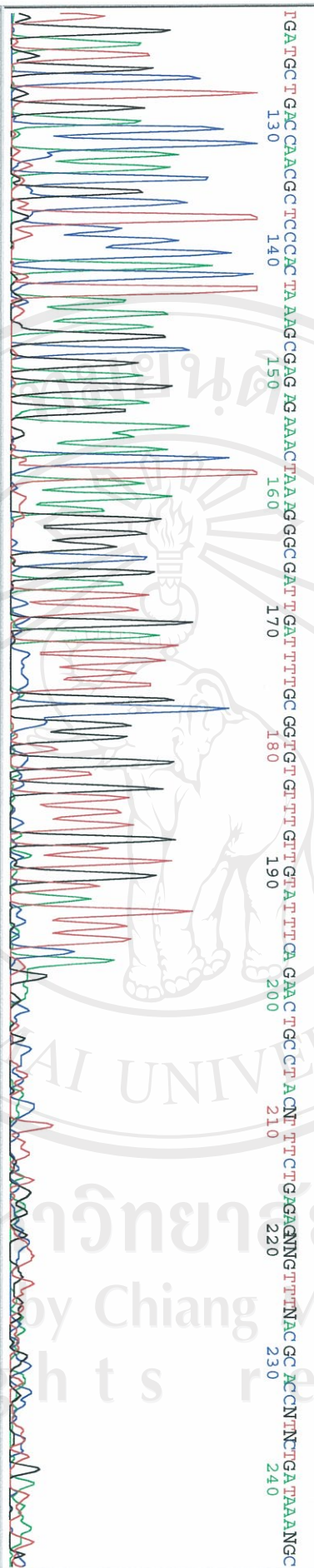
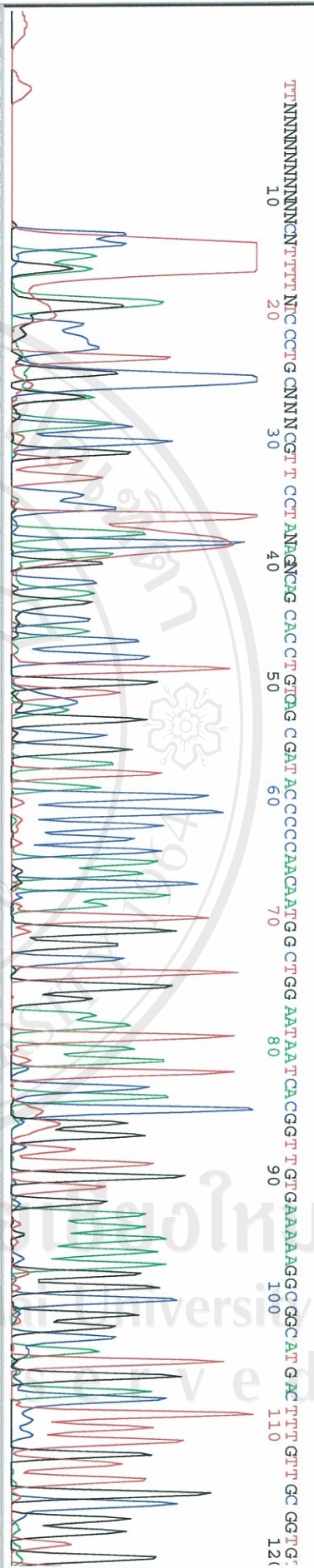
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vacAm2 gene

AY663831. Reports Helicobacter pylo...[gi:50313202]

Links

LOCUS AY663831 3053 bp DNA linear BCT 20-JUL-2004

DEFINITION Helicobacter pylori strain 249a5 vacuolating cytotoxin (vacA) gene,
partial cds.

ACCESSION AY663831

VERSION AY663831.1 GI:50313202

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori
Bacteria; Proteobacteria; Epsilonproteobacteria;
Campylobacterales;
Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 3053)

AUTHORS Aviles-Jimenez,F., Letley,D.P., Gonzalez-Valencia,G., Salama,N., Torres,J. and Atherton,J.C.

TITLE Evolution of the Helicobacter pylori Vacuolating Cytotoxin in a Human Stomach

JOURNAL J. Bacteriol. 186 (15), 5182-5185 (2004)

PUBMED [15262958](#)

REFERENCE 2 (bases 1 to 3053)

AUTHORS Aviles-Jimenez,F., Letley,D.P. and Atherton,J.C.

TITLE Direct Submission

JOURNAL Submitted (24-JUN-2004) Wolfson Digestive Diseases Center, Institute of Infection, Immunity and Inflammation, Queen's Medical Center, Clifton Boulevard, Nottingham NG7 2UH, United Kingdom

FEATURES

source Location/Qualifiers
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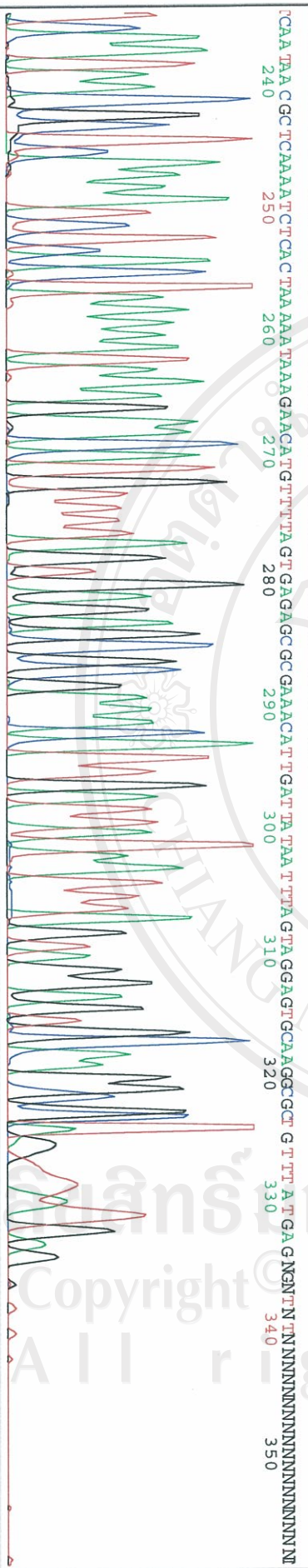
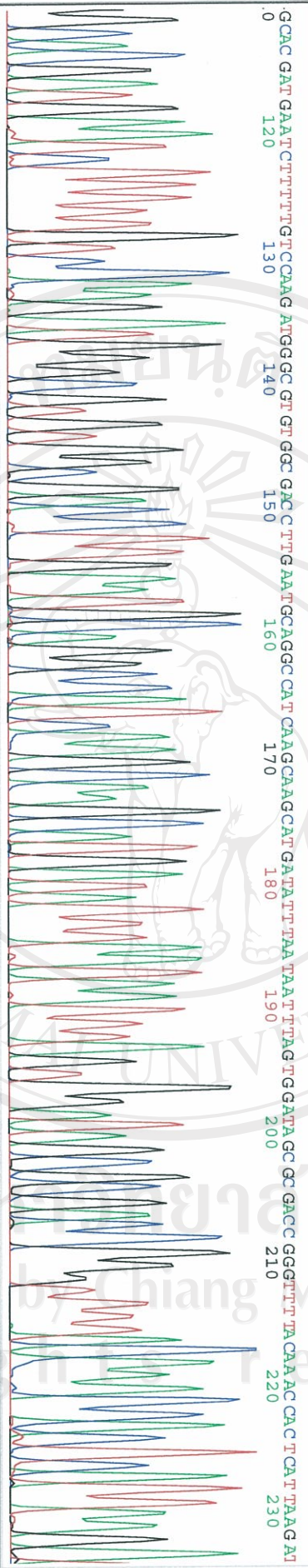
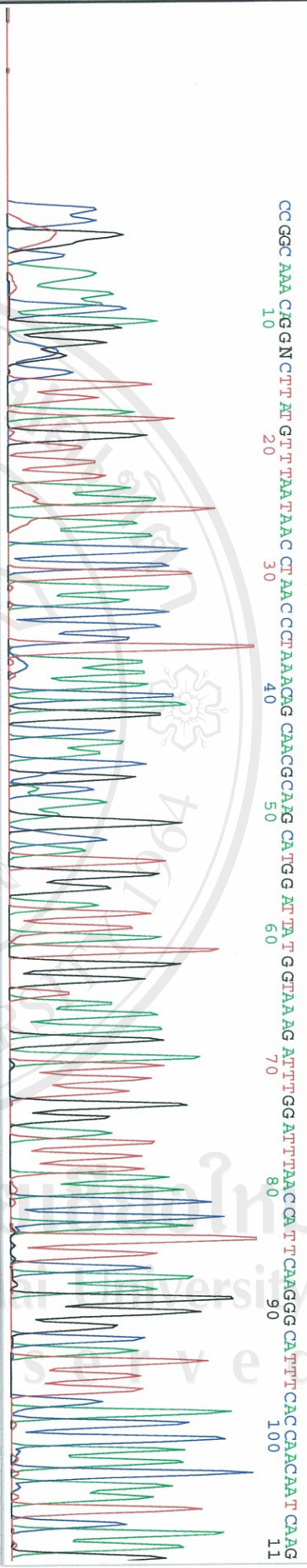
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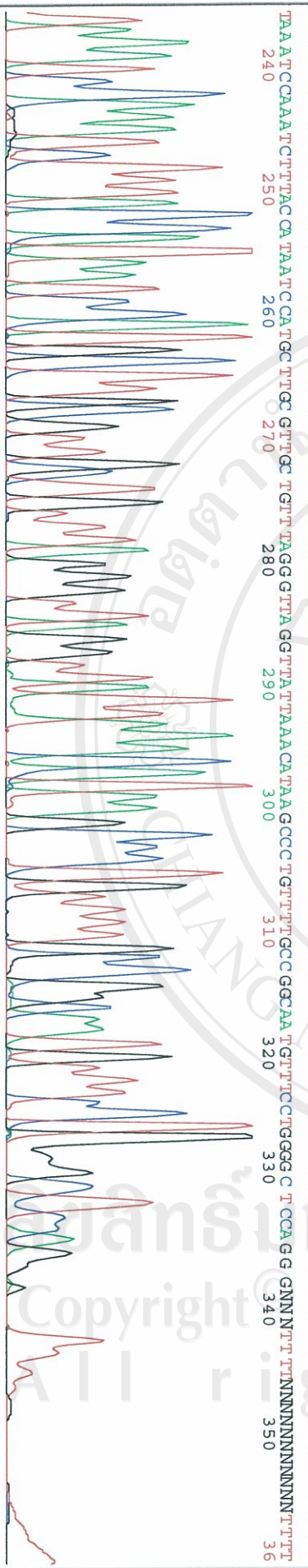
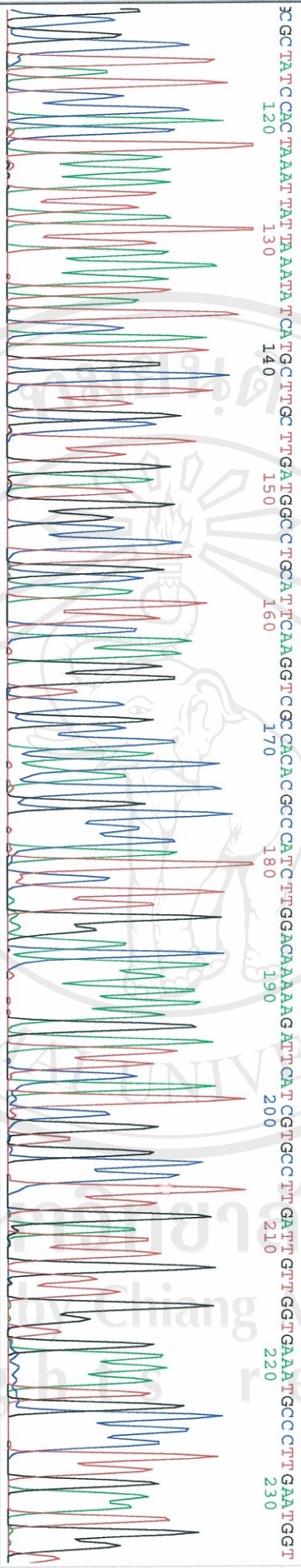
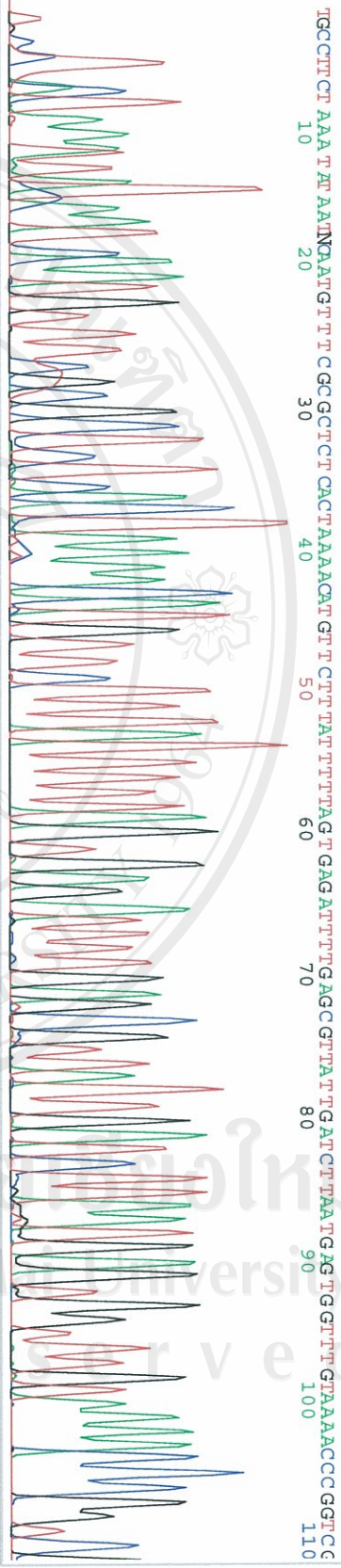
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vacAm m1 gene

U05676. Reports Helicobacter pylo...[gi:471727]

Links

LOCUS HPU05676 4738 bp DNA linear BCT 15-APR-1994

DEFINITION Helicobacter pylori 60190 cysteinyl-tRNA synthetase homolog gene, partial cds, and vacuolating cytotoxin (vacA) gene, complete cds.

ACCESSION U05676

VERSION U05676.1 GI:471727

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales; Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 4738)

AUTHORS Cover, T.L., Tummuru, M.K., Cao, P., Thompson, S.A. and Blaser, M.J.

TITLE Divergence of genetic sequences for the vacuolating cytotoxin among Helicobacter pylori strains

JOURNAL J. Biol. Chem. 269 (14), 10566-10573 (1994)

PUBMED 8144644

REFERENCE 2 (bases 1 to 4738)

AUTHORS Cover, T.L.

TITLE Direct Submission

JOURNAL Submitted (26-JAN-1994) Timothy L. Cover, Division of Infectious Disease, Vanderbilt University School of Medicine, A3310 Medical Center North, Nashville, TN 37232, USA

FEATURES

source Location/Qualifiers

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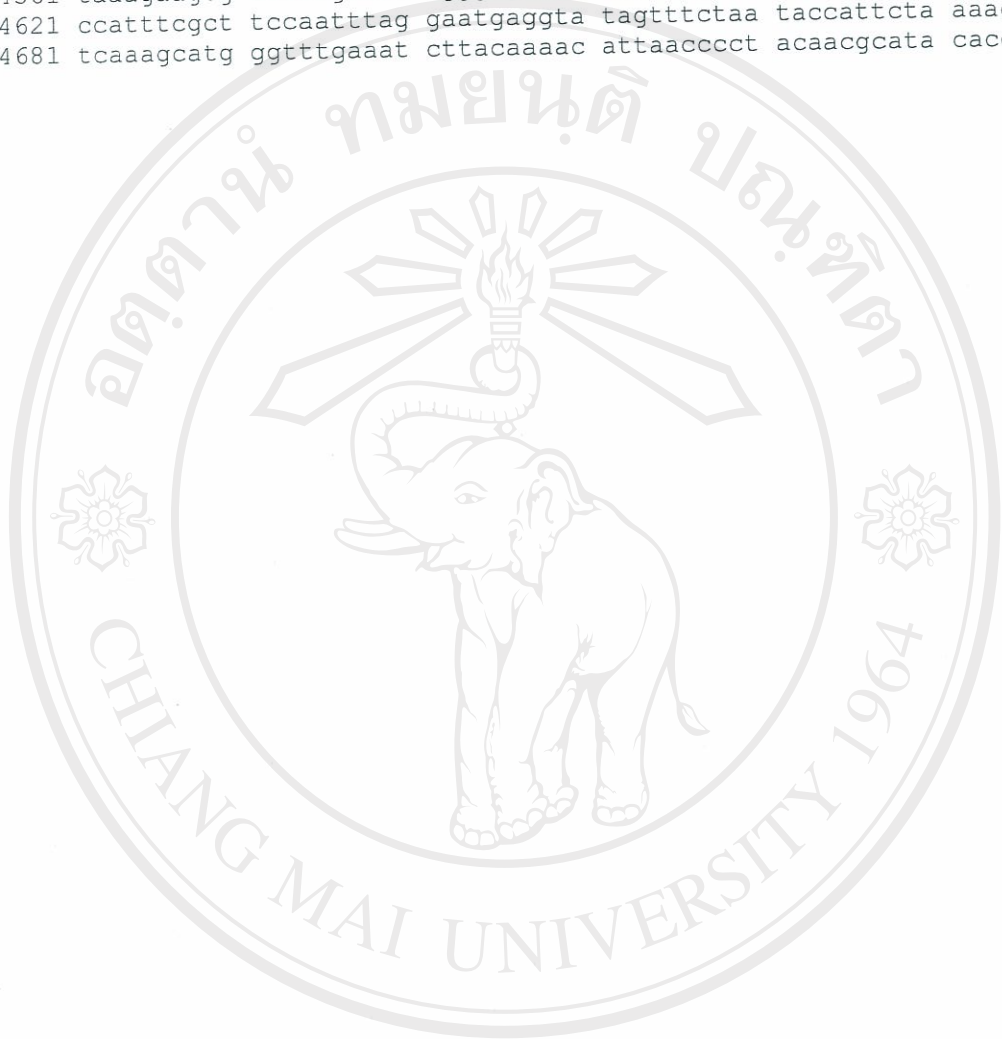
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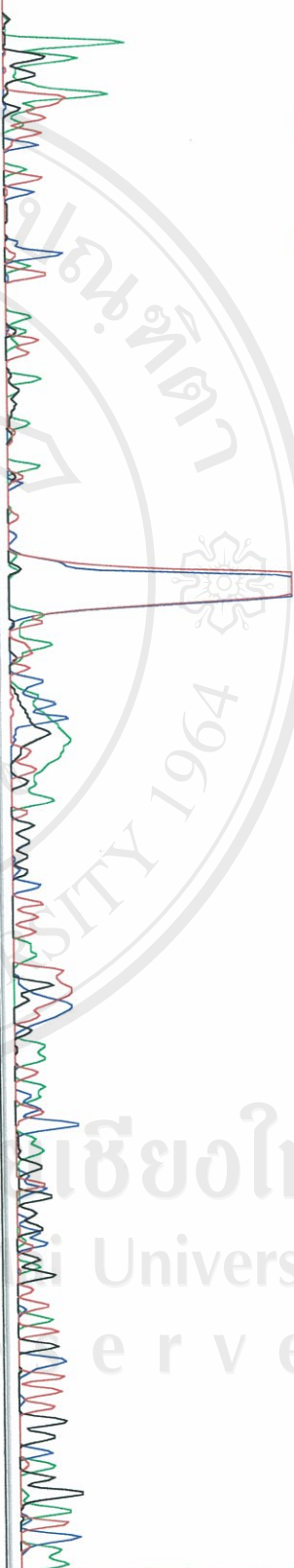
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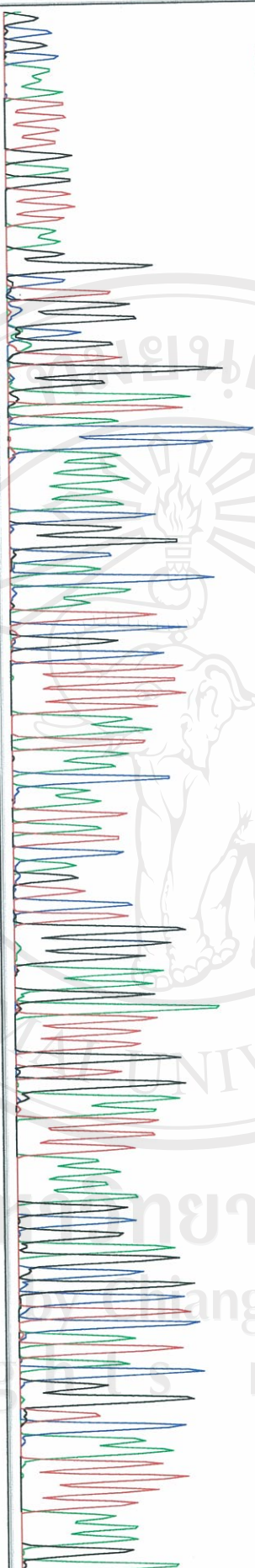
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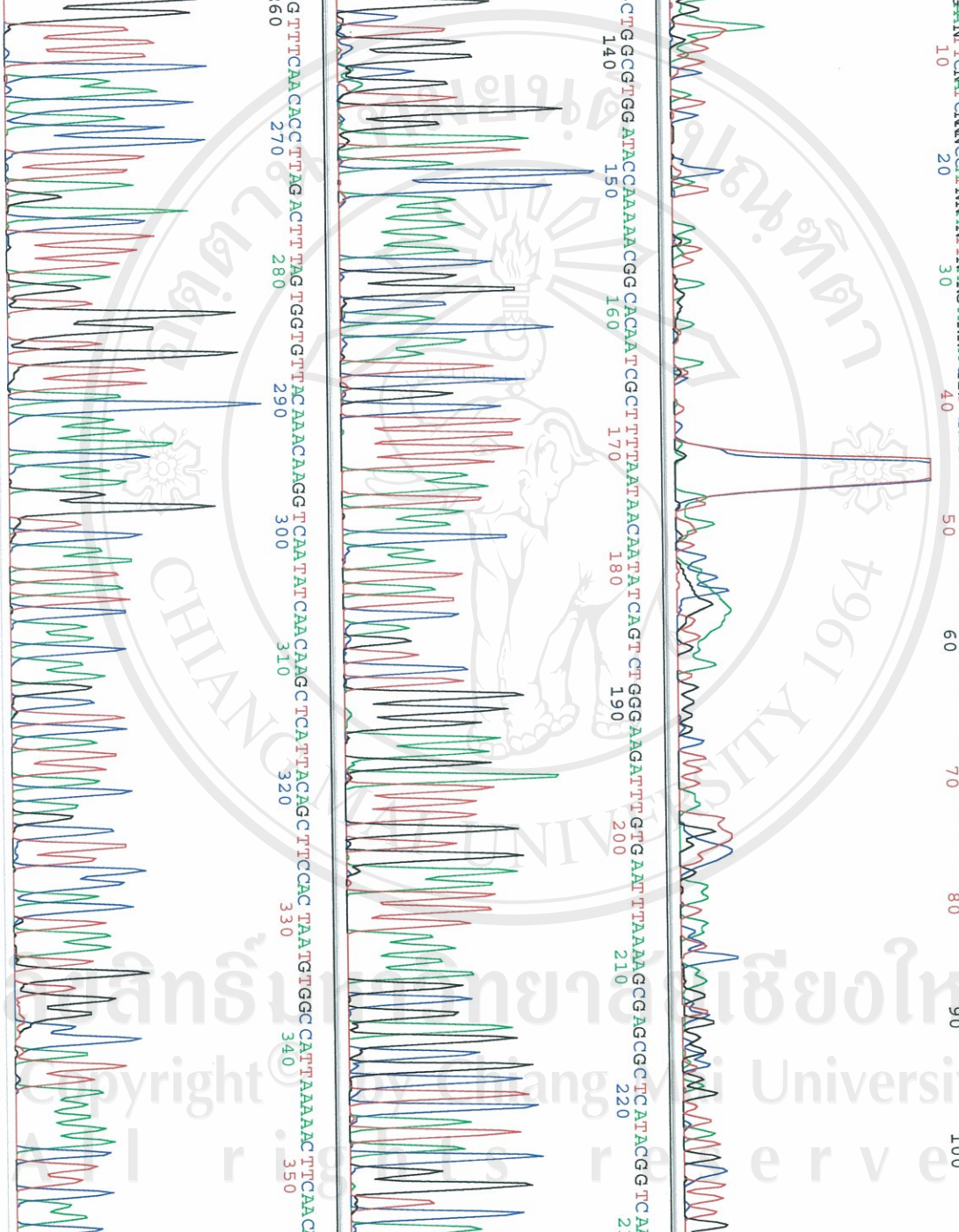
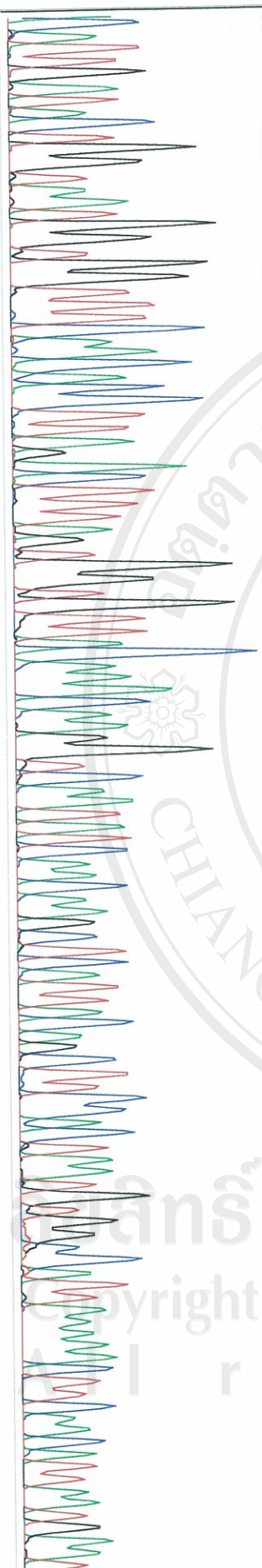
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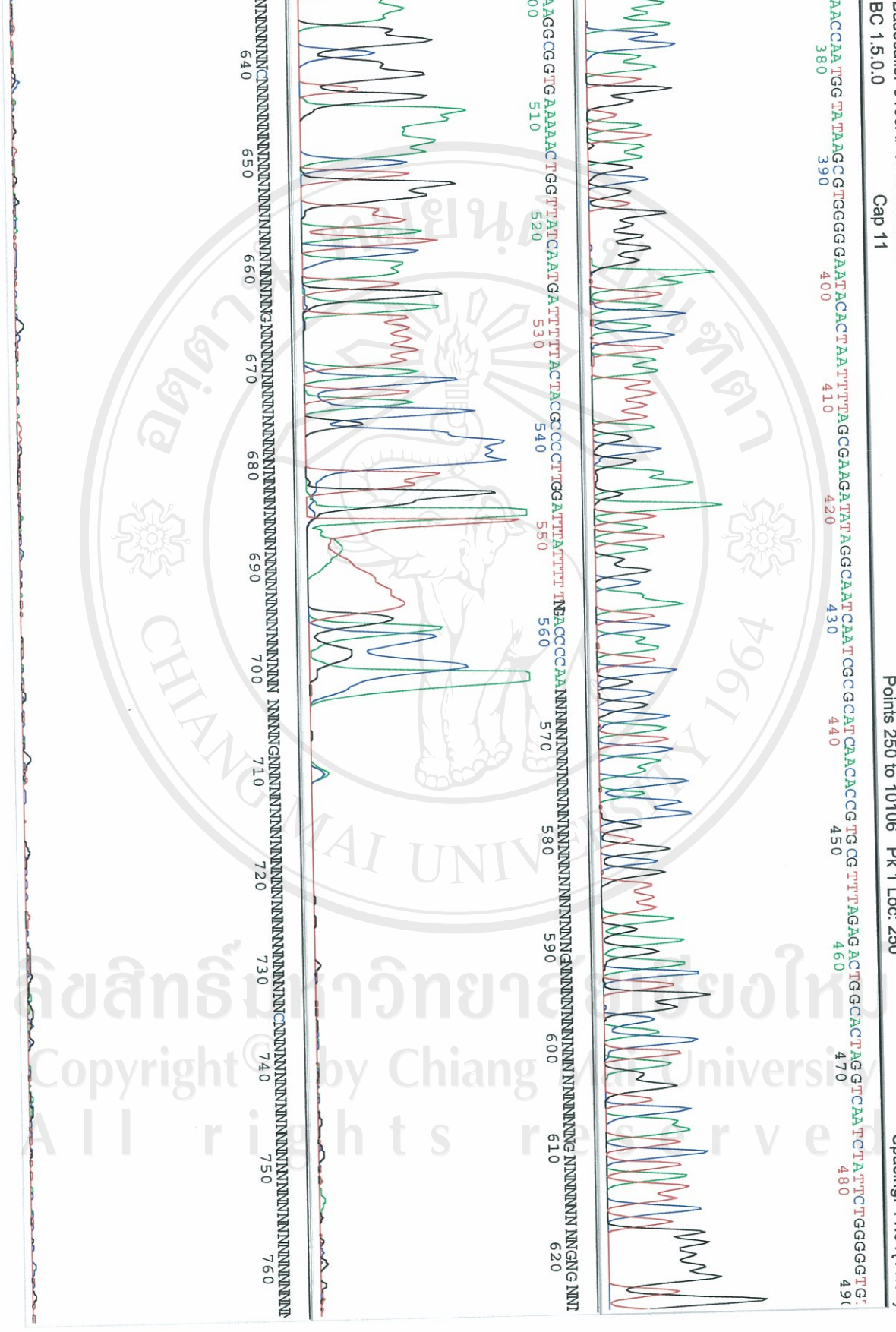
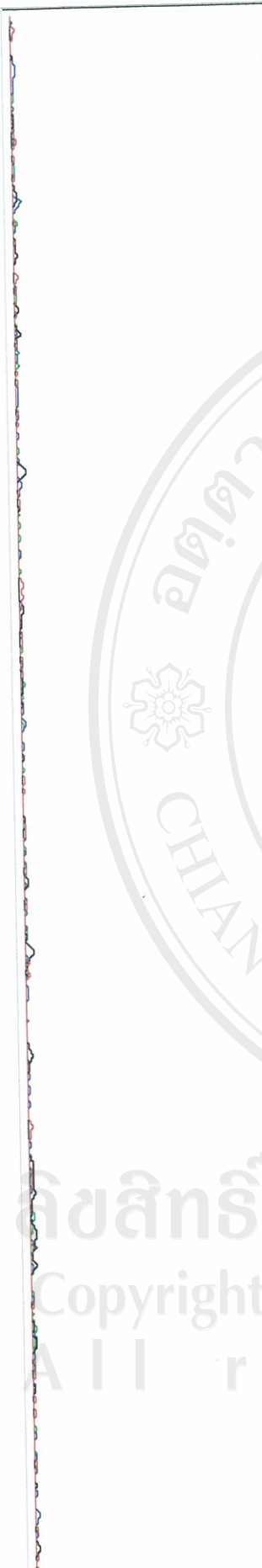
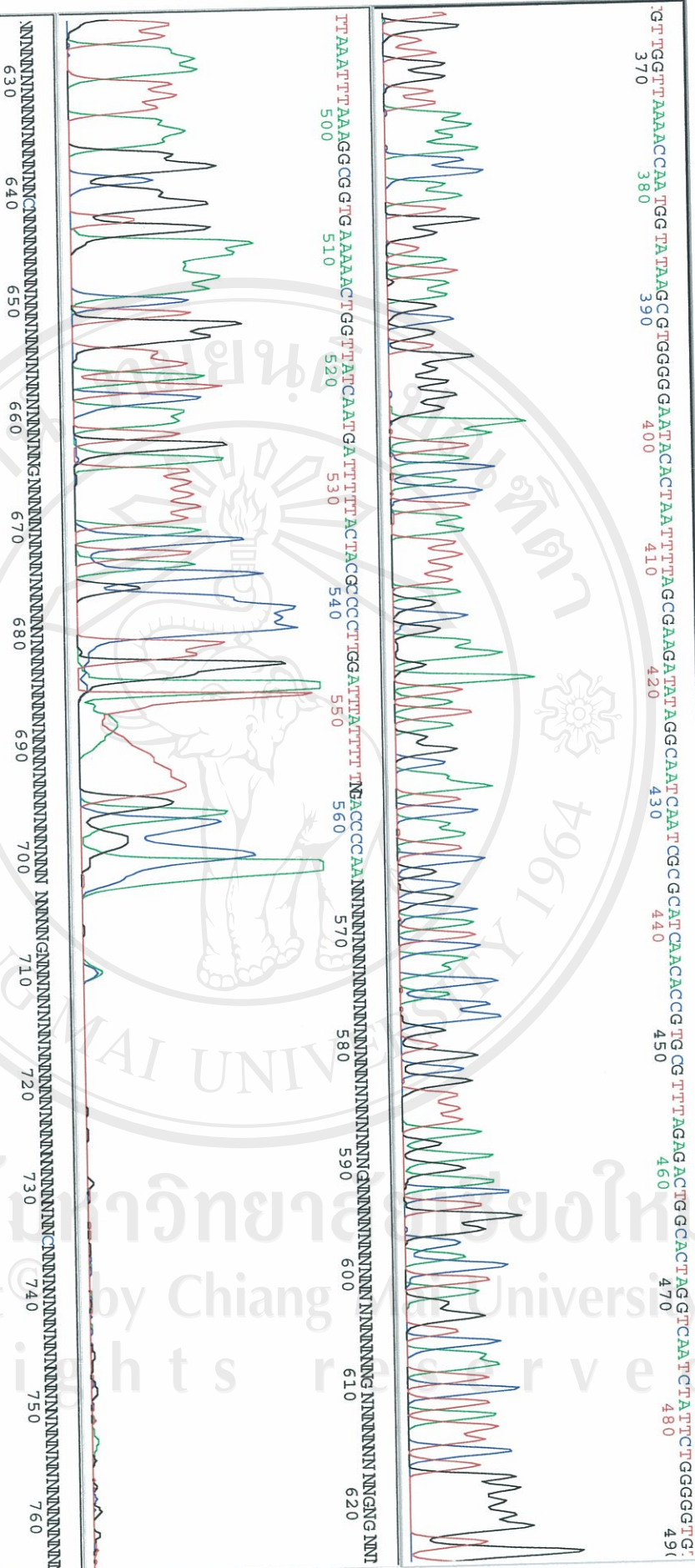


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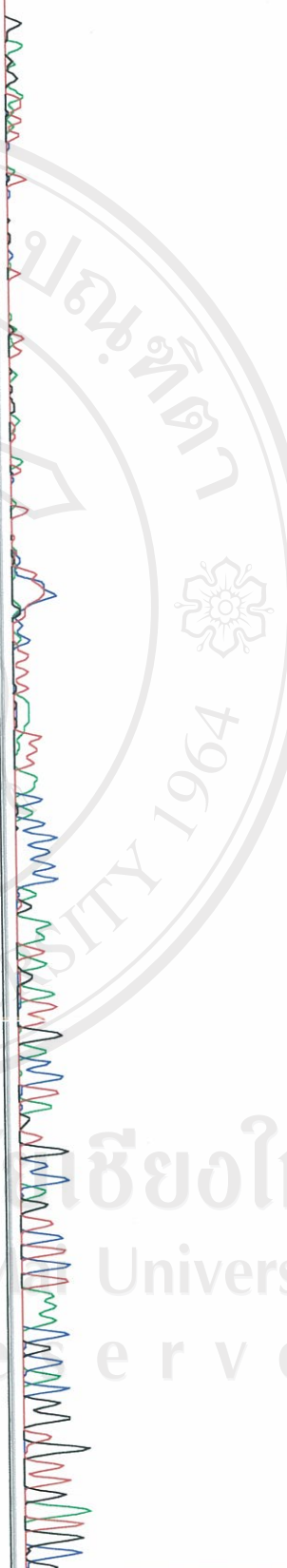
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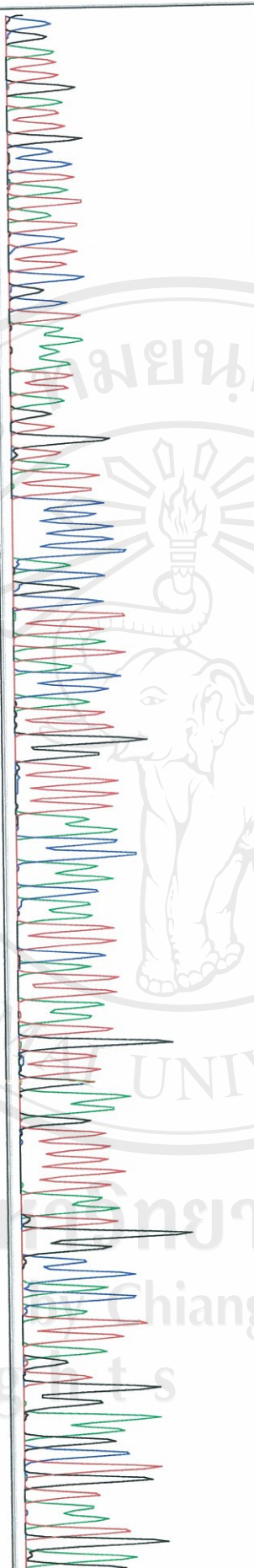


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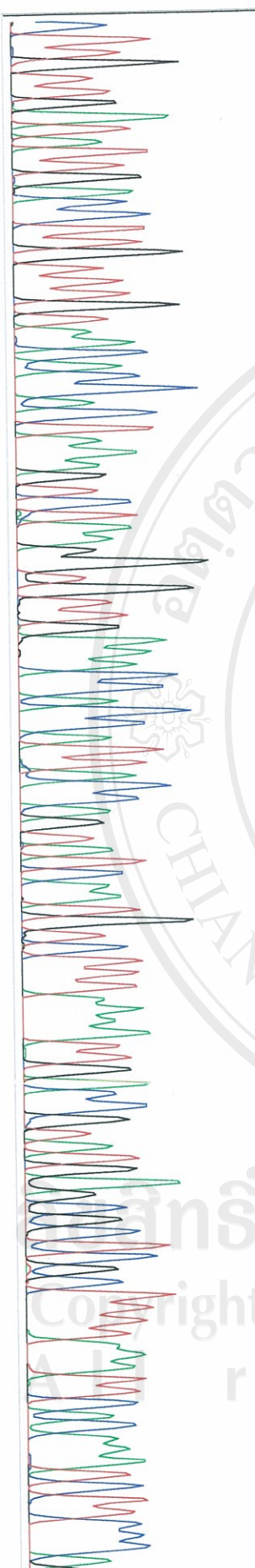
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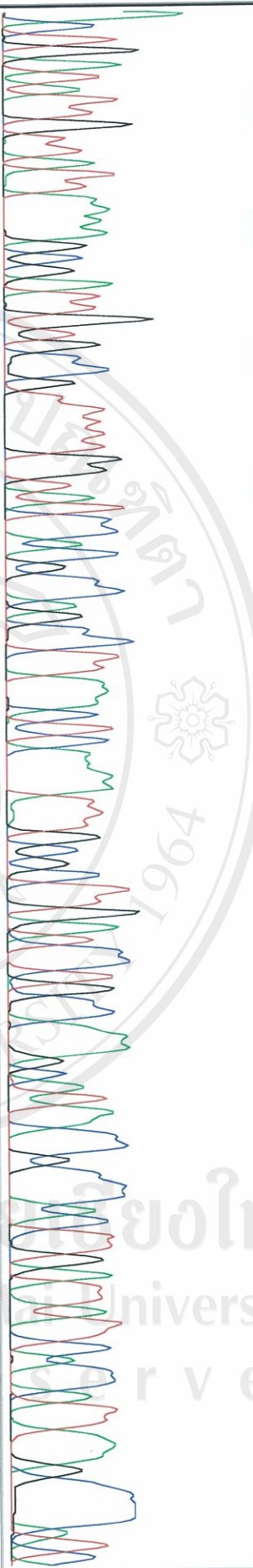
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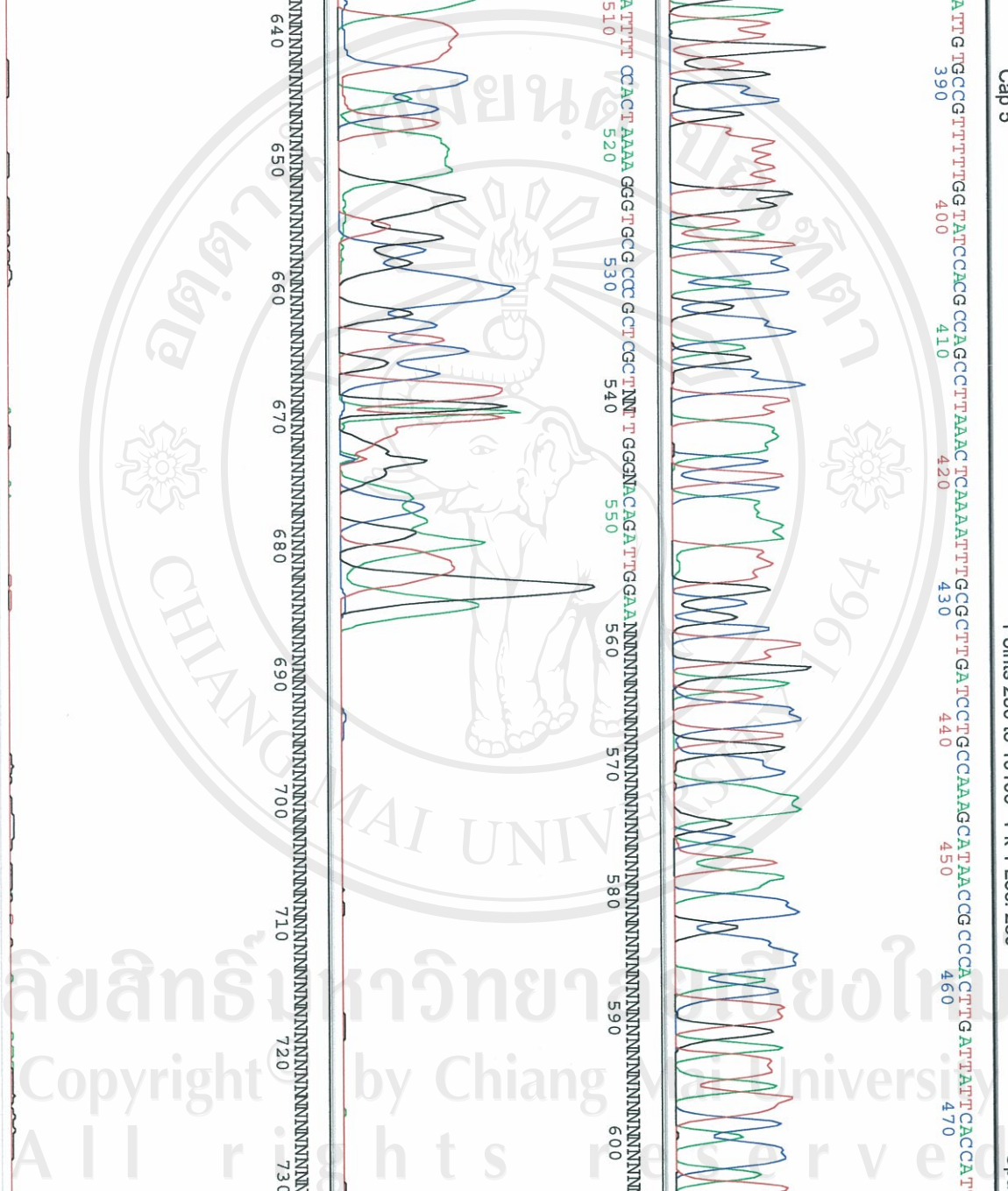
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U29401. Reports Helicobacter pylo...[gi:984359] Links

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DEFINITION Helicobacter pylori vacuolating cytotoxin homolog precursor (vacA)

gene, complete cds.

ACCESSION U29401

VERSION U29401.1 GI:984359

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori

Bacteria; Proteobacteria; Epsilonproteobacteria;

Campylobacteriales;

Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 4350)

AUTHORS Atherton, J.C., Cao, P., Peek, R.M. Jr., Tummuru, M.K., Blaser, M.J. and

Cover, T.L.

TITLE Mosaicism in vacuolating cytotoxin alleles of Helicobacter pylori.

Association of specific vacA types with cytotoxin production and

peptic ulceration

J. Biol. Chem. 270 (30), 17771-17777 (1995)

PUBMED 7629077

REFERENCE 2 (bases 1 to 4350)

AUTHORS Cover, T.L.

TITLE Direct Submission

JOURNAL Submitted (16-JUN-1995) Timothy L. Cover, Medicine, Vanderbilt University, A3310 Medical Center North, Nashville, TN 37332,

USA

FEATURES

source

Location/Qualifiers

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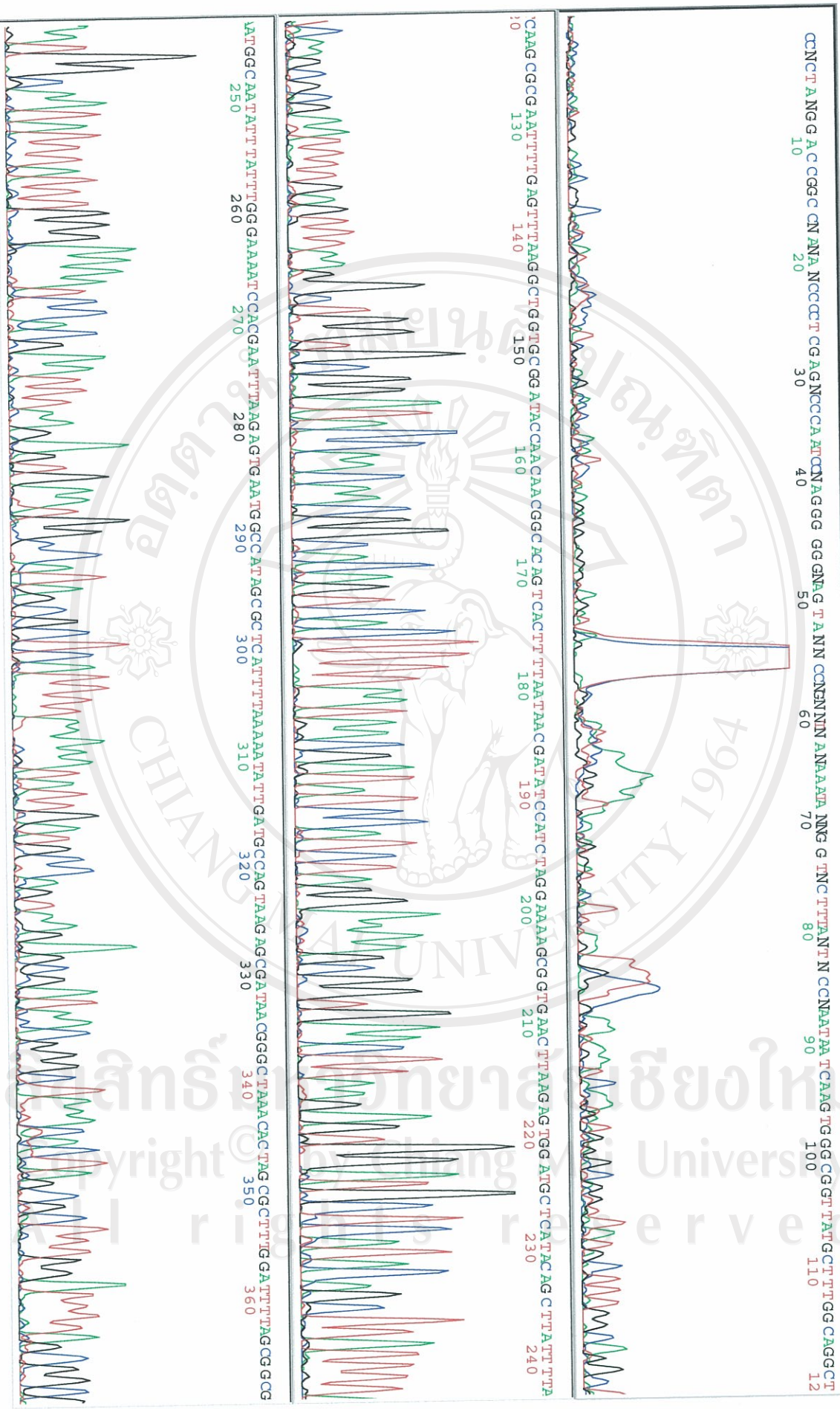
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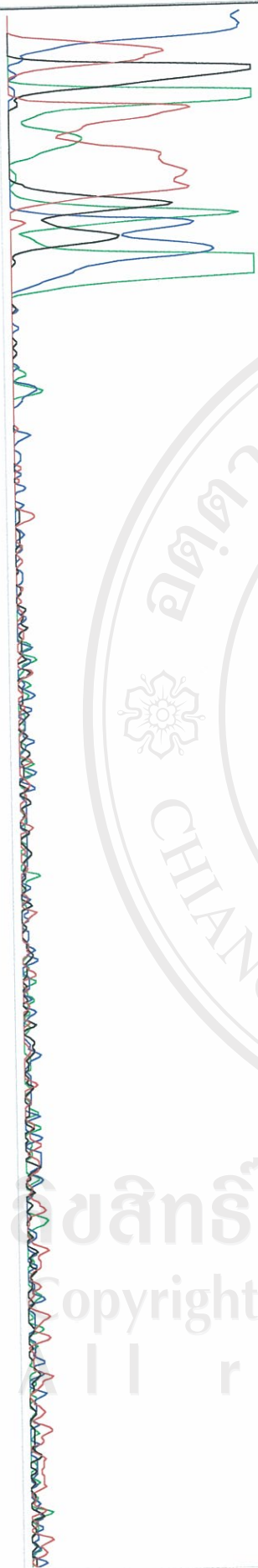
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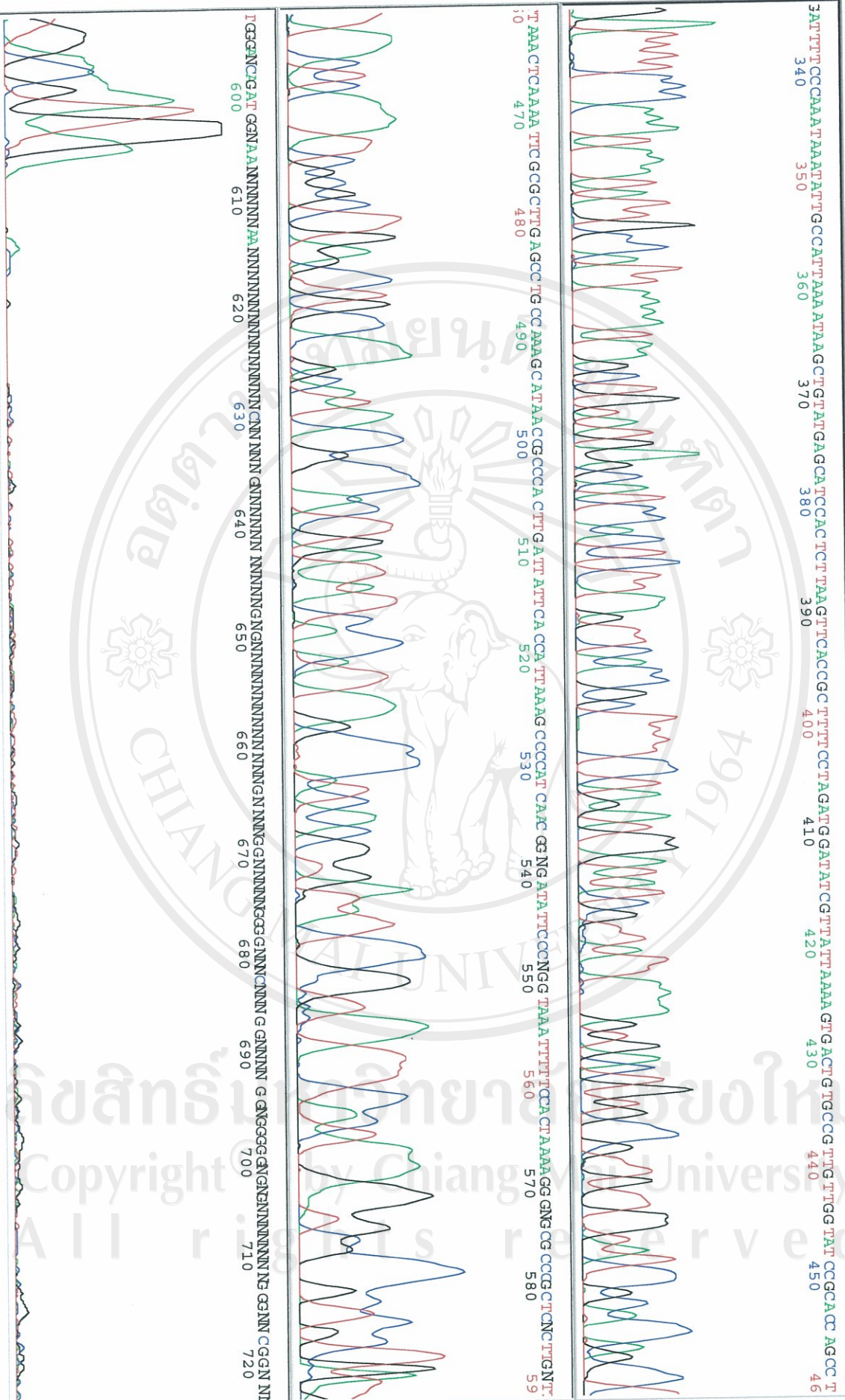


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iceA1 gene

U43917. Reports Helicobacter pylo...[gi:1518451]

Links

LOCUS HPU43917 2134 bp DNA linear BCT 01-SEP-1996

DEFINITION Helicobacter pylori serine acetyltransferase homolog (cysE) and ulcer-associated (iceA) genes, complete cds, and DNA adenine methylase homolog (M.HpyI) gene, partial cds.

ACCESSION U43917

VERSION U43917.1 GI:1518451

KEYWORDS .

SOURCE Helicobacter pylori

ORGANISM Helicobacter pylori
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales; Helicobacteraceae; Helicobacter.

REFERENCE 1 (bases 1 to 2134)

AUTHORS Peek,R.M.Jr., Thompson,S.A., Atherton,J.C., Blaser,M.J. and Miller,G.G.

TITLE Expression of a novel ulcer-associated gene, iceA, by H. pylori following contact with gastric epithelium

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 2134)

AUTHORS Peek,R.M.Jr., Thompson,S.A., Atherton,J.C., Blaser,M.J. and Miller,G.G.

TITLE Direct Submission

JOURNAL Submitted (22-DEC-1995) Stuart A. Thompson, Infectious Diseases, Vanderbilt University, MCN A-3310, Nashville, TN 37232, USA

FEATURES

source Location/Qualifiers

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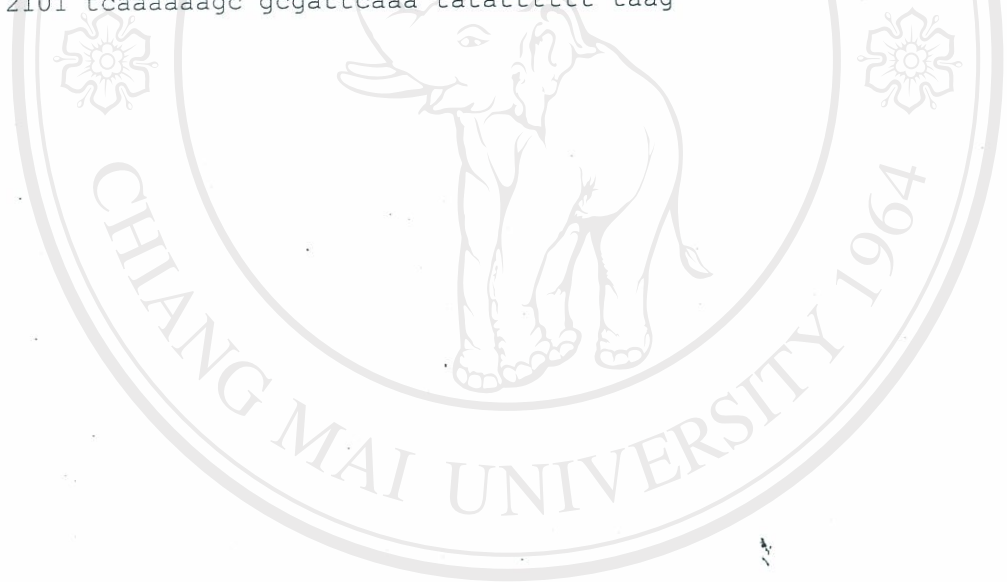
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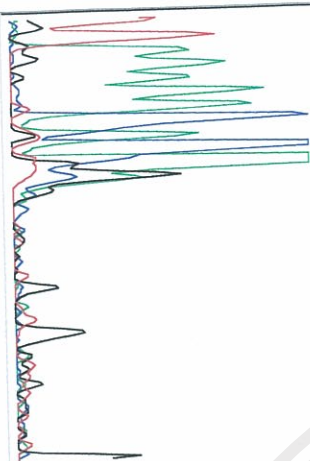
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ภาคผนวก 3

- 3.1 ค่า p value วิเคราะห์โดยใช้วิธีทางสถิติ McNema Chi-Square Test
- 3.2 ค่า p value วิเคราะห์โดยใช้วิธีทางสถิติ Fisher's exact Test



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3.1 ค่า p value วิเคราะห์โดยใช้วิธีทางสถิติ McNema Chi-Square Test

ถิ่นที่พำนัก	Gastritis	Peptic ulcer	Duodenal ulcer	Gastric cancer
ice1/ice2	0.079	0.015	0.001	1.000
m1/m2	0.253	0.664	0.099	0.500

	cag A	ice A1	vacA s1 (201 bp)	vacA s1 (259 bp)	vacA s1 a	vacA m1	vacA m2	vacA m2
other strain	88.15	64.44	97.78	88.89	81.48	59.26	32.59	34.81
Thai strain	95.56	51.85	84.44	99.26	96.30			40.74
sig	0.00	0.00	0.00	0.00	0.00			0.06

3.2 ค่า p value วิเคราะห์โดยใช้วิธีทางสถิติ Fisher's exact Test

ชนิดเป็าพททท	Gastritis			Peptic ulcer			Duodenal ulcer			Gastric cancer		
	Peptic ulcer	Duodenal ulcer	Gastric cancer	Gastritis	Duodenal ulcer	Gastric cancer	Gastritis	Peptic ulcer	Gastric cancer	Gastritis	Peptic ulcer	Duodenal ulcer
Primer จากนักวิจัยอื่น												
cagA	0.533	0.063	0.552	0.533	0.365	0.431	0.063	0.365	0.230	0.552	0.431	0.230
iceA1	0.358	0.100	1.000	0.358	0.791	0.593	0.100	0.791	0.568	1.000	0.593	0.568
vacAs1 (201 bp)	1.000	0.579	1.000	1.000	0.521	1.000	0.579	0.521	1.000	1.000	1.000	1.000
vacAs1 (259 bp)	0.492	0.381	1.000	0.492	1.000	1.000	0.381	1.000	1.000	1.000	1.000	1.000
vacAs1a	1.000	0.795	0.191	1.000	1.000	0.201	0.795	1.000	0.149	0.191	0.201	0.149
vacAm ml	0.493	0.160	0.616	0.493	0.624	1.000	0.160	0.624	1.000	0.616	1.000	1.000
vacAm m2	0.623	0.403	0.568	0.623	1.000	0.283	0.403	1.000	0.284	0.568	0.283	0.284
vacAm2	0.473	0.835	0.303	0.473	0.623	0.271	0.835	0.623	0.289	0.303	0.271	0.289
iceA2	0.317	0.520	1.000	0.317	0.781	1.000	0.520	0.781	1.000	1.000	1.000	1.000
vacastc	0.172	0.000	0.612	0.172	0.035	0.136	0.000	0.035	0.011	0.612	0.136	0.011
Primer ที่จำเพาะต่อสายพันธุ์คนไทย												
cagA	1.000	0.130	1.000	1.000	0.144	1.000	0.130	0.144	1.000	1.000	1.000	1.000
iceA1	0.176	1.000	1.000	0.176	0.233	0.620	1.000	0.233	1.000	1.000	0.620	1.000
vacAs1 (201 bp)	0.743	0.288	0.433	0.743	0.754	0.512	0.288	0.754	1.000	0.433	0.512	1.000
vacAs1 (259 bp)	0.326	1.000	1.000	0.326	0.384	1.000	1.000	0.384	1.000	1.000	1.000	1.000
vacAs1a	0.593	0.503	0.184	0.593	0.144	0.340	0.503	0.144	0.082	0.184	0.340	0.082
vacAm2	0.249	0.548	1.000	0.249	0.630	0.603	0.548	0.630	0.636	1.000	0.603	0.636

3.2 (ต่อ) ค่า p value วิเคราะห์ด้วยวิธีทางสถิติ Fisher's exact Test

ยื่นเป้าหมาย	Gastritis			Peptic ulcer			Duodenal ulcer			Gastric cancer		
	Peptic ulcer	Duodenal ulcer	Gastric cancer	Gastritis	Duodenal ulcer	Gastric cancer	Gastritis	Peptic ulcer	Gastric cancer	Gastritis	Peptic ulcer	Duodenal ulcer
Cag A	0.641	0.096	0.761	0.641	0.144	0.762	0.096	0.144	1.000	0.761	0.762	1.000
Ice A1	0.231	0.064	0.589	0.231	0.403	0.427	0.064	0.403	0.320	0.589	0.427	0.320
VacAsI/ml	0.291	0.092	0.357	0.291	0.394	0.427	0.092	0.394	0.605	0.357	0.427	0.605
VacAsI/m2	0.162	0.338	0.553	0.162	0.341	0.350	0.338	0.341	0.457	0.553	0.350	0.457
VacAsI/ml+m2	0.013	0.026	0.126	0.013	0.418	0.584	0.026	0.418	0.472	0.126	0.584	0.472
VacAsIa/ml	0.291	0.092	0.357	0.291	0.394	0.515	0.092	0.394	0.605	0.357	0.515	0.605
VacAsIa/m2	0.250	0.338	0.553	0.250	0.455	0.403	0.338	0.455	0.457	0.553	0.403	0.457
VacAsIa/ml+m2	0.013	0.026	0.126	0.013	0.418	0.584	0.026	0.418	0.472	0.126	0.584	0.472
CagA/VacAsIa/ml	0.405	0.092	0.669	0.405	0.283	0.597	0.092	0.283	0.432	0.669	0.597	0.432
CagA/VacAsIa/m2	0.249	0.217	0.612	0.249	0.574	0.458	0.217	0.574	0.457	0.612	0.458	0.457
CagA/VacAsIa/ml/IceA1	0.247	0.034	0.358	0.247	0.288	0.542	0.034	0.288	0.680	0.358	0.542	0.680
CagA/VacAsIa/m2/IceA1	0.496	0.156	0.651	0.496	0.314	0.746	0.156	0.314	0.605	0.651	0.746	0.605
vacAsIa/sIc	0.172	0.000	0.114	0.172	0.035	0.020	0.000	0.035	0.000	0.114	0.020	0.001
vacAsIc/ml	0.495	0.430	0.612	0.495	0.228	0.629	0.430	0.228	0.301	0.612	0.629	0.301
VacAsIa/sIc/ml	0.075	0.000	1.000	0.075	0.228	0.629	0.000	0.228	0.301	1.000	0.629	0.301
CagA/VacAsIc/ml/Ice1	0.800	0.213	1.000	0.800	0.209	1.000	0.213	0.209	0.636	1.000	1.000	0.636
VacAsIc/m2	0.309	0.193	1.000	0.309	1.000	1.000	0.193	1.000	1.000	1.000	1.000	1.000
VacAsIa/sIc/m2	0.309	0.193	1.000	0.309	1.000	1.000	0.193	1.000	1.000	1.000	1.000	1.000
CagA/VacAsIa/sIc/ml	0.127	0.000	0.571	0.127	0.098	0.272	0.000	0.098	0.035	0.571	0.272	0.035

3.2 (ต่อ) ค่า p value วิเคราะห์โดยใช้วิธีทางสถิติ Fisher's exact Test

กลุ่มเป้าหมาย	Gastritis			Peptic ulcer			Duodenal ulcer			Gastric cancer		
	Peptic ulcer	Duodenal ulcer	Gastric cancer	Gastritis	Duodenal ulcer	Gastric cancer	Gastritis	Peptic ulcer	Gastric cancer	Gastritis	Peptic ulcer	Duodenal ulcer
CagA/V/acAsIa/sIc/m2	0.430	0.126	0.571	0.430	0.802	0.303	0.126	0.802	0.284	0.571	0.303	0.284
CagA/V/acAsIa/sIc/ml/iceA1	0.211	0.001	1.000	0.211	0.209	0.552	0.001	0.209	0.148	1.000	0.552	0.148
CagA/V/acAsIa/sIc/m2/iceA1	1.000	0.084	1.000	1.000	0.254	1.000	0.084	0.254	0.562	1.000	1.000	0.562
mI m2	0.013	0.041	0.126	0.013	0.739	1.000	0.041	0.739	0.472	0.126	1.000	0.472
sIc/ml/m2	0.037	0.041	0.126	0.037	1.000	0.512	0.041	1.000	0.472	0.126	0.512	0.472
sIa/sIc/ml/m2	0.099	0.041	1.000	0.099	1.000	1.000	0.041	1.000	1.000	1.000	1.000	1.000
CagA/V/acAsIa/ml/iceA2	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CagA/V/acAsIa/m2/iceA2	0.743	1.000	1.000	0.743	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
CagA/V/acAsIa/sIc/ml/iceA2	0.678	0.204	1.000	0.678	0.732	1.000	0.204	0.732	1.000	1.000	1.000	1.000
CagA/V/acAsIa/sIc/m2/iceA2	0.722	1.000	1.000	0.722	0.725	1.000	1.000	0.725	1.000	1.000	1.000	1.000
CagA/V/acAsIc/ml/iceA1	0.211	0.001	0.433	0.211	0.209	1.000	0.001	0.209	0.636	0.433	1.000	0.636
CagA/V/acAsIc/ml/iceA2	0.678	0.204	1.000	0.678	0.732	1.000	0.204	0.732	1.000	1.000	1.000	1.000
CagA/V/acAsIc/m2/iceA1	1.000	0.084	0.475	1.000	0.254	0.512	0.084	0.254	1.000	0.475	0.512	1.000
CagA/V/acAsIc/m2/iceA2	0.722	1.000	1.000	0.722	0.725	1.000	1.000	0.725	1.000	1.000	1.000	1.000
CagA/V/acAsI	0.211	0.001	0.433	0.211	0.209	1.000	0.001	0.209	0.636	0.433	1.000	0.636
CagA/V/acAsIa	0.678	0.204	1.000	0.678	0.732	1.000	0.204	0.732	1.000	1.000	1.000	1.000
CagA/V/acAsIc	1.000	0.084	0.475	1.000	0.254	0.512	0.084	0.254	1.000	0.475	0.512	1.000
CagA/V/acA	1.000	0.464	1.000	1.000	0.635	1.000	0.464	0.635	1.000	1.000	1.000	1.000