

2018

4 (2 16)

1. Apoptosis
2. Necroptosis
3. Tumor suppressor
4. Oncogene
5. Promoter
6. Enhancer
7. Metastasis
8. Autophagy

4 (6 54)

- | | | | |
|---|-------------|-----------|---|
| 1 | | Knock out | ▮ |
| 2 | | Knock in | ▮ |
| 3 | | | ▮ |
| 4 | NF-kB | | ▮ |
| 5 | TGF-beta | | ▮ |
| 6 | | | ▮ |
| 7 | CRISPR/Cas9 | | ▮ |
| 8 | | | ▮ |
| 9 | | | ▮ |

4 (30 30)

- | | | |
|---|---|------------|
| 1 | | novel gene |
| | ▮ | |

4 2 20

1. planula
2. mantle
3. reproductive isolation
4. thoracoabdominal breathing
5. cycloid scale ctenoid scale
6. neoteny
7. cyst
8. bilateral symmetry
9. community
10. biosphere

4 1 20

1. 
 2.  
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 6.  
- 4 

4 10 60

- 1.

2. $\mathbb{W}$
3. $\mathbb{W}$
4. $\mathbb{W}$
5. $\mathbb{W}$
6. $\mathbb{W}$

4 (4 20)

1. granulosa cell thecal cell
2. primordial germ cell germline stem cell
3. mosaic development regulative development
4. parthenogenesis gynogenesis
5. sex determination sex differentiation

4 (10 40)

1. $\square$
2. $\square$
3. $\square$
4. $\square$

4 (20 40)

1. ? $\square$
2. A

$\square$

4 (3 24)

- 1.
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- 6.
- 7
- 8.

4 2 22

- 1. 4 4 4
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- 2. 4 4 4 Ш
- 3. 4 4 Ш

4 8 24

- 1. POPs Ш
- 2. Ш
- 3. Ш

4 15 30

- 1. Ш
- 2. Ш

4 3 30

- 1. EC₅₀
- 2.
- 3.
- 4.
- 5.
- 6. Indicator Organism
- 7. Environmental Biology
- 8.
- 9.
- 10. Priority Pollutant

4 6 30

- 1. 4 4
- 2. 4 4
- 3. Ⅲ
- 4. Ⅲ
- 5. Ⅲ

4 20 40

- 1.
- 2. 4 Ⅲ Ⅲ

Ч

(1 2 30)

- 1.
- 2.
- 3.
- 4.
- 5.
6. Decomposition
7. Autecology
8. Compensation depth
9. Ecosystem services
10. Ecological engineering

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8

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1. Ш
2. Ш
3. Ш
- 4.
- 5.

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15

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1. Ш
2. - $P \dots H \propto O_c \rightarrow H_c$
 P -----
 $\dots H$, $\propto O_c$
 $\rightarrow$ Ш -

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4 (2 20)

1. (Sterilization)
2. (Psychrophilic microorganisms)
3. (Proto treph)
4. (Generalized transduction)
5. (Lyophilization preservation)
6. (Lysozyme)
7. (Lysosome)
8. (Parasexuality)
9. (Microbial antagonism)
10. (Titer)

4 () (6 30)

1. $\sqcap$
2. $\sqcap$
3. $\sqcap$
- 4.
5. $\sqcap$

.4 (25 50)

1. $\sqcap$
2. $\sqcap$

4 (4 20)

1. mutation rate
2. topoisomerase
3. retrotranscriptase
4. split gene
5. conditional lethal mutantation

4 (2 10)

1. W
 _____DNA 1kb 200kbW
W
 _____W
2. W
 W 4 _____ 4 _____

4 (10 30)

1. DNA
2. W
3. RNA W

4 (20 40)

- 1
2. 1996 1 2 21
 4 4 4
 1 W 1 2
 2017 11 27 10 1 2 W
W

4

(1 2 30)

1. trophic cascade concept
2. flood pulse concept
3. anadromous migration
4. energy budget
5. specific growth rate
6. secondary sex characteristics
7. the catch per unit of fishing effort
- 8.
- 9.
- 10.

4

6 30

1. $\frac{1}{2}$
2. $\frac{1}{3}$
3. $\frac{1}{4}$
4. $\frac{1}{5}$
5. $\frac{1}{6}$

4

20 40

1. $\frac{1}{2}$
2. $\frac{1}{3}$

4 (2 30)

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4 1 10

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4 (5 30)

1. $\mathbb{W}$

2. Ш

3. Ш

4. Ш

5. 4 III 5

6. Ш

4 (10 30)

1. Ш

2. 4 III

W

3. Ш

W

4 2 30

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
8. CAM
9. Glycolysis
10. PPP
11. ROS
12. ChIP
13. LncRNA
14. m6A
15. TALEN

4 5 8 40

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

4 2 15 30

- 1.

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2.

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Ч (2 20)

1.

2. Stress reaction

3.

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1. _____ Ч _____ Ч _____ Ч _____ Ш

2. _____ Ч _____ Ч _____ Ч _____ Ч _____ Ш

3. _____ Ч _____ _____ Ш

4 _____ Ч _____ Ч _____ Ш

5. _____ Ч _____ Ч _____ Ш

Ч (6 30)

1 _____ Ш

2. _____ Ш

3. _____ Ш

4 _____ Ъ _____ Ё _____ Ш

5.

