Alzheimer's will be treatable like HIV, predicts €1m science laureate Michel Goedert

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KAYLA WOLF/AP

Alzheimer's disease will be managed like HIV with several drugs that curb or prevent its symptoms, a leading dementia researcher believes.

Scientists said they were optimistic that the incurable form of dementia, which affects at least 500,000 people in the UK, would be reined in, if not defeated, by the next generation of treatments.

Yesterday the €1 million Brain prize, described as the Nobel of neuroscience, was split between four biologists whose research has pinned down the origins and vulnerabilities of the disease. While numerous attempts to turn these findings into an anti-Alzheimer's drug have ended in failure over the past decade, the winners insisted yesterday that the efforts were on the right track.

Michel Goedert, head of neurobiology at Cambridge University's Laboratory of Molecular Biology, said he thought the disease would be "whittled down" by new treatments under development. "I don't think there will be a magic bullet that will one day appear and Alzheimer's disease will just disappear," he said.

"I think it will be more like HIV, which used to be a huge problem ten or 15 years ago, and now it's still there but it has been sort of contained or whittled down, if you like, by multiple drug treatments. I think Alzheimer's disease hopefully will be like that. There will still be cases but it will disappear as this huge, major problem for society."

As Professor Goedert and his fellow laureates revealed, one of the reasons Alzheimer's had proven such a tricky adversary was that it attacked the brain on at least three fronts. First come sticky globules of so-called amyloid beta protein, the hallmarks of the disease, which wear down brain cells from the outside.

This is followed by tangles of tau protein that build up inside the cells.

The condition also appears to scramble the brain's immune system by whipping up a storm of damaging "neuro-inflammation".

Giving patients a fighting chance is likely to mean coming up with a separate treatment for each of the disorder's three faces.

Bart De Strooper, director of the UK Dementia Research Institute at University College London and another of this year's Brain prize recipients, said scientists had been "naive" to think that Alzheimer's could be stopped in its tracks with a single treatment.

"Probably we see Alzheimer's disease coming from different sides and that could give you different mixtures of treatments," he said. "We will see that type of personal medicine where you understand very well the progress of the disease and then you have the tools to interfere at different stages in the most appropriate way."

The 2018 prize was shared with John Hardy, also of University College London, and Christian Haass, of Ludwig-Maximilians University in Munich, Germany.

It is the third year running that the award has been dominated by British-based neuroscientists, who have made up all but one of the past ten recipients.

Professor Hardy, who discovered amyloid beta's role as the most important harbinger of Alzheimer's, said he still believed that it held the key to unlocking the disease. He has pinned his hopes on the idea that patients can be shielded from the worst effects if they receive amyloid-busting drugs many years before symptoms become apparent.

Professor Hardy said that many promising clinical trials had collapsed because by the time people were diagnosed with Alzheimer's and given experimental drugs it was too late. "The analogy I would use is it's like having a heart attack and popping a statin. The right drug, but the wrong time."