

Kvertsetin va uning ba'zi bir hosilalarining biologik faolligini PASS (online) dasturida tekshirish

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Annotatsiya: Hozirgi kunda yangi modda sintez qilish bilan birga uning biologik faolligini o'rganish ham davr talabi hisoblanadi. Ushbu ishimizda PASS (online) dasturi yordamida kvertsetin va uning ba'zi bir xosilalarining ayrim kasalliklarga qarshi farmakologik faolligini o'rganish natijalari keltirilgan.

Kalit so'zlar: Kvertsetin, miritsetin, luteolin, apigenin, ramnetin, rutin, azaleatin, Pa qiymat, Pi qiymat, PASS (online), biologik faollik, ingibitor, antioksidant.

Testing the biological activity of quercetin and some of its derivatives in PASS (online)

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Abstract: Nowadays, in addition to the synthesis of a new substance, the study of its biological activity is also a requirement of the time. In this study, the results of a study of the pharmacological activity of quercetin and some of its derivatives against certain diseases using the PASS (online) program are presented.

Keywords: Quercetin, myricetin, luteolin, apigenin, ramnetin, rutin, azaleatin, Pa value, Pi value, PASS (online), biological activity, inhibitor, antioxidant.

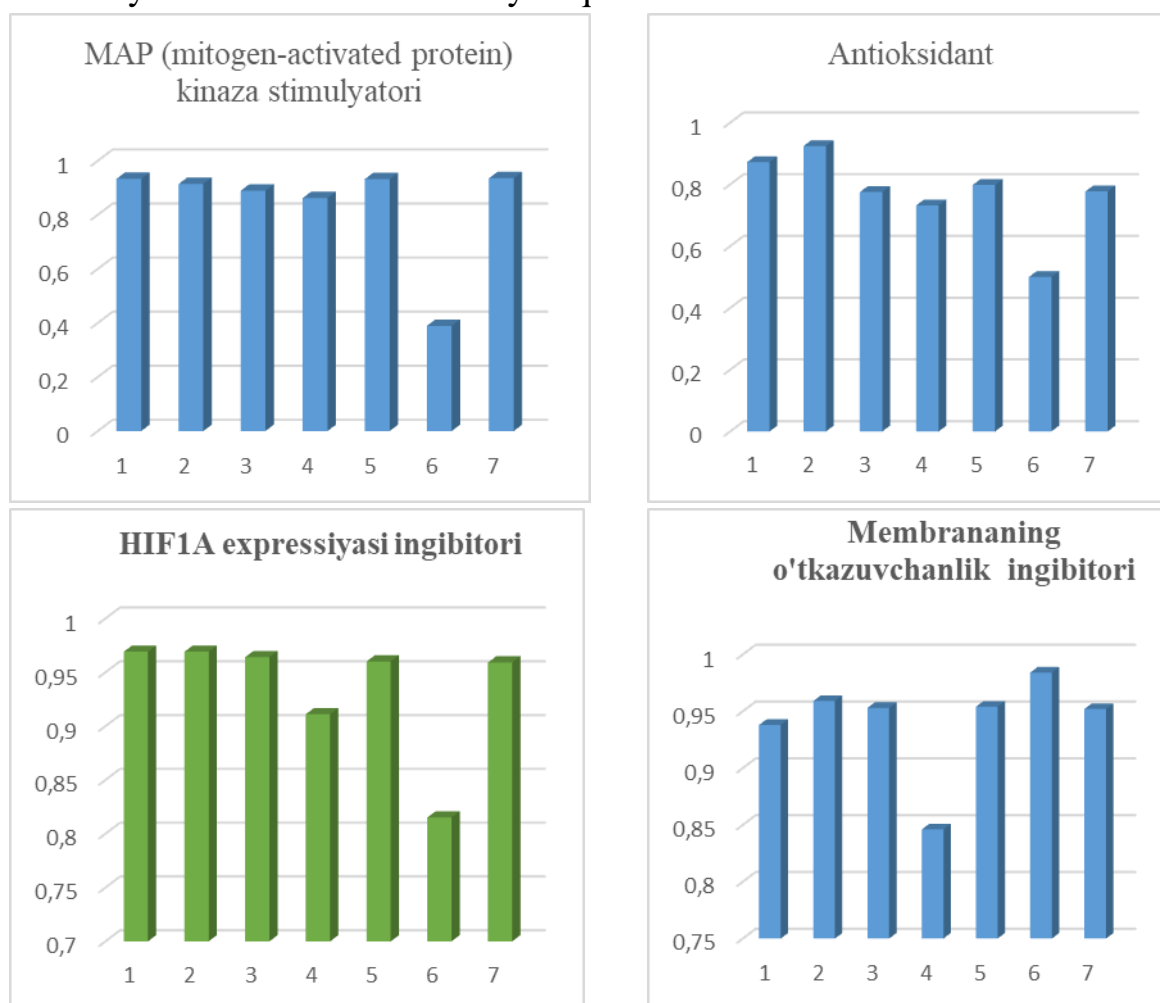
Kirish

Kvertsetin hosilalarining bioaktivligini o'rganish va ularning inson salomatligiga ta'siri hali rivojlanish bosqichida. Ko'plab olib borilgan ilmiy tadqiqotlarda kvertsetin hosilalarining bir qancha foydali xususiyatlari borligi aniqlangan, ammo ularning ta'sir qilish mexanizmi haligacha to'liq o'rganilmagan [1-2].

PASS online dasturi yordamida maqsaddagi moddaning strukturasi asosan biologik faolligini o'rganish mumkin. Bunda, Pa qiymati moddaning aynan qanday kasallikka nisbatan farmakologik faolligini belgilasa, Pi qiymati esa shu kasallikka nisbatan farmakologik faolligi pastligini belgilaydi. Farmakologik faolligi $P_a > 0.71$ qiymatidan yuqori bo'lgan hollarda, moddaning faolligi berilgan kasalliklarga nisbatan yuqori bo'lish ehtimoli kuzatiladi [3].

Olingan natijalar tahlili

PASS (online) dasturi ma'lumotlaridan ko'rinib turibdiki kvartetsetin va uning xosilalarida umumiy ingibitorlik va antioksidantlik xossalari yuqori. PASS (online) ma'lumotlari asosida kvartetsetin va uning xosilalari allergiya va yurak-qon tomir kasalliklarga nisbatan ta'sir qilishi, hamda turli xil fermentlarga nisbatan ingibitorlik va stimulyatorlik hossalari namoyon qiladi.



Bu yerda: 1. Kvartetsetin; 2. Miritsetin; 3. Luteolin; 4. Apigenin; 5. Ramnetin; 6. Rutin; 7. Azaleatin.

1-rasm. Kvartetsetin va uning ba'zi xosilalarining PASS (online) dasturida hisoblangan farmakologik faolliklari

Fobik kasalliklarni davolashga nisbatan kvartetsetin va uning xosilalarining farmakologik faolligini PASS dasturida o'rganish natijalari shuni ko'rsatdiki, eng yuqori farmakologik xususiyatga kvartetsetin va uning xosilasi miritsetin ega bo'ldi.

Birinchi diagrammadan ko'rinib turibdiki MAP kinaza fermenti stimulyatorida ramnetin va azaleatin eng yuqori farmakologik faollikni namoyon qilgan. Bunga sabab kvvertsetin molekulasiga CH₃ guruhining kiritilishi deb olsak bo'ladi. Antioksidantlik xossasi esa miritsitinda eng yuqori farmakologik faollikka ega. HIF1A expressiyasi ingibitorida apigenin va rutindan boshqa barcha xosilalar yuqori faollikni namoyon qilgan bo'lsa, membrananing o'tkazuvchanlik ingibitorida rutin eng yuqori faollikni namoyon qilgan. Bunga kvvertsetin molekulasiga kiritilgan funksional guruxlar sabab deb izohlasak bo'ladi.

Tajriba qism

Kvvertsetin moddasi va uning ba'zi xosilalarining strukturasi Chem Office dasturining ChemDraw Ultra qismida chizildi va PASS (online) dasturi yordamida ularning ayrim kasalliklarga qarshi farmakologik faolligi o'rganildi.

Xulosa

Pass (online) dasturida kvvertsetin va uning xosilalarining biologik faolliklari o'rganilganda barcha kasalliklarga nisbatan kvvertsetin va uning xosilasi miritsetinning biologik faolligi yuqori bo'ldi. Kvvertsetin molekulasiga turli xil funksional guruxlarining kiritilishi uning aktivligini ortib kamayishiga sabab bo'ldi.

Foydalanilgan adabiyotlar

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