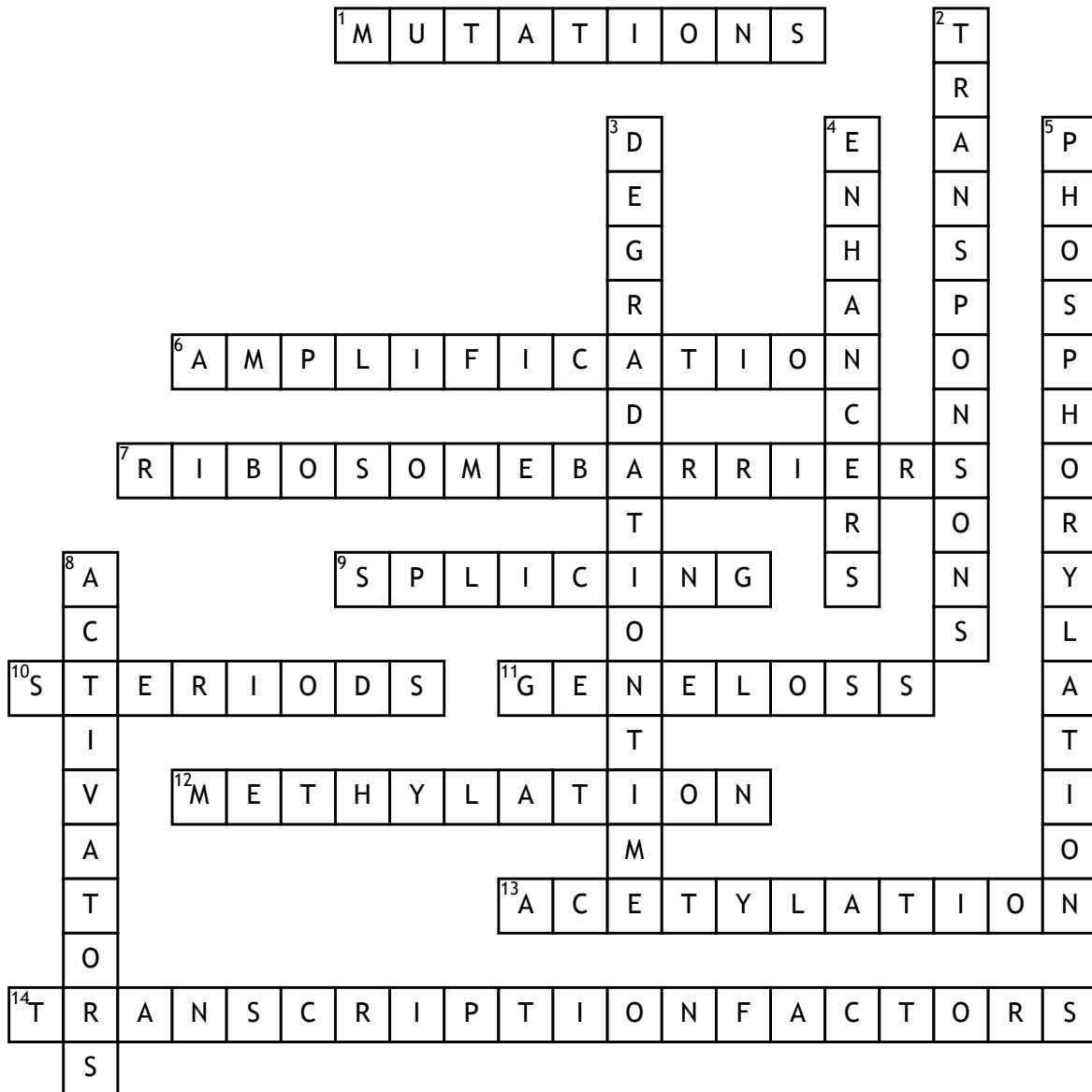


# Gene Regulation Crossword Puzzle



## Across

1. A permanent, heritable change in the nucleotide sequence in a gene or a chromosome.

6. An increase in the frequency of a gene or chromosomal region, as a result of replicating a DNA segment by in vivo or in vitro process, such as by gene duplication or polymerase chain reaction, respectively.

7. A molecule consisting of two subunits that fit together and work as one to build proteins according to the genetic sequence held within the messenger RNA.

9. The process by which introns are removed from hnRNA to produce mature messenger RNA that contains only exons.

10. A group of synthetic hormones

11. Gene elimination from differentiating cells in some protozoans, insects, and crustaceans.

12. A biochemical process involving addition of methyl groups to DNA, silencing a gene or cluster of genes.

13. Formation of an acetyl derivative.

14. A protein required for recognition by rRNA polymerases of specific stimulatory sequences in eukaryotic genes.

## Down

2. DNA segments that are mobile that are capable of replicating and inserting copies of DNA at random sites in the same or a different chromosome.

3. The reduction of a chemical Compound to one less complex, as by splitting off one or more groups.

4. Genetic elements important in the function of a specific promoter.

5. The addition of a phosphate (PO<sub>4</sub>) group to a protein or other organic molecule.

8. A DNA-binding transcription metabolite that positively modulates an allosteric Enzyme or regulates one or more genes by increasing the rate of transcription.