Chemometric investigations of the multidrug resistance in strains of the phytopathogenic fungus *Penicillium digitatum*  
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**THE OBJECTIVES OF THIS WORK**

1. **P. digitatum** (green mold), like other *Penillium* species, contaminates fruits, nuts, vegetables, and even cerials causing serious losses in agriculture worldwide, and various respiratory problems, allergic diseases and other non-inflammatory symptoms that may be extremely dangerous to immunocompromised persons. To get more insight into the multidrug resistance (MDR) mechanisms of this microbe, particularly CYP511 (cytochrome 511 – ergosterol biosynthesis) and auxin pump PMR1-mediated resistance to demethylation inhibitors (DMIs), is one of the objectives;

2. To present novel ASR (Activity-Structure Relationship) & chemometric study of MDR activities of diverse *P. digitatum* strains with respect to DMIs;

3. To present novel QGAR (Quantitative Genome-Activity Relationship) and regression modeling of these MDR activities, taking into account the genome structure of the strains.

**GENERAL: THE MOLD AND ITS ANTIFUNGALS**

**ACTIVITY-STRUCTURE RELATIONSHIPS (ASR) I**

**ACTIVITY-STRUCTURE RELATIONSHIPS (ASR) II**

**QUANTITATIVE GENOME-ACTIVITY RELATIONSHIPS (QGAR)**

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