

SUPPORTING INFORMATION

Size, Surface Properties, and Ion Release of Zinc Oxide NPs: Effects on Cytotoxicity, Dopaminergic Gene Expression, and Acetylcholinesterase Inhibition in Neuronal PC-12 Cells

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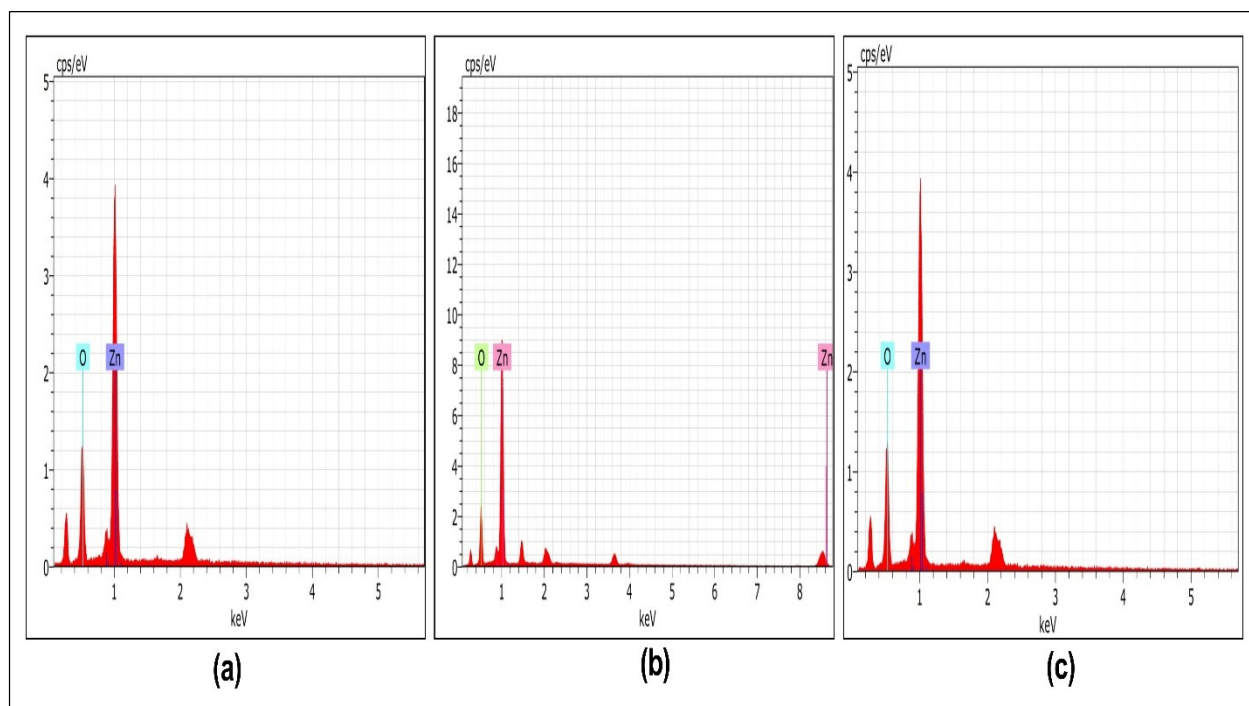
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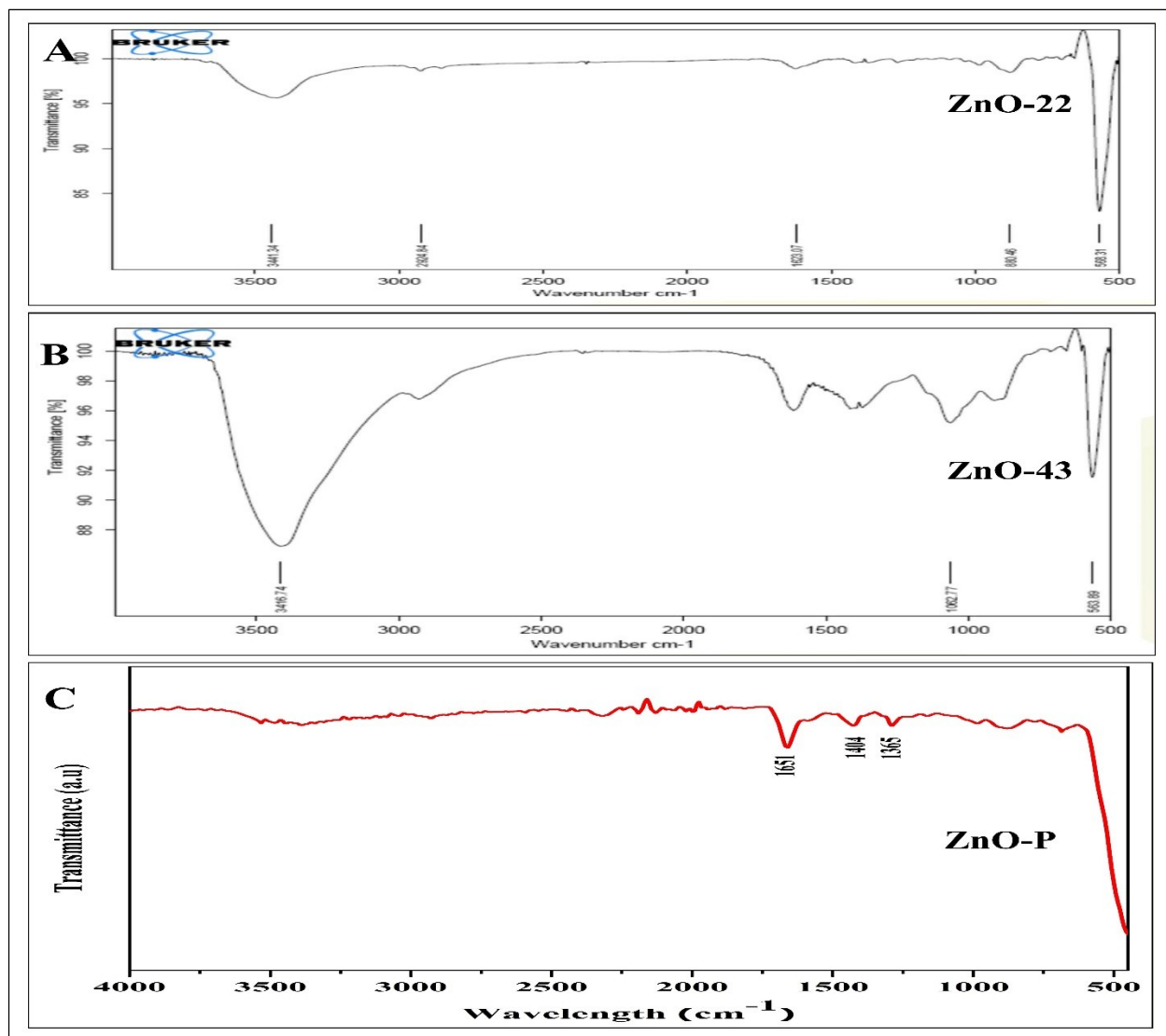
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Supplementary figure legends

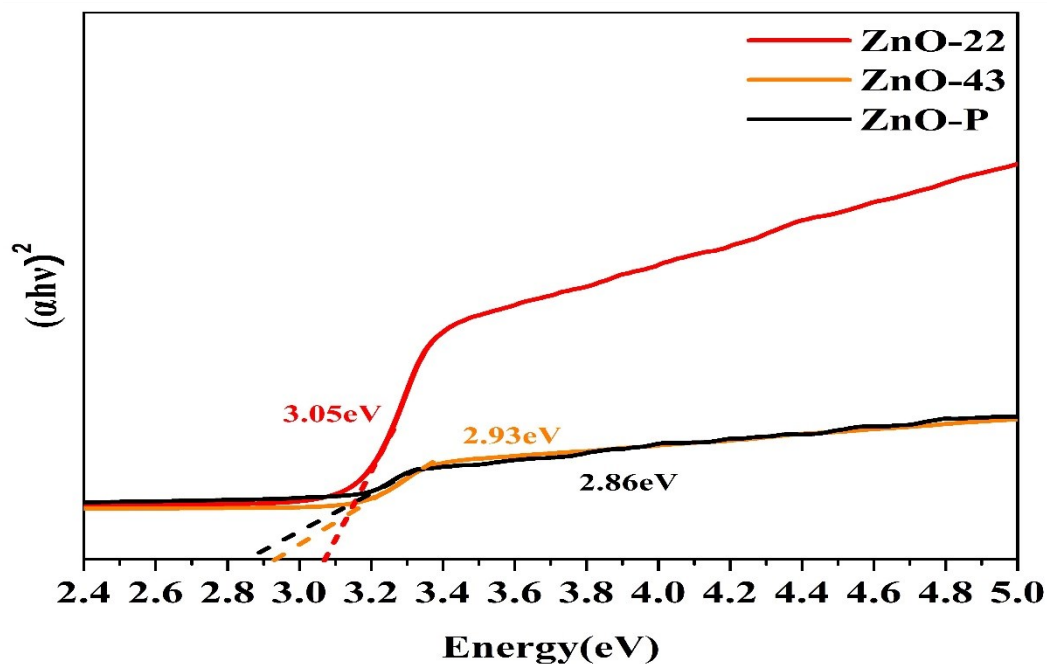
Supplementary Figure 1. The results of elemental analysis confirming the presence of Zinc by EDS analysis ZnO-22 (a), ZnO-43 (b) and ZnO-P (c).



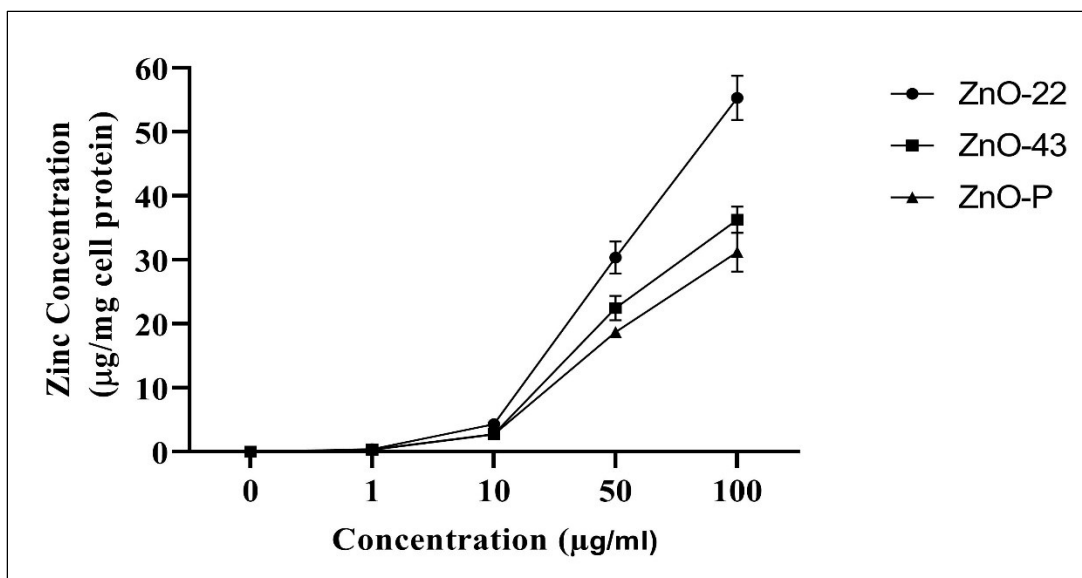
Supplementary Figure 2. The results of functional group analysis by FTIR spectroscopy of synthesised ZnO NPs.



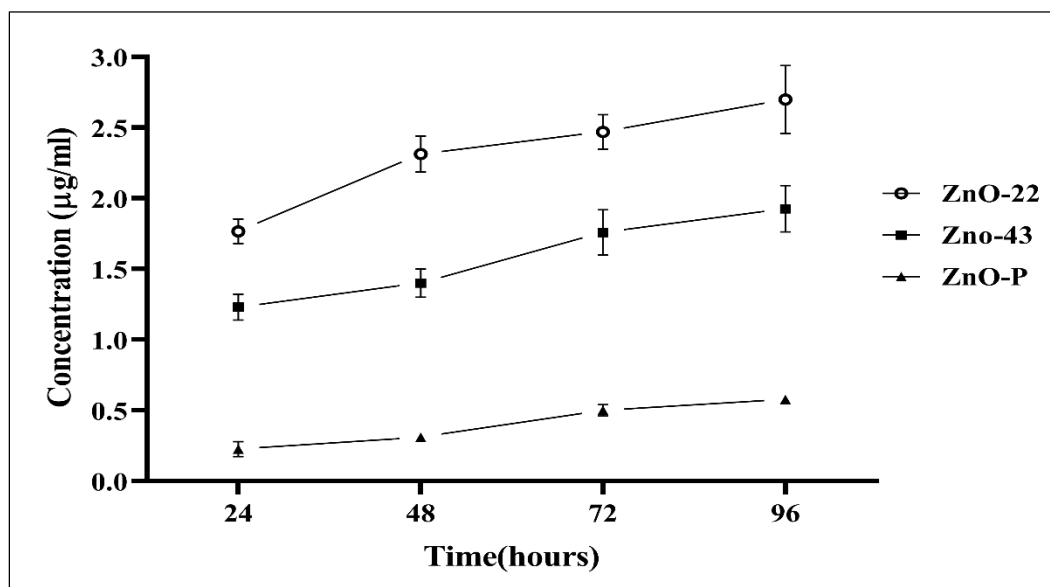
Supplementary Figure 3. The result for determination of optical energy band gap energy by Tauc plot graph calculated by extrapolation of the linear part of $(\alpha h\nu)^2$ versus energy (eV) for the synthesized Zinc Oxide Nanoparticles.



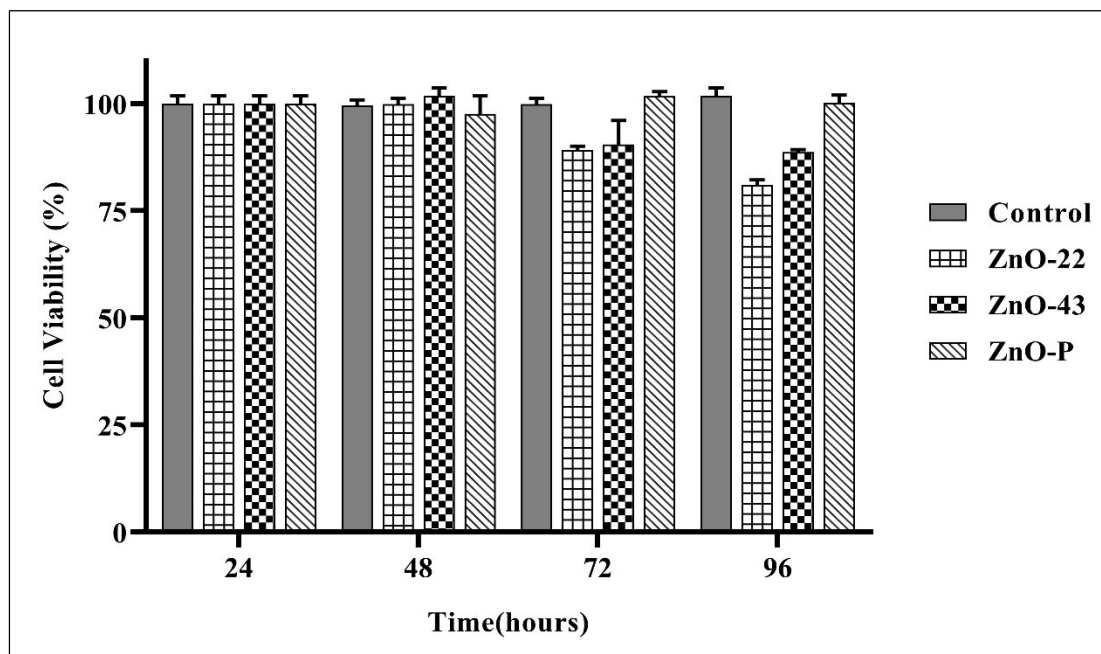
Supplementary Figure 4. The result for intracellular uptake of ZnO NPs determined as total Zinc (per mg of cellular protein) by Flame atomic absorption spectroscopy after 96hrs of exposure suggesting a dose-dependent increase in total cellular uptake.



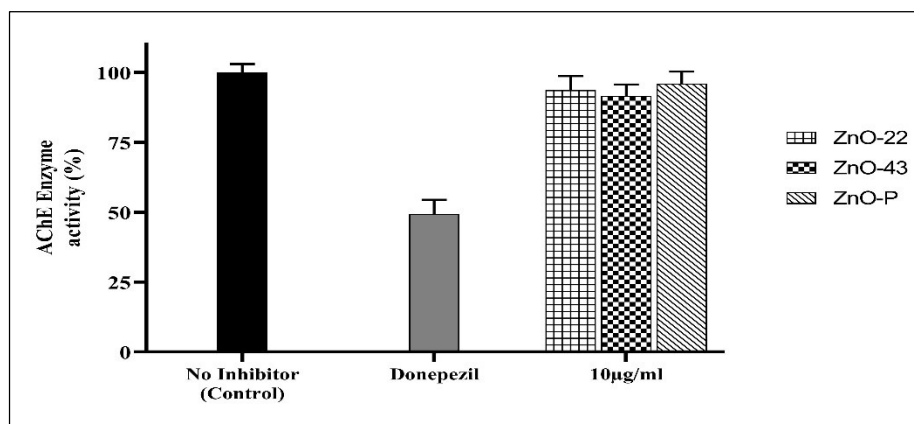
Supplementary Figure 5. The result for determination of Zinc ions released in cell culture media at 10 μ g/ml of Zinc oxide nanoparticles at different time interval (24, 48, 72 and 96hrs) by Flame atomic absorption spectroscopy.



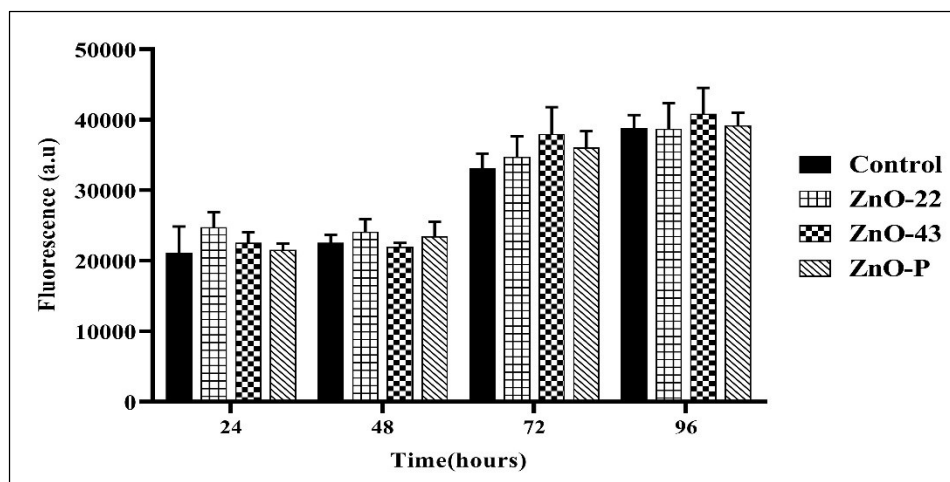
Supplementary Figure 6. The result for cell viability by MTT assay in PC-12 cells upon exposure to cell culture media containing released zinc ions from 10 μ g/ml of ZnO NPs for 24-96hrs.



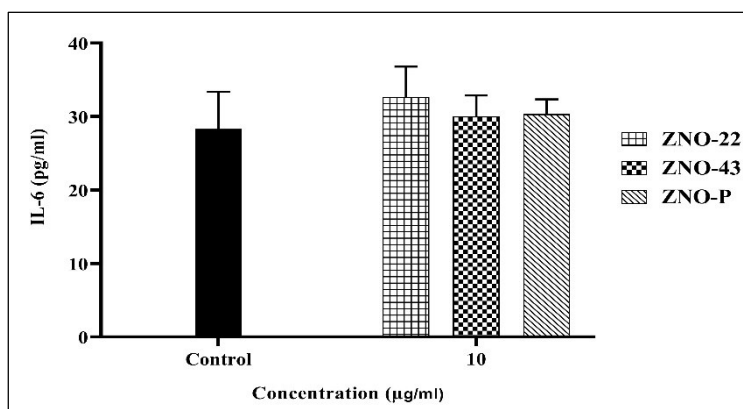
Supplementary Figure 7. The result for determination of AChE inhibitor activity upon exposure to cell culture media containing released zinc ions from 10 μ g/ml of ZnO NPs.



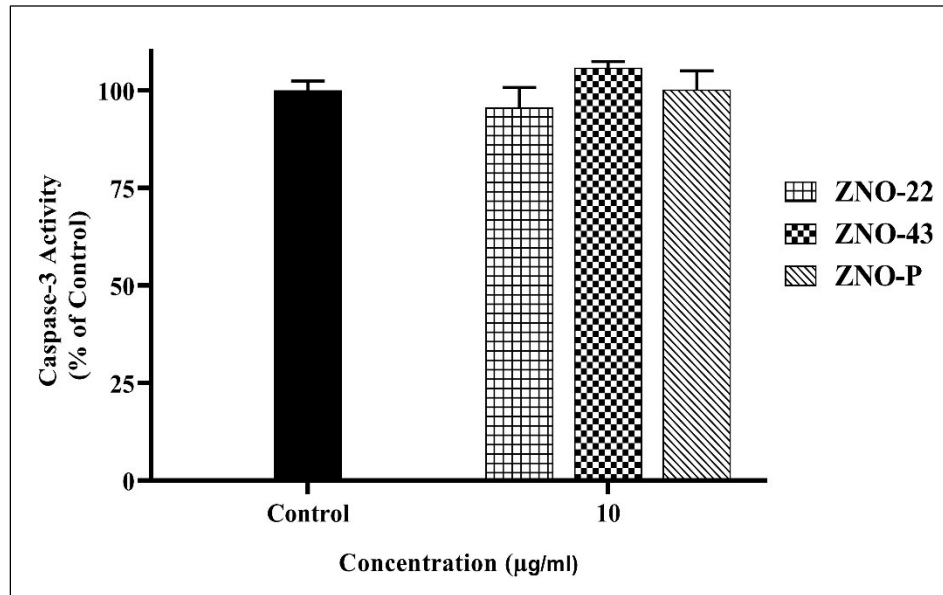
Supplementary Figure 8. The result for ROS generation by DCFDA assay upon exposure to cell culture media containing released zinc ions from 10 μ g/ml of ZnO NPs for 24-96hrs.



Supplementary Figure 9. The result for IL-6 levels determination in PC-12 cells upon exposure to cell culture media containing released zinc ions from 10 μ g/ml of ZnO NPs for 24hrs.



Supplementary Figure 10. The result for determination of caspase-3 activity in PC-12 cells upon exposure to cell culture media containing released zinc ions from 10 μ g/ml of ZnO NPs for 24hrs.



Supplementary Table 1. List of primers.

Primer Name	Primer Sequence 5' --> 3'
Tyrosine hydroxylase (Th)- 1F	CCTTCCAGTACAAGCACGGT
Tyrosine hydroxylase (Th)- 1R	TGGGTAGCATAGAGGCCCTT
Monoamine oxidase A (Maoa)- 1F	GAACCCGAGTCCAAGGATGT
Monoamine oxidase A (Maoa)- 1R	ATGGCCCAAACCATAGGCTG
Catechol-O-methyltransferase (Comt)- 1F	GTTAAAACCCGTGTCTGCGG
Catechol-O-methyltransferase (Comt)- 1R	CATGATTTGGCCTTTCGCGT
α -synuclein 1 F	GACCAGATGGGCAAGGGTGA
α -synuclein 1R	CATAAGCCTCACTGCTAGGGT
GPCR-37 -1F	CAACCTCGCTTTCTGGGACT
GPCR-37 -1R	ACCCAGAGAAGCTACCTCGATA

Parkin -1F	CGGGACTGCAAGGAAGCATA
Parkin-1R	CCGGTATGCCTGAGAAGTCG