

Script of “ANIRIDIA – A Journey to a brighter future” Comic book
ENGLISH

Cover	Produced by ANIRIDIA-NET COST Action CA18116 ANIRIDIA - A JOURNEY TO A BRIGHTER FUTURE Script: Juliana Martinez-Atienza Illustrations: Catalina Medarde Aniridia-Net.eu www.cost.eu
Inside cover Left	aniridia-net.eu www.cost.eu Funded by the European Union This publication is based upon work from COST action ANIRIDIA-NET #CA18116 (https://aniridia-net.eu/) supported by COST (www.cost.eu). COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation. @aniridianet
Inside cover Right	ANIRIDIA: A JOURNEY TO A BRIGHTER FUTURE Script: Juliana Martinez-Atienza Illustrations: Catalina Medarde Revision & translations: ANIRIDIA-NET COST Action #CA18116 members This is a free copy, ANIRIDIA-NET does not intend to sell this comic book. This comic book may not be reproduced or used without the consent of ANIRIDIA-NET.
Page 3	QR/URL to access to language translations: Aniridia-net.eu/aniridia-comic-script/
Page 4	Kid: What are you? Why are you here?
Page 5	Kid: My eyes don't hurt anymore! Bird: Eureka! My suspicions are confirmed. You are special. Like me.
Page 6	Bird: We have... ANIRIDIA. You have: BLACK EYES, NO IRIS. Kid: Is this why my eyes hurt when I open them on a sunny day?
Page 7	Bird: Your eyes' irises are like sunshades for your eyes. They protect them from the bright light. You don't have irises... Kid: ... so these sunglasses are my sunshades! Bird: You should also avoid direct light when you are at home or school by placing shades or curtains.
Page 8	Kid: Please don't fly so fast! POF!
Page 9	Bird: Ouch... I don't have very good vision – what doctors call Low Visual Acuity. Sometimes I don't see details clearly... and I need to move closer to see better.
Page 10	Kid: When I do sports or play with my friends, they must be patient, because it is always more difficult for me. Kid: I am better at games where things are not going too fast.
Page 11	Kid: Sometimes my eyes get strained and move rapidly and uncontrollably... and I see even less. Bird: It also happens to me. This is what doctors call nystagmus.
Page 12	Kid: It happens when I am nervous, angry or tired. It may look like I am distracted...but I cannot control my eyes when they get agitated.
Page 13	Bird: We are very special beings, believe me. Aniridia is a rare genetic disorder. It only happens to very few people around the world. Kid: And... do they all feel the same? Bird: Not really, no. It may affect people in different ways. Some are blind or have low vision, other have near normal sight. Kid: But... why does it happen?

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Page 14	<p>Bird: Come on, jump on my back. We are going on a journey. Kid: Where are we going? Bird: I will take you to meet a geneticist. This is a researcher specialized in the study of genes.</p>
Page 15	<p>Bird: Genes are the elements of your body that carry the information that determines your inherited characteristics, the features that are passed on to you from your parents. Genes are necessary to make the proteins that do all the work in our body.</p>
Page 16	LAB
Page 17	<p>Bird: Hi my friend! Nice to see you again! Could you explain to my friend why people with aniridia are so special and different? Geneticist: That is a very easy question!</p>
Page 18	<p>Geneticist: Aniridia is caused by mistakes (mutations) in the PAX-6 gene. This gene contains key information needed for the development of the eye. The PAX-6 gene is like the set of instructions our body needs to develop our eyes before we are born, while still in our mother’s tummy.</p>
Page 19	<p>Geneticist: Because of these mutations, half of the amount of the PAX-6 protein is produced, causing mistakes in the development of the eyes. There are many ways that PAX-6 affects the development so there are many ways that people with aniridia show signs of this genetic disorder.</p>
Page 20	<p>Geneticist: People with aniridia are born without iris, but other parts of the eye can be affected too and cause other associated conditions: cataracts, glaucoma, dry eye, strabismus, kidney cancer, retina with foveal hypoplasia, sleep problems...</p>
Page 21	<p>Bird: So the PAX-6 gene is really the main character in this story. Kid: But... How can we help people with aniridia?</p>
Page 22	<p>Bird: Our journey is not over yet. Hop on to fly again my dear! You are about to meet my eye doctor. She knows a lot about aniridia.</p>
Page 23	<p>Bird: We came for a flying visit! Doctor: Flying visit indeed!! SHOOT!</p>
Page 24	<p>Bird: We have a few questions. Could you help my friend understand how doctors can help people with aniridia? Doctor: Doctors can help identify and understand aniridia.</p>
Page 25	<p>Doctor: We can also prevent its symptoms and treat its associated conditions, and so help with delaying its development. For example we can treat your eyes with artificial tears... to keep your eyes moist and avoid pain. Kid: Well, this is great!</p>
Page 26	<p>Kid: But, Can you really fix aniridia? Is there an operation for it? Can you fix PAX-6 gene’s mistakes? Doctor: Unfortunately, medicine is not yet there...</p>
Page 27	<p>Doctor: But there is a lot of research going on!! Bird: Time for another flight. Jump on, my dear!</p>
Page 28	<p>Bird: As my doctor said, there is a network of brilliant researchers working together around the world to find a cure. Kid: Wow! Just like a whole team of superheroes.</p>
Page 29	<p>Bird: A lot of promising new drugs and devices are being tested that will some day improve the lives of patients like you and me. We are now in a Swedish... EYE RESEARCH LAB.</p>
Page 30	<p>Bird: These researchers, along with colleagues in the USA, France and the UK are testing new drugs that force the cell to produce more PAX-6 protein. Remember in aniridia only half of the amount of PAX-6 protein is produced.</p>
Page 31	<p>Researcher: These new drugs may be able to increase the amount of PAX-6 in the eye... which can help keep our eyes clear. Kid: But how do they know this idea will work?</p>

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	Researcher: Very good question, kid.
Page 32	Researcher: The drug has been tested so far in vitro. I mean, in test tubes containing cells like the ones you have in your eyes. We have also tested this drug in the eyes of laboratory mice. They still need to do more tests before they can use it in humans... but I have high hopes!
Page 33	Bird: A group of French researchers have invented a device that can help colonize the eye with a special type of powerful cells. They call them stem cells.
Page 34	Bird: Stem cells are like the building blocks of the human body. They can renew themselves again and again... and help repair tissue making the eye more transparent.
Page 35	Bird: We are visiting a researcher that is trying to find cell messages in teardrops. WELCOME TO NORWAY
Page 36	Bird: Hallo... My apologies
Page 37	Bird: Could you help us with some information on your research on aniridia? Researcher: Yep, sure! Kid: Can teardrops really contain messages? Researcher: Yes, kid!
Page 38	Researcher: Cells communicate using chemistry. These conversations between cells can tell them what work they need to do and when they should do it.
Page 39	Researcher: For example, in the teardrops of people with aniridia we have found special messages that are telling cells to do different things instead of working together to keep the eye clear.
Page 40	Researcher: We are working on new strategies to read and change these messages...
Page 41	Researcher: ... and so possibly change the way your cells behave. GO CELLS GO!
Page 42	Kid: We are special because we have aniridia. Bird: However, our future is bright.
Page 43	Bird: We have a whole team of hero researchers working together around the world on a lot of promising ideas that will make our lives much easier in the future.
Backcover	<p>One day, our little friend is visited by a peculiar bird and receives the gift of a pair of sunglasses. They both have aniridia, a rare eye disorder that makes them very special. They will become inseparable, and will take us on an amazing journey to discover aniridia, meeting scientists and doctors that are working on brilliant ideas to improve the lives of aniridia patients.</p> <p>A fun way to approach aniridia and to discover all the medical and scientific efforts that are being made to improve the lives of patients. Put on your glasses and travel with us towards a brighter future for aniridia!</p> <p>Aniridia-net.eu www.cost.eu Produced by ANIRIDIA-NET COST Action CA18116 Aniridia: networking to address an unmet medical, scientific and societal challenge.</p>