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Therapeutic interventions for pregnancy and related non-pregnancy conditions

Researchers at Stanford University have identified molecular regulators that can act as part of a personalized treatment plan to help treat hormone-related conditions, including pregnancy and infertility.

Hormonal and non-hormonal treatments have a broad application in pregnancy and other medical conditions. The most widely used hormonal regulators are progesterone and derived progestins, which are used to treat conditions ranging from infertility to pre-term labor. However, there is a need for more targeted and effective molecular regulators. To address this need, the Snyder lab has identified a wide array of molecular regulators using computational analysis. These regulators are both steroids and non-steroids and can be used for a variety of conditions such as recurrent pre-term delivery, amenorrhea, abnormal uterine bleeding, and hormonally sensitive cancer. The ability to provide a more specific treatment plan could potentially increase the efficacy with which these disorders are managed.

Applications

- Pregnancy-related complications, including: recurrent miscarriage, infertility treatment, preterm labor, assisted reproductive technology, recurrent preterm delivery
- Other hormonal conditions, including: amenorrhea, premenstrual symptoms, abnormal uterine bleeding, hormonally sensitive cancers, precocious puberty, transgender hormone suppression
- Contraception
- Neurological disorders

Advantages

- Greatly improved therapeutic effects over progesterone with bigger effective size in the population, longer efficacy window, and potentially fewer side effects.

Patents

- Published Application: WO2021061847
- Published Application: WO2022211810
- Published Application: 20220339176
- Published Application: 20240358719

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