**Transcript**

***Dr Christine Hawkins – Cell death regulation in cancer and viral diseases***

My research is all about the molecular basis by which cells control whether they survive or they die and so a lot of people know that our bodies are made of cells and they sort of think that it’s in our interests to keep all those cells alive. But, actually what happens during development and also during healthy adult life is that a lot of cells die every second of every day and if that process is perturbed and cells inappropriately survive or inappropriately die then diseases can result. So inappropriate cell death can contribute to neurodegenerative diseases for example, inappropriate cell survival can contribute to formation of cancers and infectious diseases as well.

So I guess with the two different parts of our work, some of our work focuses on the cancer aspect and some of it focuses on the viral diseases and infectious diseases. With the cancer work we’re really trying to figure out whether it’s possible to treat cancers with drugs that directly target cell death pathway components and a lot of those drugs have been produced in the last few years as the field has matured and a lot more is understood about the pathways by which cell death is controlled. So some of our work is trying to figure out whether those drugs are going to be useful or not and also whether they are going to avoid some of the side effects that are common with current cancer therapies. Chemotherapy and radiotherapy are quite effective for some cancers but often the patients who get treated with those treatments suffer really horrible side effects and sometimes they can be fatal. So it would be good to find drugs that can avoid some of those and there’s some promise that some of these direct cell death inducing drugs might offer that promise as well. So we’re investigating that.

Well, cancer is obviously a really big health burden both in terms of death and disease in Australia and other countries, and although there have been a lot of improvements for particular types of cancers in the treatment of those there are some cancers that currently are still very difficult to treat and so by finding better treatments for those cancers then obviously that’ll be fantastic for the patients that get diagnosed with them. Also as I mentioned, the chemotherapy and radiotherapy which do work quite well for other cancer types have these side effects associated with them and so we’re hoping that by being able to find treatments that bypass some of those side effects that still manage to kill the tumour cells but don’t subject the patients to the horrible side effects and that will be a major advantage for those people who even, even those who have cancers that are currently curable it will be a more pleasant treatment for them.