

Review of: "Analysis of the Spread of Covid-19 via Atangana-Baleanu Fractional Derivatives"

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Potential competing interests: No potential competing interests to declare.

This manuscript provides a thorough investigation into the spread of COVID-19 utilizing Atangana-Baleanu Fractional Derivatives. The mathematical analysis establishes the existence and uniqueness of solutions, examines equilibrium points, and presents stability analyses. Additionally, it offers numerical simulations to validate the theoretical findings, contributing significantly to epidemiological modeling research.

1. The manuscript effectively utilizes Atangana-Baleanu Fractional Derivatives to model the spread of COVID-19, demonstrating a novel approach in epidemiological modeling.
2. The rigorous mathematical analysis establishes the existence and uniqueness of solutions, providing a solid foundation for further investigation.
3. The examination of equilibrium points and stability properties enhances understanding of the epidemic's long-term behavior and potential control strategies.
4. The numerical simulations offer practical insights into the dynamics of the proposed fractional model, further validating its applicability in real-world scenarios.
5. Overall, this manuscript makes a valuable contribution to epidemiological modeling, offering insights that can inform strategies for mitigating the spread of COVID-19 and similar infectious diseases.