

2016

2 20

- 1 adaptation
- 2 chemiosmosis hypothesis
- 3 hybrid vigor heteresis
- 4 stem cell
- 5 parallel evolution
- 6 transmitter
- 7 exotoxin endotoxin
- 8 Okazaki fragment
- 9 nomeobox
- 10 eutrophication

1 30

- 1 7
- 2 HCl
B₁₂
- 3 3
- 4 DNA
- 5 5
- 6 3 3
- 7

		12	60
1			
2			
3	DNA	mRNA	
4			
5			

	(	20	40	)
1				
2				

30

3

- 1 (peptide unit)
- 2 (chromatography)
- 3 (motif)
- 4 (allosteric effect)
- 5 (zymogen)
- 6 (ketose)
- 7 (unsaturated fatty acid)
- 8 (peripheral membrane protein)
- 9 (channel protein)
- 10 (chromosome)

25

1

- 1 _____
 - 2 _____
 - 3 _____
 - 4 DNA _____
 - 5 _____
 - 6 B2 _____
- [S] _____

25

,

1

1

A NAD B NADP C D E

2

A B C D

E

3

A B C D S-S- E

4

Km

A mol/L B mol/min C nmol/L D mmol/L E mol/ml

5

A CoQ B FAD C NAD⁺ D pLp E Tpp

6

A B C D E

7

A B₁ B B₂ C PP D C E

8

E

A B C D E

9

D

A B C D E

10

A B C D B₁₂ E

11

A B C D E

12

A B C D

E

13

A B C D E

14

A B C α D E

15

A B C D

E

16

A Met B Phe C Trp D Val E His

17 pH6 0

A Glu B Trp C His D Lys E Thr

18

A 3 B 4 C 5 D 6 E 7

19 O₂

A 3 B 4 C 5 D 6 E 1

20

A B C D E

21

A RNA B DNA C D E

22 DNA (A+T) 90 T_m

A 93.2 B 73.4 C 106.2 D 89.8 E

23 snRNA

A mRNA B DNA C RNA

D RNA E mRNA

24 CO₂ H₂O $\leftrightarrow$ H₂CO₃

A B C D E

25 (ATCase)

A ATP B CTP C UTP D ADP E GTP

($\surd$) ($\times$) 25 1

1

2 6

3 DNA

4

5

6

7 α -

8

9

10 C C

11 DNA G C

12

13 DNA

14

15 [ES]

16

17 PP

18 B₁₂

19

20 mRNA 5' polyA

21 DNA

22 RNA

23 tRNA

24

25 DNA 100 1

45

1 ()

(20)

2

- RNA

2

- DNA

1

- DNA

A

RNA

 t

A

3.

A B

4.

Kimura Ohta

A B

5.

A B

(15 45)

1

2 RNA

3

a)

b)

2

c)

(20 40)

1 Genomics, Transcriptomics Proteomics Phenomics

2

3 30

1. (aseptic c technique)
2. (Nitrifying bacteria)
3. (lipopolysaccharide LPS)
4. (periplasmic space)
5. (anabolism)
6. (antisepsis)
7. RNA (plus-strand RNA)
8. (missense mutation)
9. (interferon IFN)
10. solid state fermentation

1 20

- | | | |
|----|-----|------|
| 1. | RNA | mRNA |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |

10.

11. Ames

12. BIOLOG

13.

2 30

1.

A B C D

2.

A B. C. DNA D. RNA

3.

NADH

A 6 B 1 C 3 ATP
D 1 2

4.

A () B () C () D ()

5.

A. B. C. D.

6.

A B C
D

7.

A B.
C D.

8.

A B C D

9.

