

## BACCALAUREAT GENERAL ET TECHNOLOGIQUE EPREUVE SPECIFIQUE MENTION

### « SECTION EUROPEENNE OU DE LANGUE ORIENTALE »

Académie de Nantes, binôme : Anglais/SVT – SERIE S

### Thème 1 - La Terre dans l'Univers, la vie, l'évolution du vivant

#### 1-A – Le brassage génétique et sa contribution à la diversité génétique.

**With the help of these documents and your scientific knowledge, present cystic fibrosis, a genetic disease, symptoms, origin, inheritance and its possible treatments.**

#### Document 1: Making strides<sup>1</sup> to fight cystic fibrosis (CF)

Community members can support their family members, friends and neighbours who have cystic fibrosis by participating in the Batesville Great Strides walk Sunday, May 21, at Liberty Park.

"Cystic fibrosis is a genetic disease that affects the entire body, but primarily the lungs and digestive system," reports Victoria Littlefair-Molin, fundraising partner for the Cystic Fibrosis Foundation's Cincinnati chapter.

5 "There are 30,000 people living with CF in the USA.

"The body creates a thick and sticky mucus that traps bacteria, primarily in the lungs, which can cause infections, lung deterioration and, eventually, lung failure. The mucus also prevents the body from digesting important nutrients, so people living with CF must take enzymes to maintain a healthy weight and nutrients. There are many mutations, so not all symptoms are the same."

10 She adds, "There is no cure for CF. However, the Cystic Fibrosis Foundation is leading the way in revolutionary drug development and treatment for people living with CF. The money raised goes into new drug development to help the underlying causes for the disease. The foundation has already successfully created two drugs that have helped fight the underlying causes, but we are still far away from finding a cure."

Great Strides walks across the country aid in fundraising efforts. Valerie Ziegler's son, Jet, 2, has cystic  
15 fibrosis. She, along with husband Adam and daughter Rowan, 6, and other family members and friends will be participating in the Batesville walk with the team Jet's Flight.

"We knew when I was pregnant with Rowan that we (she and Adam) were carriers. If both parents are CF carriers, there is a one in four chance that your child will have CF," says the Aurora resident. Rowan does not have it, but she may be a carrier. "When we had Jet, it came back on the newborn screen that he had it."

20 She reveals, "There are over 1,300 different mutations. Jet has the most common one, the double delta f508 .... He has to eat enzymes every day to help absorb fat." The toddler<sup>2</sup> has a breathing treatment once a day to thin the mucus that builds up. He also wears a vest twice a day, which shakes and helps break up the mucus. "He was such a big baby that he started using the vest a little earlier than most kids, at 10 months old ....

Since February, Jet has been participating in a study, along with three other kids aged 2-5, at Cincinnati  
25 Children's Hospital Medical Center (...). "We have seen tremendous results. He has not been coughing as much and has only been on antibiotics once" since then, Valerie reports. Before that, he was on antibiotics much more often.

By Diane Raver, April 26, 2017, The Herald-Tribune <http://www.batesvilleheraldtribune.com>

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1. A big step

2. The baby

