

ZIENTZIA AZOKA
2021-2022

TITLE OF THE PROJECT: New generations, new genetics.

GROUP'S NAME: Pogmant

NAMES:

- Nekane Ugalde
- Sara Gonzalez
- Malen Berrueta
- Kattalin Fernandez



Hypothesis:

Why do we inherit some characteristics and not other ones ? We want to study different hereditary characteristics.

Summary:

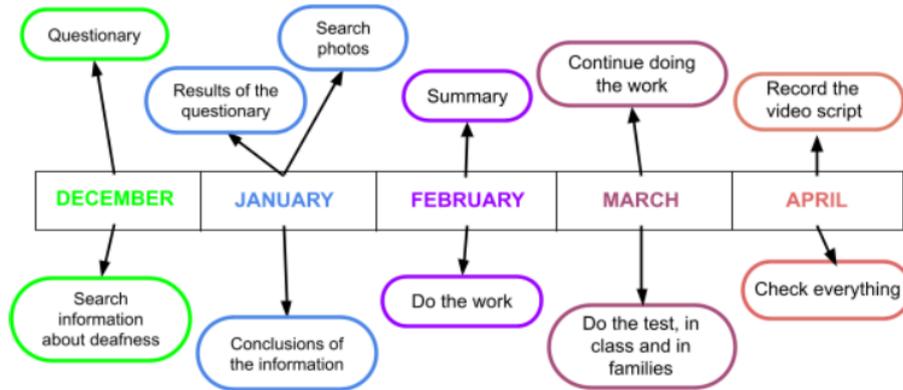
In our group a deaf person is involved and this fact led us to ask ourselves whether deafness is hereditary or not and how this characteristic has been inherited in his family.

In addition, we have tested the prevalence of the TAS2R gene in two families for transmission, as well as in a group of students and their families. TAS2R38 is a bitter taste receptor that facilitates the taste perception of phenylthiocarbamide (PTC) and propylthiouracil (PROP).

Finally, we have also observed the frequency of other characteristics such as the widow's peak, freckles, dimples,...

Chronogram

To make a study of heritable characteristics, we designed a timeline to help us better organize our work.



Materials and methods:

The materials we have used are very basic:

- Questionnaires about some hereditary traits
- PTC Tests
- Family trees

Procedure:

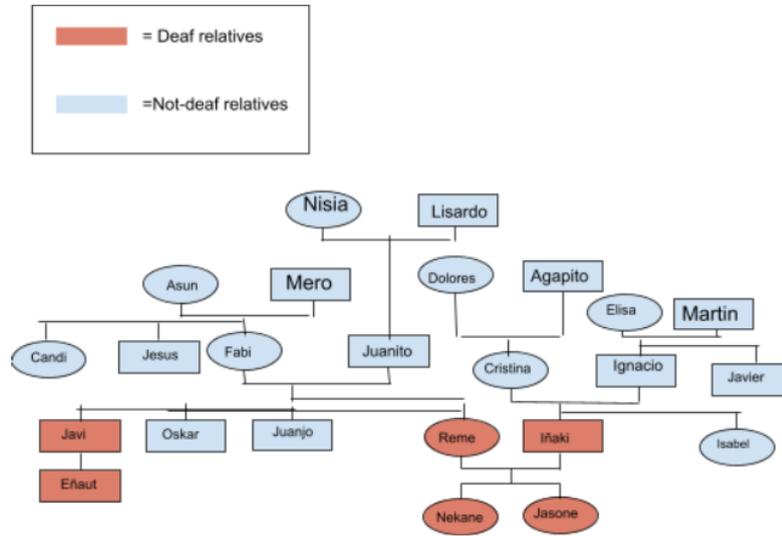
We started our genetics related project by using some methods:

- working and finding information about genetics, deafness, photos, genealogic trees;
- tests,
- graphics with the questionnaires we've made and checked.
- Last of all, we took our TAS2R test results including our classmates and some of their main family to see the prevalence of this trait in the population we have studied.

Results

FAMILY TREES:

1.- Nekane's genealogic tree



In this genealogic tree we can see Nekane's family tree, which is that some of them are deaf and others are hearing. We put it as like separating the deaf relatives and non-deaf relatives.

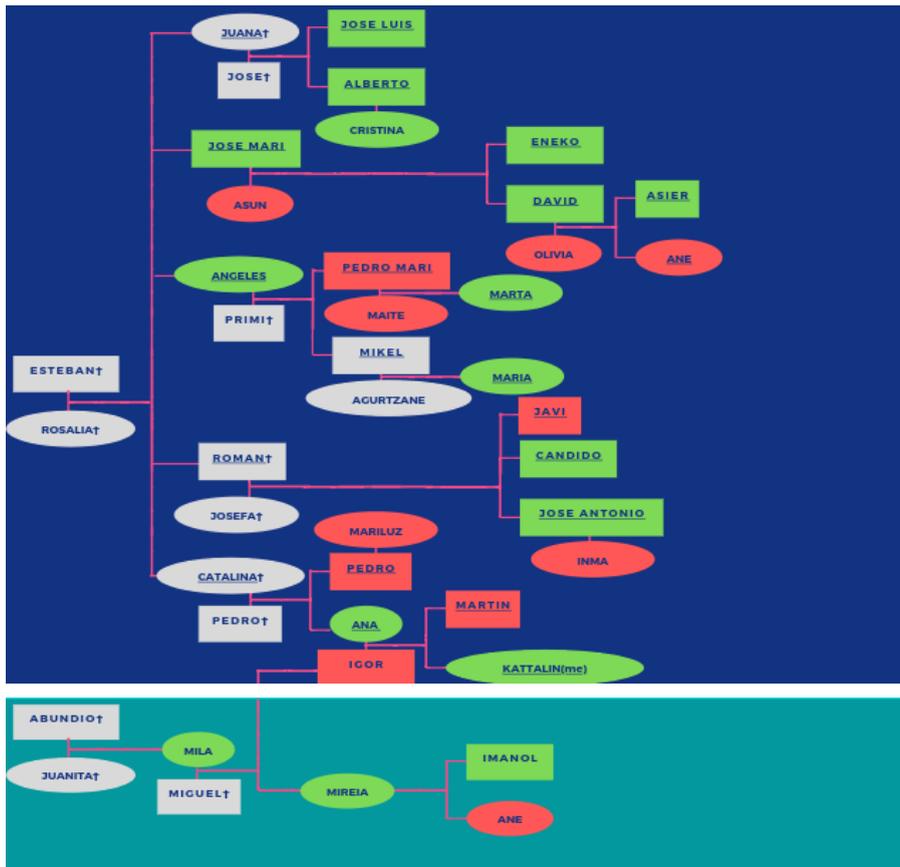
PTC TESTS

3.- Maddi's family

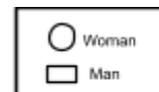
From 24 people from Maddi's family we've tested 16. 13 of them were positive and 3 were negative. We haven't tested the orange ones which are 14.



Kattalin's family tree



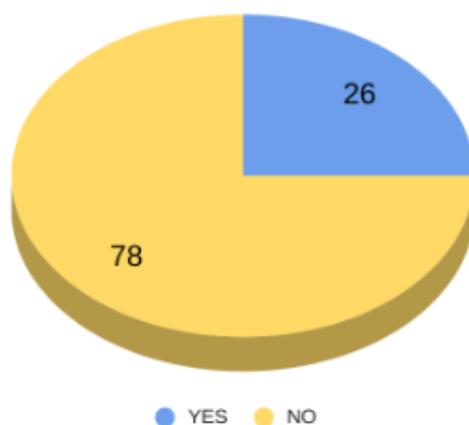
From 43 people from Kattalin's family we've tested 17 were positive and 12 were negative. We haven't tested the white ones which are 14.



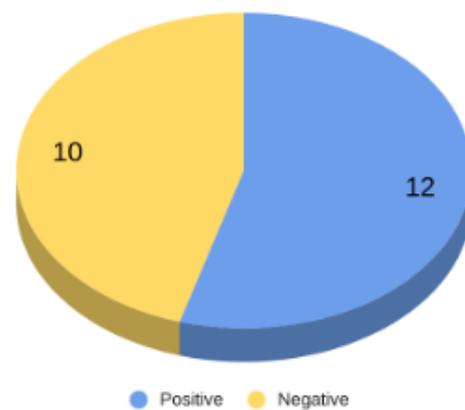
29.

QUESTIONNAIRE ABOUT GENETIC TRAITS

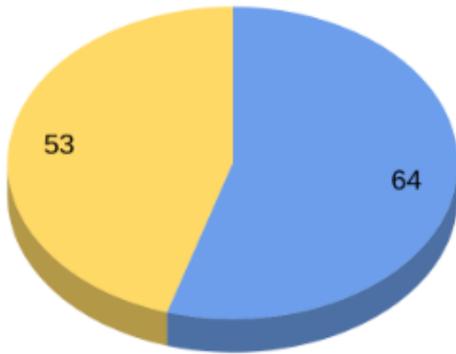
Freckles on face



TAS2R gene (class)

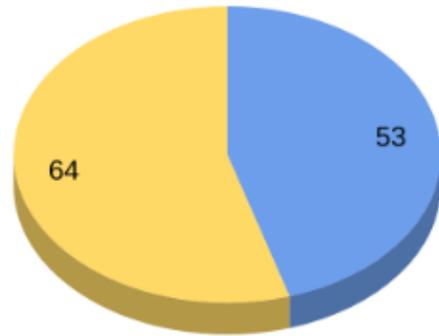


Clasping hands RIGHT above



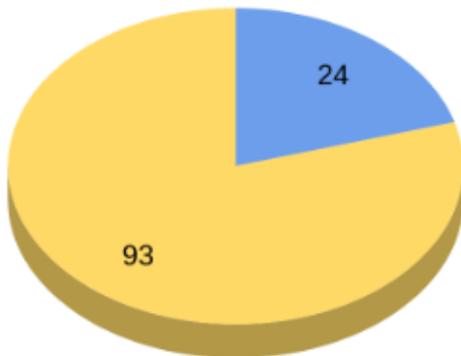
● YES ● NO

Clasping hands LEFT above



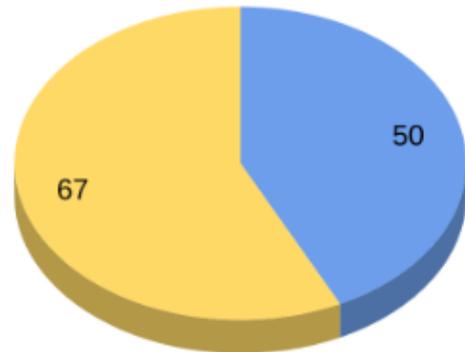
● YES ● NO

Dimple on Chin



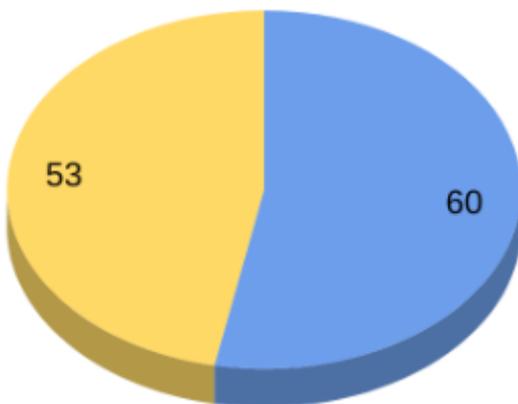
● YES ● NO

Widow's peak



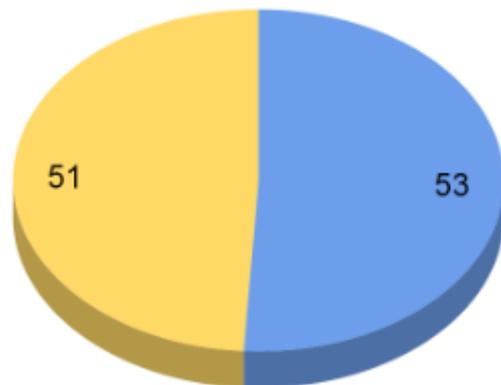
● YES ● NO

Straight Hairline



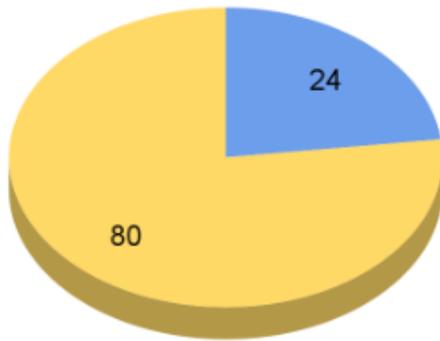
● YES ● NO

Attached ear lobes



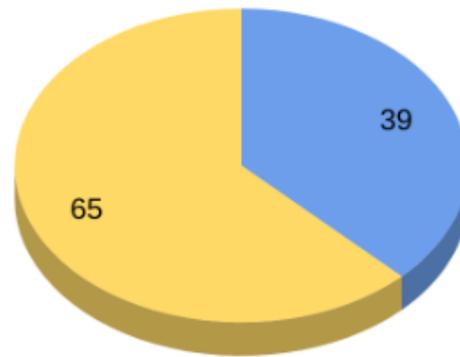
● YES ● NO

Left Handed



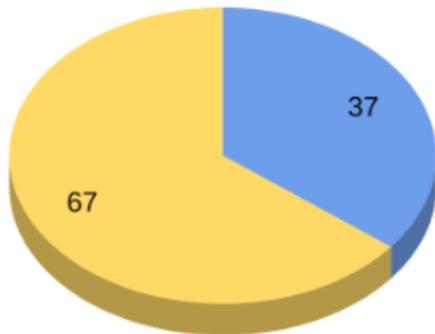
● YES ● NO

Gap between front teeth



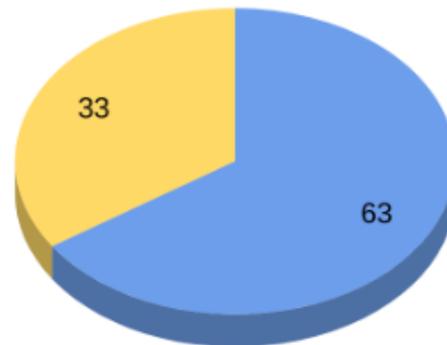
● YES ● NO

Hair on fingers after knuckle



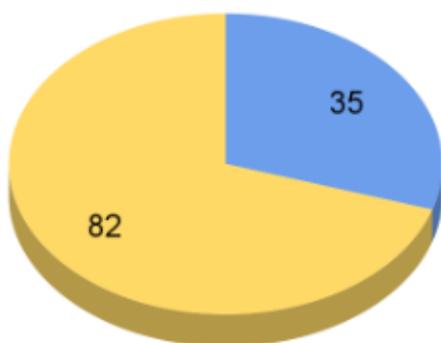
● YES ● NO

Can roll tongue



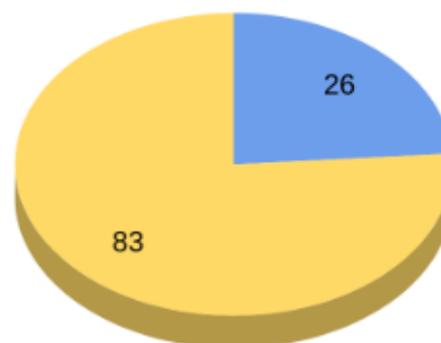
● YES ● NO

Curly Hair



● YES ● NO

2nd toe is longer than big toe



● YES ● NO

Conclusions

Our conclusion of this work is that in families, the genomes are usually the same which means that almost all the family is either positive or negative. But when the test is made in different families such as we did in our class, the answers aren't the same, they're so diverse.

In Nekane's family our conclusion is that the deafness comes from her parents but before her parents we don't know where the deafness come from because there wasn't anyone deaf. We believe that more extensive research would be necessary.

ACKNOWLEDGMENTS

We would like to thank Elhuyar for giving us the opportunity to participate in Zientzia Azoka. We would also like to thank Urko Martinez Marigorta for agreeing to be our mentor and for helping us to solve the problems we have had in our project.

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