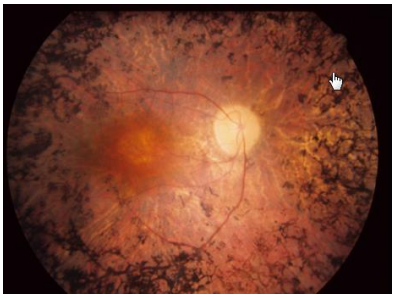
Institute of Molecular and Clinical Ophthalmology Basel

Retinitis Pigmentosa

Retinitis pigmentosa is the term for a group of clinically and genetically heterogeneous inherited retinal disorders. It affects between 1 in 3000 and 1 in 5000 people. The disease leads to the progressive death of photoreceptors and subsequent visual field loss.



Picture 1: The retina of a patient with retinitis pigmentosa is covered with multiple dark spots[1]

Picture 2: Impaired vision of a retinitis pigmentosa patient

Retinitis pigmentosa affects about 3 million people worldwide.

The disease usually starts in adolescence or early adulthood with night blindness and progressive vision loss.

Symptoms may be mild initially and worsen over many years. The death of photoreceptors starts in the periphery of the retina and slowly extends in the direction of the macula, the point of keenest vision. Characteristically, patients develop tunnel vision and also a loss of color vision. It leads to full blindness.

The disease was first described by the Dutch ophthalmologist Frans Donders in 1855. It was named after characteristic spots on the retina of patients which can easily be detected in a normal eye exam of patients with advanced disease.

Today, more than 45 different genes have been identified as potential causes of retinitis pigmentosa. The fact that so many different genes exist makes the development of a gene therapy challenging.

Researchers and clinicians at the Institute of Molecular and Clinical Ophthalmology Basel have chosen retinitis pigmentosa as a priority focus area. They are exploring optogenetic approaches to restore light sensitivity in the retina of fully blind patients.

[1] Picture sourced from: http://eyewiki.org/testwiki/index.php?title=File%3ARetinitis_Pigmentosa_fundus.jpg#filelinks