

## Synthesis and screening of newer quinazolin-3(H)-4-one derivatives for anticonvulsant activity

Jayasekhar P Nair<sup>1</sup> and Mincy Mathew<sup>2</sup>

<sup>1</sup>Oman Medical College, Sultanate of Oman

<sup>2</sup>Medical College, India

Quinazolin-4(3H)-one analogues are reported to possess anticonvulsant activity due to non competitive antagonism of AMPA receptors ( $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazole propionic acid receptor). Various Schiff bases of 3-amino-2-phenylquinazolin-4(3H)-one were synthesized after optimizing the molecules for the drug likeness profile and bioactivity index using molinspiration software. The selected candidates were prepared by condensing 3-amino-2-phenylquinazolin-4(3H)-one with different biologically active aryl aldehydes and ketones using microwave irradiation. 2-Phenyl-3-[[[(1E)-substituted arylmethylene]amino]quinazolin-4(3H)-one analogous synthesized were characterized by spectral and elemental analysis. The compounds were tested for the preliminary acute toxicity profile before evaluating their anticonvulsant activity using maximal electrical shock (MES) method. Among the compounds synthesized 3-[[[(3E)-2-oxo-1,2-dihydro-3H-indol-3-ylidene]amino]-2-phenylquinazolin-4(3H)-one exhibited significant anticonvulsant activity comparable with that of phenytoin.

### Biography

Jayasekhar Nair has completed his Ph.D. degree in pharmaceutical chemistry. He is working as Professor of medicinal chemistry and chair of Pharmacy Program of Oman Medical College. He has 25 years of teaching and research experience in medicinal chemistry and has a lot of scientific publications in reputed international journals to his credit. At present he is supervising four Ph.D. candidates and his areas of research interest are molecular modification and pharmacological screening of heterocyclic molecules and computer-aided drug design.

[jayasekhar@omc.edu.om](mailto:jayasekhar@omc.edu.om)