

# The Effects of the Uncontrolled Use of Biomodulina T on the Severity of Severe Acute Respiratory Syndrome–Coronavirus 2 Infection in Older Cuban Adults: An Open Label Evaluation

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Covid-19 pandemic is a **worldwide public health problem**.

Millions of people at risk of **serious symptoms or death**.

... **older adults** are more likely to experience the **most serious manifestations of COVID-19**, at least in part the result of the **ageing of the immune system**...

Among several Cuban products that was and still is in use for treatment of COVID-19 is Biomodulina T, a **biological immunomodulator of natural origin** present in polypeptide fractions obtained from the bovine thymus...

This medication exhibits **cellular regeneration and immunomodulatory properties**, presumably because it stimulates lymphoblastoid mitosis and thus the differen-

Although Biomodulina T **might not prevent COVID-19 infection**, it could help stimulate the immune systems of individuals, and thereby **modulate symptoms and improve responses to this viral infection**.

The aim of this article is to **present the results of a government approved, experimental public health intervention involving repeated Biomodulina T injections** as a way to **potentially ameliorate or prevent symptomatic severe acute respiratory syndrome coronavirus 2**, which causes COVID-19 disease, in older adults in an urban area in Matanzas, Cuba.

## Research Design and Methods

The intervention was carried out at **3 downtown medical offices of the José Luis Dubrocq Polyclinics**, Matanzas City, Matanzas Province, Cuba, from April 12, 2021, to August 31, 2021.

The intervention began during the period of time when the highest numbers of new cases of COVID-19 were being reported in this territory and before the availability of vaccines or other proven treatments.

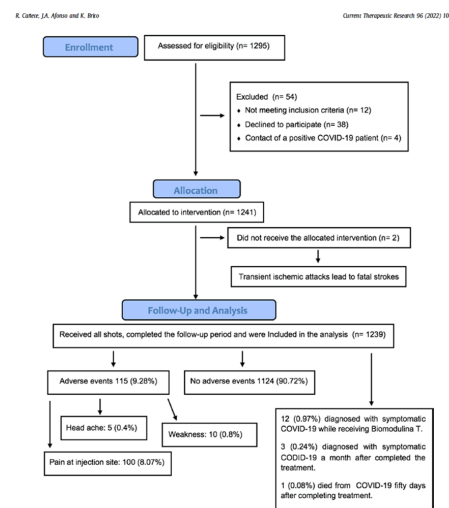


Figure 1. Flow diagram of the assessment.

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**Table 1**  
Demographic characteristics of older adult patients treated with Biomodulina T (N=1239) at admission as reported on data collection forms.

Variable	Biomodulina T-treated group
Sex*	
Male	485 (39.1)
Female	754 (60.8)
Age <sup>†</sup> (y)	75.6 (60–104)

\* Values are presented as n (%).

† Values are presented as mean (range).

**Table 2**  
Preexisting diagnoses of older adult patients (N=1239) in the Biomodulina T-treated group.\*

Variable	Biomodulina T-treated group
High blood pressure	799 (64.48)
Diabetes mellitus	246 (19.85)
Ischemic cardiopathy	172 (13.88)
Bronchial asthma	81 (6.53)
Cerebrovascular accident including stroke	16 (1.29)
Cancer	15 (1.21)
Chronic obstructive pulmonary disease	8 (0.64)
Chronic kidney disease	2 (0.16)
Other preexisting diagnoses	143 (11.54)

\* Values are presented as n (%).

Only **16 (1.3%)** subjects developed laboratory confirmed COVID-19 during the 12 week study period; **12 during the initial 6 weeks** while receiving the shots, **another three one month after the injections**, and **another single patient who died** from a severe COVID-19 infection 50 days after the final dose.

The incidence of COVID-19 among the people receiving the medication was equivalent to **1.291 per 100.000 individuals**.

This is less than the incidence reported in the Matanzas province during the same period of time, **(9.441 per 100.000 individuals)**.

Similar, the **mortality rate (0.08%)** was lower among individuals receiving the intervention than reported for the general population of the province **(0.81%)**.

Biomodulina T<sup>®</sup> was well tolerated.

## Conclusion

Although further, confirmatory, controlled clinical trials are needed, Biomodulina T injections were well tolerated safe and the results of this open, uncontrolled study suggests that it may have been useful to prevent decrease the incidence and severity of SARS-CoV-2 in older Cuban adults in Matanzas.