Molecular biologist and cancer researcher Dr Vicki Whitehall from the QIMR Berghofer Medical Research Institute in Australia provides an insight into her research on the different varieties of polyps found in the human bowel and their significance in oncogenesis. Her team is conducting novel studies into the genetic and molecular characteristics of different forms of colorectal cancer.

**THE PROBLEM WITH POLYPS**

Q. What can other sectors learn from medicine when it comes to encouraging equality in the workforce? Looking forward, what progress needs to be made to promote the involvement of women in the medical science disciplines in which they are still underrepresented?

Professor Monica Lakhanpaul (University College London, UK):

Medicine has been tackling gender issues for many years. Universities have reviewed entry requirements and university application assessments to try and make sure men and women are equally able to engage with them, and have also proactively reached out to schools to encourage women to apply, using role models to allay some of the fears young women typically raised when applying to medicine. The profession itself has also increased the number of flexible working posts available so that women can juggle the difficult task of being a mother and a doctor. There are, however, still many disciplines where women are underrepresented. It appears that where women have managed to enter the discipline and have been successful, more women have followed – which in itself means more women are attracted to the discipline. While we have done well in achieving our current position, we must recognise that there is not an even distribution of women across all disciplines and more needs to be done.

**FIXING THE MEMORY MODEL**

Although the hippocampus has been intensely investigated for over 70 years, one region has remained largely understudied. In an interview with International Innovation, Dr Rebecca Piskorowski from Université Paris Descartes, France, explains her focus on the cornu ammonis 2 and its role in memory formation, and the aim to produce a new and more encompassing model of hippocampal function using the latest optogenetics and biophysical tools.
AN AGE OF OPPORTUNITY

Professor Diana Kuh and Dr Rachel Cooper, participants in the UK’s longest-running birth cohort study, the Medical Research Council National Survey of Health and Development, discuss the need for rich life course data on health and ageing. From a sample of 5,000 British men and women since their birth in 1946, the emerging data reveals the social, psychological and biomedical factors that impact wellbeing and quality of life.

FEED YOUR HEAD

Neurologist Dr Sophie Layé and nutritionist Professor Véronique Pallet from the Laboratory of Nutrition and Integrative Neurobiology in France share the inspiration that led them to collaborate on research dedicated to better understanding neurological disorders and their relationship with nutrition, with a focus on cognitive and emotional disorders such as depression.

MECHANICAL METHODS

In the Department of Biomedical Engineering at the University of Akron, USA, Dr Marnie Saunders investigates cellular interactions and mechanotransduction, taking her cue from the natural world to advance modern technologies. The lab is developing models that accurately mimic the in vivo bone environment for the effective study of bone multicellular interactions.

A SPECIFIC SOLUTION

As cardiovascular disease is on the rise, the need for new treatment options is greater than ever before. Dr Julie Goodwin from Yale University, USA, is exploring the correlation between glucocorticoid receptors, which are expressed by most cells in the human body, and hypertension, in search of new targets for potential avenues of treatment.

ASSOCIATION FOR WOMEN IN SCIENCE

Janet Bandows Koster, Executive Director and CEO of AWIS champions the interests of women in science, technology and engineering across all disciplines and employment sectors, and explains the importance of working towards a positive system transformation to ensure that women in these fields can achieve their full potential.

EUROPEAN PLATFORM OF WOMEN SCIENTISTS

In pursuit of gender equality in science and innovation, Drs Brigitte Muehlenbruch and Dora Groo have been influential ambassadors for women working within academia and industry. EPWS endeavours to promote networking among female scientists, enhance the understanding and inclusion of gender issues in science and research policy and ensure that women’s interests are taken into consideration when setting the political agenda.