

2020

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(1.5 15)

- 1 í Non-coding RNA
- 2 í Pyroptosis
- 3 í Necrosis
- 4 í Innate immunity
- 5 í TATA box
- 6 í Signal peptide
- 7 í Adaptive immunity
- 8 í Immunoprecipitation
- 9 í Autophagy
- 10 í Endocytosis

(5 50)

1. 2019
- 2.
- 3.
4. ChIPseq
- 5.
6. cDNA
7. mRNA
- 8.
- 9.
- 10.

(35 35)

2 20

1. gastrovascular cavity
2. retrogressive metamorphosis
3. (successional speciation)
4. veliger larva
5. trichocyst
6. synsacrum
7. adaptive radiation
8. altricial
9. coxal glands
10. parthenogenesis

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15 30

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(4 20)

1. mosaic development regulative development
2. oogonium spermatogonium
3. holoblastic cleavage meroblastic cleavage
4. cytokinesis karyokinesis
5. epiboly involution

(10 40)

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2. Hox
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- Keystone species
- Ecological succession
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- Net primary production
- Trophic cascade

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1. (productive infection)
2. (cryptobiosis)
3. (substrate accelerated death)
4. (autolysis)
5. (attenuation)
6. (gene recombination)
7. (burst size)
8. (metachromatic granules)
9. (cyanophycin)
10. (inflammatory)

30

(25 50)

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(4 20)

1. cDNA cDNA library
2. Promoter
3. - Hardy Weinberg Law
4. Quantitative trait locus QTL
5. Reporter gene

(2 10)

1. 
2. 

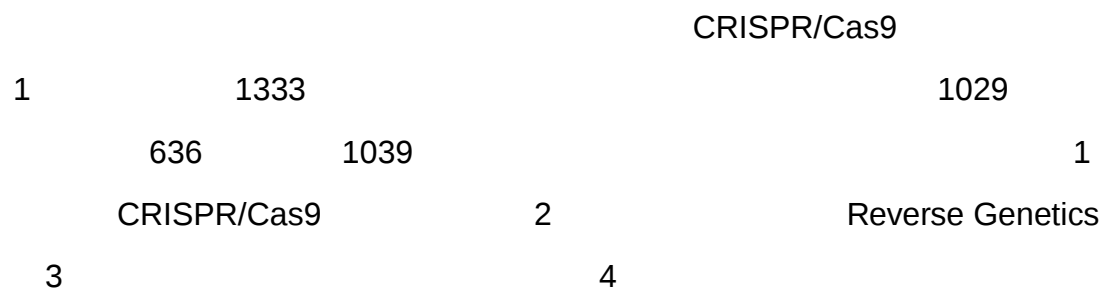
(10 30)

1. Southern blot Northern blot Western Blot
2. RNA
- 3.

(20 40)

1. genetic central dogma . .
- Francis Harry Compton Crick 1958
- DNA RNA RNA
- DNA DNA DNA

2. CRISPR/Cas9



25

1. 2 4
2. Reproductive strategies 1 3
3. 1 2
4. Diadromous migration 1 3
5. Principle of competitive exclusion 1 3
6. 1 3

42

1. 4
8
2. match-mismatch hypothesis, bigger-is-better hypothesis,
stage-duration hypothesis 8
3. 8
4. 6
5. 3
6. 6
6. 2 6

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1. “ ”

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Meckel's cartilage

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1. Active absorption
2. Antenna pigment
3. Calvin cycle
4. CaM
5. GWAS
6. HSP
7. LLPS liquid-liquid phase separation -
8. Phytochrome
9. PPP
10. ROS

8 5 40

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4. C3 C4 CAM
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15 2 30

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(2 20)

1. Median lethal concentration
2. Bio-magnification
3. Stress response
4. Assimilation efficiency
5. Trophic level
6. Mature coefficient
7. Anadromous migration
8. Fish fullness
- 9 Biological overfishing
- 10 Hanging ratio

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