

TALKING WITH
SUPER RESEARCHERS
of
Ageing

PROJECT: *EllasonCiencia*



Quan Zhou & MECUSA



ANA MARÍA CUERVO, BARCELONA

PROFESSOR AND DIRECTOR OF THE INSTITUTE FOR AGING STUDIES AT THE ALBERT EINSTEIN COLLEGE OF MEDICINE, NY

I STUDY AGING BECAUSE ...



MY EXPERIENCE AS GERIATRICIAN UPSET ME A LOT, BACK THEN THERE WAS A SHORTAGE FOR THERAPIES FOR THE ELDERLY



I ENJOY HOW MY LAB'S RESEARCH PROJECTS ADVANCE AND INTERTWIN, AND SEEING MY MENTEES GROW

★ MY BIGGEST CONTRIBUTION

THE DISCOVERY OF SELECTIVE RECYCLING IN CELLS

SELECTIVE AUTOPHAGY

YOUR CELLS EAT AND RECYCLE PARTS THAT DON'T WORK



WITH AGE, THEY STOP RECYCLING PROPERLY, PILE UP GARBAGE AND DON'T WORK AS WELL



WE CONSOLIDATED THE IDEA OF A SELECTIVE SYSTEM. IT WAS NOT EFFICIENT FOR CELLS TO DESTROY AND RECYCLE EVERYTHING PASSING ALONG

+ zoom





SUSANA GONZALO, MADRID

PROFESSOR OF BIOCHEMISTRY AND
BIOLOGY AT SAINT LOUIS UNIVERSITY

I STUDY AGING BECAUSE ...



I WAS INSPIRED BY OTHER SPANISH
RESEARCHERS SUCH AS MARIA BLASCO
AND MANUEL SERRANO



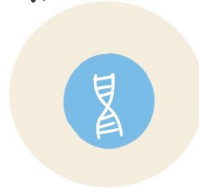
I LOVE TO SEE MY TRAINEES GROW,
UNTIL THEY DISCUSS WITH YOU ABOUT
SCIENCE BECAUSE THEY KNOW MORE
THAN ME

★ MY BIGGEST CONTRIBUTION

TO RESEARCH HOW SOME MUTATIONS CAUSE PREMATURE
AGING PROGERIA, GENETIC DISEASE

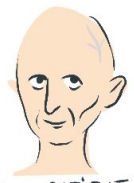
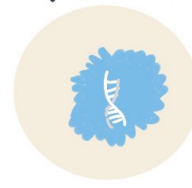
PROGERIA IS A DISEASE THAT
CAUSES ACCELERATED AGING
BECAUSE THE NUCLEUS OF THE
CELL IS UNSTABLE AND THUS
DNA GETS DAMAGED

Healthy



10y/old

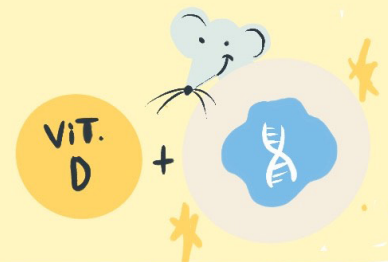
with
PROGERIA



10y/old PATIENT



WE DISCOVERED THAT VITAMIN
D IMPROVES THE STABILITY OF
THE NUCLEUS IN PATIENT-
DERIVED CELLS AND MICE WITH
PROGERIA. A NEW CANDIDATE
FOR CLINICAL TRIALS!





LORENA SAELICES GOMEZ, SAN FERNANDO

PROFESSOR AT THE CENTER OF ALZHEIMER'S AND
NEURODEGENERATIVE DISORDERS IN TEXAS SOUTHWESTERN
UNIVERSITY

I STUDY AGING BECAUSE ...



OF PERSONAL REASONS: MY
GRANDMA HAD ALZHEIMER'S



I LOVE TO SOLVE PROBLEMS,
TO HAVE A SCIENTIFIC
QUESTION AND ASK MYSELF
"HOW DO I FIND THE SOLUTION?"

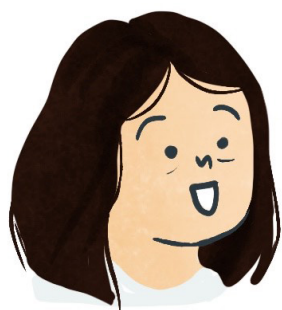
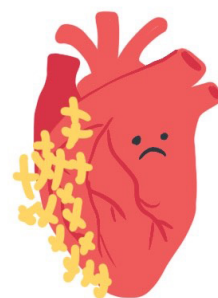
★ MY BIGGEST CONTRIBUTION

TO DISCOVER HOW DEFECTIVE PROTEINS HARM DIFFERENT
ORGANS TTR PROTEIN, CARDIAC AMYLOIDOSIS

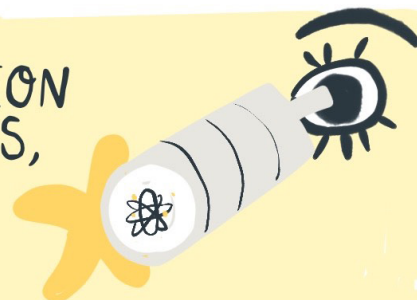
TTR IS PRODUCED IN
THE LIVER, AND IT
TRANSPORTS
VITAMINS AND
HORMONES TO OTHER
PARTS OF THE BODY



WITH AGING, TTR IS
NOT PROPERLY
PRODUCED, IT
ACCUMULATES IN
ORGANS AND THIS
AFFECTS THEIR
FUNCTION



IF WE GET ATOMIC INFORMATION
ABOUT HOW TTR ACCUMULATES,
WE WILL BE ABLE TO DESIGN
BETTER TREATMENTS
AND DETECTION SYSTEMS



CHALLENGES OF AGING RESEARCH



TO ACCOUNT FOR
DIVERSITY IN STUDIES

WHAT'S IN STUDIES



HEALTHY & WHITE

THE REALITY



DIVERSE WORLD



+ PREVENTION OF
AGE-RELATED DISEASES



FIND TOOLS FOR THE
EARLY DETECTION OF
AGE RELATED DISEASES



✓ TO UNDERSTAND THE
UNDERLYING MOLECULAR
MECHANISMS TO
DISTINGUISH CAUSES
FROM EFFECTS



REVERT "SIDE EFFECTS"
OF AGING TO LIVE
BETTER

THE GOAL OF AGING RESEARCH IS NOT TO
FIND THE SOURCE OF ETERNAL YOUTH BUT
TO LIVE HEALTHIER