



SCOTTISH RITE CHARITABLE FOUNDATION
VALLEY LIAISON COMMITTEE



Over the past few years, we have been sending out information messages to our Valley memberships to keep them informed of some of the work being done by researchers who are, in part, funded by your Scottish Rite Charitable Foundation. This message is going to expand on that somewhat by venturing beyond our research recipients.

In June 2016, you were presented with the research being completed by Dr. David Vocadlo as part of his research program at the University of British Columbia. He was investigating the effects of a particular type of sugar that attached itself to a certain protein known as *tau* and the role this might play in Alzheimer's Disease (AD). In very basic terms, it is known that AD, and a number of related conditions involving the tau protein, are characterized, in part, by the development of clumps, called "neurofibrillary tangles", composed of an abnormal form of the tau protein. In AD patients, as a result of the tau becoming heavily decorated with phosphate groups, the tau becomes clumped together, disrupting its normal function. By identifying what causes the phosphate grouping leading to clumping, or the malfunctions in the mechanisms regulating tau, it is hoped that the clumping can be controlled, potentially leading to advances in treating and possibly preventing AD.

Recently, researchers from the University of South Australia and the Third Military University in China have discovered a signal pathway within cells while studying diseases caused by misfolding the tau protein inside the nerve cells that leads to cell damage and eventually death. They reported that it was previously unknown how the gene mutation was responsible for causing cell damage, more generally referred to as neurodegeneration and dementia. They were investigating how these tauopathies (diseases) have some common pathology, including a particular tau protein that plays a critical role in nerve cell function.

In conducting this research, they not only found a signalling pathway but, and perhaps on a more positive note, invented a potential drug for treatment of such diseases. Approval has been granted for more extensive clinical trials of the new drug perhaps resulting in treatment for Alzheimer's and other tauopathies.

While it is exciting to learn that progress is being made toward "Solving the Puzzles of the Mind", especially with respect to these particular neurodegenerations, this also points out another significant factor. First off, it is fair to assume that those who the SRCF supports are clearly not working in a vacuum but rather their research is shared with others around the globe and secondly, those funds provided to researchers here in Canada by SRCF are leading to positive end results.

For more information on the research being carried out, check out the Foundation website at www.srcf.ca and remember to use the blue envelope to make your donation!

Ron Findlater 33°
Valley Liaison Chairman