Seminario de Química Orgánica

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AULA SEMINARIO [DQO – 3º piso – PAB. II – CIUDAD](https://zoom.us/my/qo.aula01) UNIVERSITARIA

AULA VIRTUAL DQO: https://zoom.us/my/qo.aula01 - Clave: exactas20

YouTube: <https://www.youtube.com/channel/UCyIYRdx196IH55Do6PVMzXA>

"**Exploring different facets of catalysis towards bioactive quinoidal compounds: The complexity of simple and powerful molecules**"

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Our group has developed practical methods for design, synthesize and optimize new heterocyclic compounds with a broad range of biological applications. In this context, we revealed the synthesis and biological evaluations (e.g. bioimaging, cellular uptake and dynamics in living cells) of new fluorescent heterocyclic compounds, which have allowed visualizing the whole endocytic pathway and selective cellular staining of lipid-based structures, that is, lipid inclusions in the cytosol. In addition, modular synthesis via organocatalysis of diverse naphthoquinones and selenium-containing quinone-based triazoles possessing two redox centres, with trypanocidal and antitumor activities were recently described by our group. This lecture will present a combination of strategies in Medicinal Chemistry and synthetic methodologies, as for instance, transition metal catalysed C–H activation reactions for the synthesis of bioactive compounds. The development of reactions that produces in a single step trypanocidal naphthoquinoidal compounds will be presented, along with recently developed iodination, oxygenation, thiolation and selenation processes. Strategies and reactions to prepare fluorescent compounds used to monitor enzymatic processes will also be briefly discussed.