Evaluation of CD9 Blood Levels in Pediatric Patients with Familial Mediterrian Fever (FMF)

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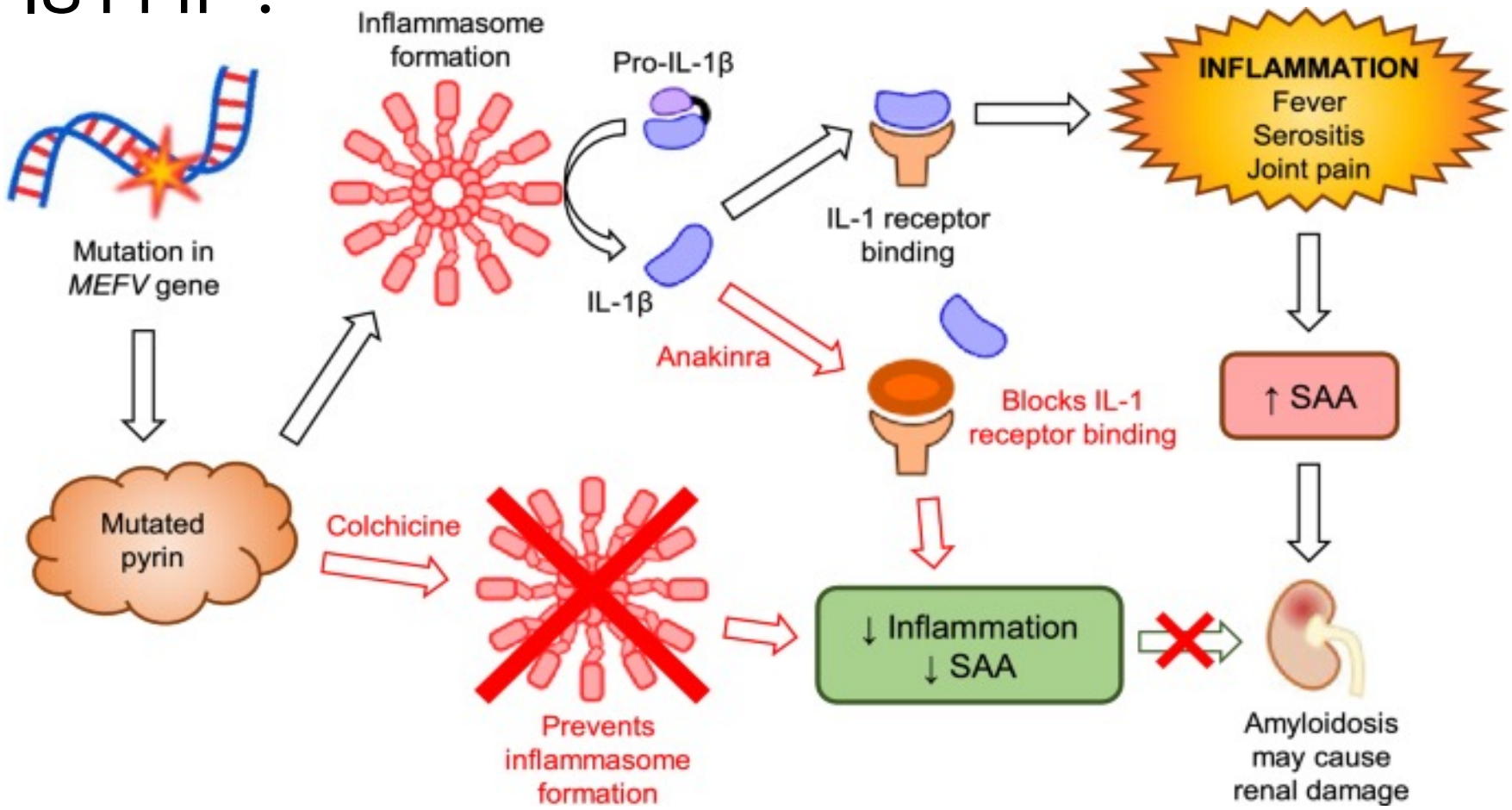


Fig. (1) Pathology of familial Mediterranean fever, and mechanism of action of colchicine and anakinra *(Lee et al.,2021, p.103).*

INTRODUCTION

WHAT IS CD9 TETRASPAIN ?

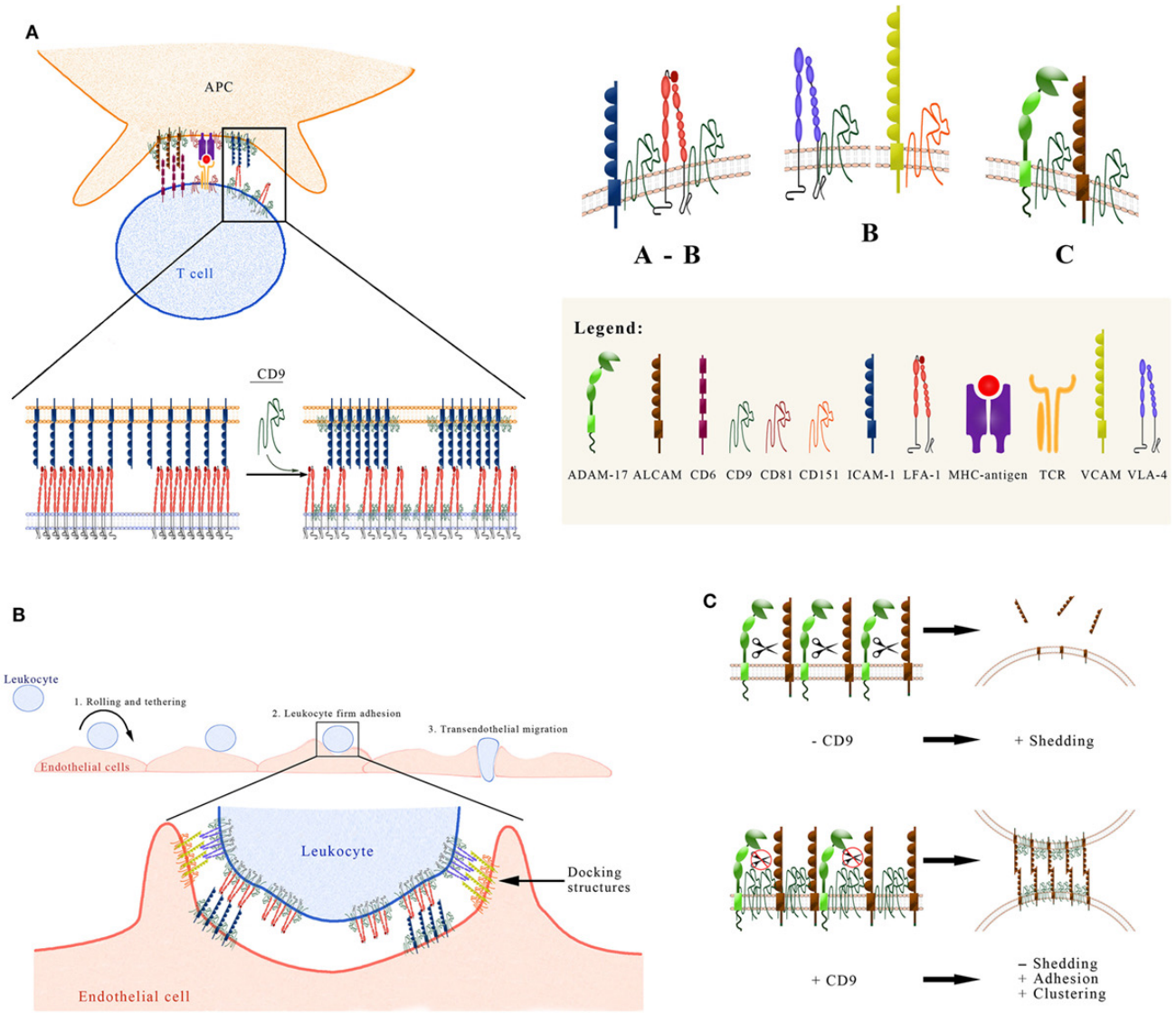


Fig. (2) Functional regulation exerted by CD9 on the activity of some immune system adhesion molecules.*(Reyes et al., 2018, p.4)*

INTRODUCTION

Research Question

- Could the potential association between CD9 and FMF provide valuable insights into treatment strategies or therapeutic responses?

- To the extent that it had been reviewed in the literature, ***there was no prior study investigating this relationship***.

AIM

To investigate CD9 levels in FMF patients and examine their relationship with diagnosis, clinical manifestations, and genetic results.

METHODS

EXCLUSION CRITERIAS

- Being diagnosed with another autoınflammatory disease
- Being diagnosed with an infectious disease at the time
- Being diagnosed with chronic disease
- Age outside 2-18 years

METHODS

GROUP A1
n=34

- Patients in remission phase
- 2-18 years old
- Diagnosed or preliminary diagnosed with FMF
- Followed by Bezmialem Vakif University ' or Okmeydanı City Hospital's Pediatric Nephrology outpatient clinic

GROUP A2
n=6

- Patients in attack phase
- 2-18 years old
- Diagnosed or preliminary diagnosed with FMF
- Followed by Bezmialem Vakif University ' or Okmeydanı City Hsopital's Pediatric Nephrology outpatient clinic

GROUP B
n=28

- Healthy control group

METHODS

of a **prospective** study

COLLECTED DATA

Laboratory Data

- ❑ SAA
- ❑ WBC
- ❑ CRP
- ❑ ESR
- ❑ 24h Urine Protein
- ❑ Microalbumine

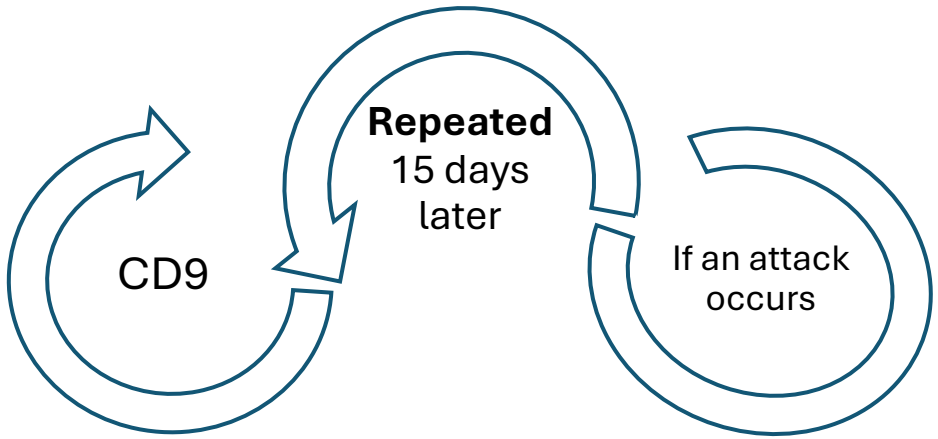
Patient's clinical history

- ❑ Symptoms
- ❑ Attack frequency
- ❑ Attack duration
- ❑ Treatment adherence
- ❑ Genetic mutation

Patient's Clinical Form

OBTAINED DATA

- CD9 by ELISA



RESULTS

	GROUP A (n=40)	GROUP B (n=28)
AGE	**11.6667 ± 3.84708**	**9.1071 ± 4.81001**
SEX	**%57.5 (F)** **%42.5 (M)**	**%71.4 (F)** **%28.6 (M)**

MOST COMMON SYMPTOMS

- Abdominal Pain %78.6
- Arthritis %50
- Fever %46.4
- Chest Pain %17.9

ATTACK FREQUENCY

- Once a month %40
- Every 2-6 months %17.5

ATTACK DURATION

- Less than 3 days %30
- 3 days %15

TREATMENT

Colchicine-treated (n=24)
Untreated patients (n=9)

MOST COMMON GENETIC MUTATION

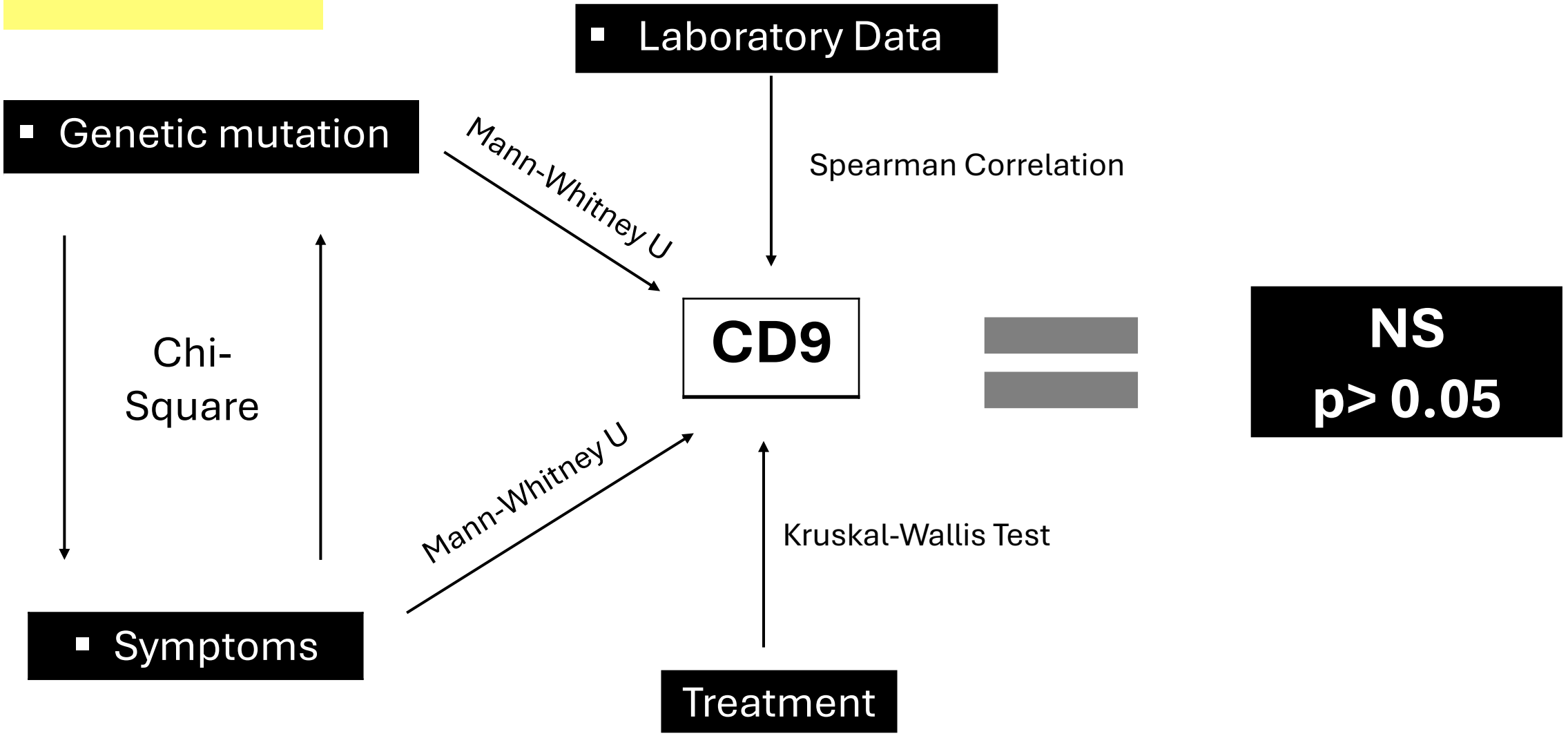
● M694V %27.5 ● E148Q %17.5 ● R202Q %7.5 ● OTHER

RESULTS

	GROUP A (n=40)	GROUP B (n=28)	Independent Student T Test
CD9 *(ng/mL)*	4.88 ± 3.4	9.97 ± 4.6	**p<0.01** *t: -5.284*

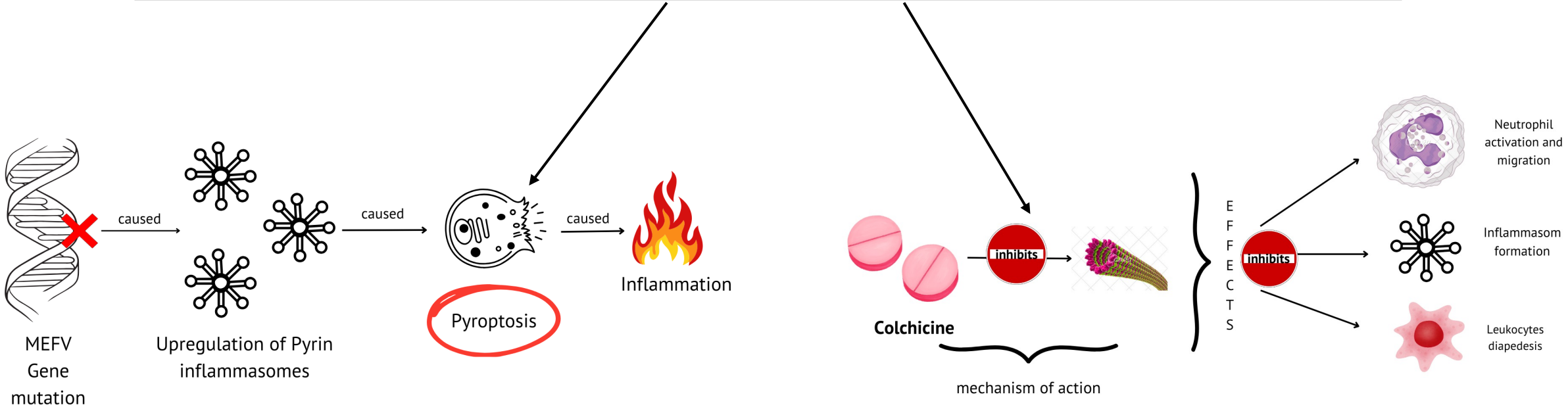
	GROUP A		
	The patients in attack phase (n=6)	**The patients in remission phase (n=6)**	**Wilcoxon Test**
CD9 (ng/mL)	2.87 ± 0.94	4.51 ± 3.2	**p>0.05** p=0.249

RESULTS


Laboratory Data
Genetic mutation
Mann-Whitney U
Spearman Correlation
Chi-
Square
CD9
NS
p> 0.05
Mann-Whitney U
Kruskal-Wallis Test
Symptoms
Treatment

DISCUSSION

CD9 levels are significantly higher in the control group compared to FMF patients.



CONCLUSION

- Despite the limitations in sample size, which are attributed to time constraints, and the restricted attack group due to the study's prospective design, the findings indicate that CD9 may have a significant role in the pathophysiology of FMF.
- Further large-scale, multicenter, and international studies are warranted to comprehensively elucidate its role.

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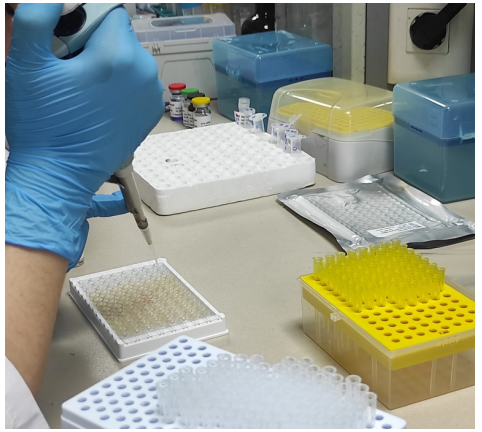
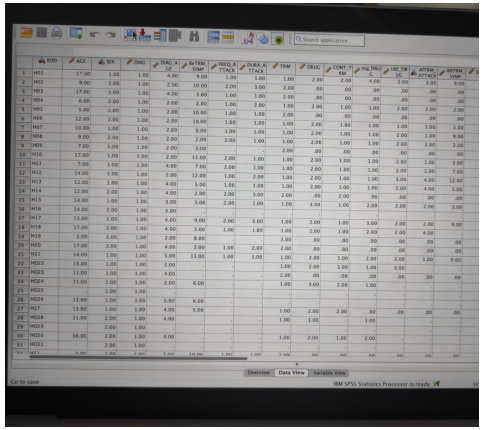
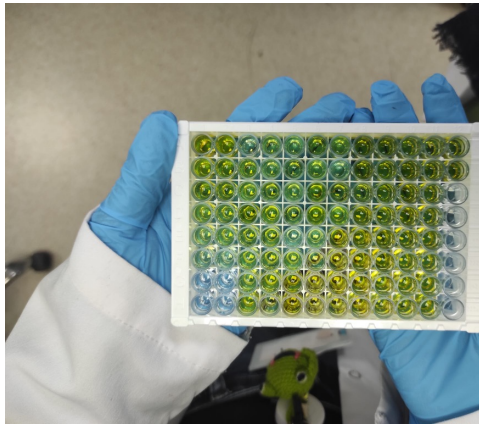
My research journey !





Filled with joy and acquiring new insights



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