Recent Developments in Indazole Scaffold towards Prevention and Treatment of Various Health Disorders

In this busy lifestyle, humans consume high-calorie and ready-to-eat foods, which leads toward different digestive ailments, such as irritable bowel syndrome, constipation, fistula, ulcerative colitis, colon cancer, pancreatic cancer, anal fissure, and metabolic syndrome. As per the National Institute of Mental Health (NIMH), attention-deficit hyperactivity disorder, autism, bipolar disorder, depression, obsessive-compulsive disorder, Alzheimer’s, Parkinson’s, post-traumatic stress disorder, schizophrenia, and suicidal tendencies are the most dominant mental disorders. As per the Centers for Disease Control and Prevention (CDC), in the United States, one out of four persons die due to heart problems. Elevated blood pressure, blood cholesterol level, smoking, and alcohol intake are the major risk factors for different heart conditions. On the other hand, cholera, pneumonia, influenza, tuberculosis, methicillin-resistant *Staphylococcus aureus*, measles, typhoid, malaria, anthrax, meningitis, and dysentry are the most common bacterial infections caused by *Vibrio Cholerae*, *Pneumococcal pneumonia*, *Mycobacterium tuberculosis*, rubeola virus, *Salmonella typhi*, *Bacillus anthracis*, *Neisseria meningitidis*, and Shigella bacteria, respectively. As per CDC, aspergillosis, candidiasis, *Candida auris* infection, *Cryptococcus neoformans*, mucormycosis, and *Pneumocystis pneumonia* are the most common fungal infections. Also, infections caused by parasites, tapeworm, pinworm, hookworm, ascaris, trematodes, and *Entamoeba histolytica* are the most common ones. Indazole is a five-membered pyrazole ring fused with benzene. Indazole scaffolds exist in 1H and 2H tautomeric forms with the molecular formula of C$_7$H$_6$N$_2$ and 118.14 molecular weight. It is a colorless solid nitrogen-containing heterocyclic. 1H-indazole is reliable than 2H-indazole. It should be noted that a series of derivatives of indazole having 2H tautomer follow hybridization of cyclic systems and act as anti-inflammatory as well as antimicrobial compounds. Amongst various natural and synthetic indazole moieties, nigellicine, nigellamine, nigellidine, zanubrutinib, and SCH772984 have shown significant results in curing various gastrointestinal disorders.

In this special issue on indazole derivatives, the journal aims at providing detailed information on the role of indazole scaffolds in the treatment of various neurological, gastrointestinal, and cardiovascular diseases, and infections caused by different bacteria, fungi, and parasites.

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