

# The Evolution of Chromene as Bioactive Molecule

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## Abstract

Among the vast range of benz-fused, heterocyclic compounds oxygen-containing compounds occupy a unique position due to their extensive pharmaceutical significance. Particular "Chromene" is well distributed in biologically active molecules and natural products. Chromene has been studied more than five decay and has usually been isolated from natural products often from plants and roots. They are important precursors of biologically active benzopyrans, which exhibit a broad spectrum of potent biological activities including antioxidants, antimicrobial, anti-inflammatory, antiproliferative, antitumor, antimalarial, anticancer, and anti-HIV.

**Keywords:** Chromene, pyran, biological activity

## Introduction

In last 75 years Heterocyclic compounds have a large range of applications in medicinal, agriculture, and materials chemistry<sup>1</sup>. The heterocyclic compounds have been an interesting field of study for a long time. They are broadly distributed in nature, playing a crucial role in living animals. Statistically, more than 85 percent of all biologically active compounds are heterocycles or comprise heterocycles. Heterocyclic molecules are the fundamental building blocks of biological systems. Heterocycles are present enormously in drugs<sup>2</sup>, vitamins<sup>3</sup>, many natural products<sup>4</sup>, biomolecules<sup>5</sup>, and active biological compounds such as antineoplastic<sup>6</sup>, anti-inflammatory<sup>7</sup>, antidepressant<sup>8</sup>, antimalarial<sup>9</sup>, anti-HIV<sup>10</sup>, antimicrobial<sup>11</sup>, antifungal<sup>12</sup>, antiviral<sup>13</sup>, antidiabetic<sup>14</sup>, herbicidal<sup>15</sup>, and fungicidal agents<sup>16</sup>. In addition to these, the heterocycles are often found as a lead compound in drug synthesis and agrochemicals. Some of these molecules show solvatochromic<sup>17</sup>, photochromic<sup>18</sup>, and fluorescent properties<sup>19</sup>.

## Discussion

### Some synthetic bioactive chromene derivatives

Chromene as antihypertensive agent-