Antonio Alberto Rodriguez Sousa, J Pharmacogenomics Pharmacoproteom 2018, Volume 9
DOI: 10.4172/2153-0645-C1-022

Evolution of diagnosis and treatments for cystic fibrosis of pulmonary involvement: A transition from broad spectrum drugs to target drugs: A critical review

Antonio Alberto Rodriguez Sousa
Complutense University of Madrid, Spain

Cystic fibrosis is the genetic disease with the highest incidence in the Caucasian population. Although it has always been a pediatric disease, this disorder has a higher incidence in adults due to the increase in life expectancy of patients. Thanks to the design of target drugs that treats specific mutations of the cystic fibrosis trans-membrane conductance regulator (CFTR) gene. On the other hand, it is noteworthy to highlight the progress that has been made in terms of diagnostic techniques of this disease, being able to apply classical techniques such as the evaluation of electrolytes in sweat or the valuation of the transepithelial nasal potential difference or molecular techniques such as tracing mutations by high resolution melting of the DNA of the affected individuals, thus facilitating the diagnosis and being able to apply early different treatments that delay the progress of the pathology. In this way, the variability of available treatments allows to fight against the multiple clinical manifestations of this disorder, being able to apply traditional drugs such as antibiotic therapy combined with antifungals against pulmonary infections together with specific expectorant agents such as hypertonic saline and the implementation of respiratory physiotherapy or target medications such as ivacaftor, among others. Nevertheless, research directed towards the design of a curative and non-palliative treatment is necessary, such as a gene therapy that uses a virus or a plasmid as a transmission vector and that assumes the correct resumption of cellular processes altered by this disease.

Biography

Antonio Alberto Rodriguez Sousa completed his Bachelor Degree from Complutense University of Madrid. He is currently pursuing his PhD at the same university since 2015; although, he develops a large part of his work by teaching at the School of Biological Sciences. He has extensive experience in medicine, particularly on cystic fibrosis as a genetic disease. He has attended more than 10 prestigious international congresses, contributing with great academic impact and is currently a member of the Department Council of his alma mater.

antonr05@ucm.es