Can you begin by providing a brief overview of your investigations into the immune system?

My early work was important in shifting medical focus onto the important impact of each individual’s early environment on the developing immune system, particularly maternal health and the environment in pregnancy. We showed that children who develop allergies in the first years of life have differences in their immune function at birth. Before that, most of the focus was on postnatal risk factors.

As time has gone on, my work has become more holistic. I credit my interest in the immune system as what encouraged me to start looking at everything in a more integrated way. The immune system has a critical influence on the development and function of virtually every tissue and organ in the body.

Becoming an immunologist has provided me with an ideal platform to engage people across many fields of medicine; in fact, sharing solutions to the modern pandemic of chronic inflammatory diseases is a core theme of my latest book *Origins: Early Life Solutions to the Modern Health Crisis*.

Can you begin by providing a brief overview of your investigations into the immune system?

In what ways do you use your career to uphold your belief that an integrated, collaborative approach is best?

A large focus of my career has been on disease prevention. This encourages long-range thinking and advocates strategies that might not have immediate impact, but can have long-term benefits for individuals and the community into the next generations. For example, improving our environment in early life can benefit all aspects of our long-term physical and mental health. Moreover, it will improve health and longevity of our children. This means we need to apply the same long-range vision to the adverse impact of rapid industrial growth on human health and the environment. While economic expansion is in apparent conflict with environmental conservation, more responsible management of natural resources will not only allow more sustained development, it will mean better health for humans and their environment in the future.

It’s all interconnected. That’s the theme of my research and my broader philosophy on life. The health of humans, the environment, our social fabric and economic health are interdependent. I believe there needs to be stronger focus on finding common ground with more mutually beneficial cross-sectoral approaches that transcend competing interests. Messages of unity and collaboration must come from science and medicine as strongly as other sectors.

How can this approach help create solutions to humanity’s many challenges?

Most of our challenges are rooted in greed, self-interest and the loss of communal identity – all at the expense of any meaningful collective vision. This is reflected in our global health crisis, environmental degradation, economic and social instability, and growing inequity of resource allocation. Our current economic system supports and perpetuates these challenges, and policies to overcome social inequity and injustice are not able to cut through this.

Our collective activities are threatening the ‘health’ of our environment, society and physical and mental health. We have reached a point where it is irresponsible not to act. We need ‘self-help’ on a global scale!

What impact would you like to see your work have on society?

Though my work is technically about health, it is really about the future. I want to bring greater awareness of the critical importance of improving conditions in early life for long-term health and longevity.

On a broader level, I want to bring people together, and empower and inspire others to act, and find opportunity and common ground – all to facilitate positive change. It is about building a collaborative mindset so we can improve the health of our own future and the next generation’s in every regard. If my role is only to remind people of what they can do – that every choice they make can make a difference – I will be happy.
A paediatrician at **Perth Children’s Hospital** and researcher at the **Telethon Kids Institute** and the **University of Western Australia** is involved in a wide variety of activities promoting an idea of holism, in which inclusion is upheld, diversity is celebrated and the notion of all working together to solve the global challenges we face is encouraged.

**IN PHILOSOPHY, THE** word ‘holistic’ pertains to a belief in the fundamental interconnectedness of everything, where any single element of a given ‘thing’ can be understood only through reference to the whole of it. The belief in the benefits of adopting a holistic approach in a range of fields, including education, ecology and medicine, has become increasingly popular in recent times.

Indeed, where in the past we might have been inclined to view health as something separate, an entity that needed addressing only when it declined – as in the case of visiting the doctors for advice when we fall ill – it is now often seen as something that requires continuous consideration, with sentiments such as ‘a healthy mind resides in a healthy body’ becoming part of popular discourse.

The adoption of a holistic approach to life is something that Professor Susan Prescott keenly advocates. In addition to her role as paediatric immunologist and allergist at Perth Children’s Hospital and research leader at Telethon Kids Institute, she is President of the Developmental Origins of Health and Disease (DOHaD) Society of Australia and New Zealand, and Chair of the in-FLAME network. This multitude of responsibilities enables her to uphold the tenets she encourages, both through using collaborative and integrated approaches to her research and in communicating the findings from it.

**EMBRACING THE GLOBAL COMMUNITY**

Prescott’s endeavours – both in the clinic and out of it – focus on multiple systems, are multidisciplinary and celebrate the idea of having lifelong impact. As such, she maintains that science and the findings from it should not be separated from any other field, something her studies on early immune development has reaffirmed: “From a biological standpoint, the environment begins to affect our future from our conception and, even before that, with the health of our parents,” she says. “Adverse conditions during critical stages of our development can have a profound effect.

Is this realistic? Idealistic? Perhaps both, but if we don’t aim for this we cannot hope to achieve it.

**Do you have any final comments?**

Social evolution can occur by slow and gradual increments that are almost invisible until change has occurred. That is not what is needed here.

In the face of so many vast challenges, we need to achieve a more active, concerted, conscious and precipitous frame-shift. To make this leap, we need a strong sense of collective motivation. We have the technological capacity to improve the future if we act now.

We’ve never been more connected than we are now. This is truly a time where we can hope that new knowledge and a greater awareness might bring new vision and a frame-shift in attitudes and thinking. That is what we need.
A HOLISTIC APPROACH TO LIFE

OBJECTIVES

• To take a holistic approach to life
• To underscore that systemic changes are needed for the future health of society. This requires inclusive and big picture thinking, and embraces diversity as part of the solutions to global challenges.

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The Calling: http://bit.ly/11tpNMh
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PROFESSOR SUSAN PRESCOTT is a leading researcher in the area of allergy and early immune development. She is Professor of Paediatrics in the School of Paediatrics and Child Health at UWA; Paediatric Allergist and Immunologist at the Perth Children’s Hospital; and Associate Director of Research at the Telethon Kids Institute. Her expertise focuses on early life risk factors for inflammation as a preventive target.

In recognition of Prescott’s embodying of these beliefs, the University of Western Australia where she has worked since 1997 – now as Professor – has made a strong commitment to the Athena SWAN Charter as part of the Science in Australia Gender Equity (SAGE) pilot, which is dedicated to improving gender equity in Australian STEM organisations. “I believe that the style of approach is necessary to overcome restrictive and often dictatorial traditions, in addition to individual issues of gender and representation,” explains Prescott. “It is about ‘de-normalising’ territorial, competitive and adversarial behaviour. All of us, men and women alike, need to be advocates for positive philosophical change.”

MORE THAN THE SUM OF OUR PARTS

It is extremely difficult to not be influenced and affected by Prescott’s palpable passion for a holistic approach to life – she was once told she was too passionate to work in science – a sentiment that exemplifies precisely what she is rallying against. For Prescott, passion is what drives humanity’s quest for discovery and its desire for change. As she puts it: “A sense of challenge is what motivates us to seek new paradigms and solutions for present and future generations.”

In addition to acknowledging the vital role prevention plays in long-term health from the first moments of life, Prescott is keen to encourage the idea that the majority of global challenges the human race faces come from the same root cause – namely, the way we live. Though, this should be understood to include societal constructs and values, as much as our lifestyle. “There is no doubt that we need a more collaborative and holistic vision to restore a sense of community,” enthuses Prescott. “By continuing to look at things separately, we reduce our perspective and capacity.”

OUT WITH THE OLD

Prescott firmly believes that empowering both men and women to dismantle some of the traditional ‘paternalistic’ approaches to problem solving is critically important in realising an integrated, collaborative approach. “How can a new approach be undertaken using an old mode of thought?” she asks. “By their very definition, the global challenges we face affect us all and should therefore involve us all.” This necessitates widespread engagement, not just among scientists but across local, national and international communities, where politicians and scientists of all creeds and colours – and both sexes – join forces to provide solutions for present and future generations.

IMPROVING HEALTH OUTCOMES FOR THE NEXT GENERATION

In addition to her work as an immunologist and allergist, Prescott is an Associate Director of the Telethon Kids Institute. As one of the largest and most successful medical research institutes in Australia, this independent and not-for-profit organisation takes a multidisciplinary approach to major health issues. For example, its ORIGINS project is a birth cohort study – run in collaboration with the Joondalup Health Campus – that has the aim of making meaningful changes in policy and practice to reduce the burden of common health conditions through early interventions.

It is composed of a multigenerational study of 10,000 children and their parents and, unlike many birth cohort studies, it will take a proactive approach, defining and targeting risk factors, and testing interventions aimed at the risk of disease. “Interventions will be focused on improving modifiable aspects of the early life environment, such as nutrition, physical activity, smoking and pollutants,” explains Prescott. “We won’t need to wait for decades to see the results and the project will assess all aspects of health in relation to the early environment. It will, however, have a particular interest in early onset noncommunicable diseases, such as allergic disease, childhood obesity, neurodevelopment and child mental health issues.”

Through early screening and identification of the children at risk, ORIGINS will provide timely community benefits. The team’s hope is that this legacy project will continue to inform and improve health for decades to come.

To accompany the project, Prescott has written a book. Called Origins: Early Life Solutions to the Modern Health Crisis, it explains how focusing on early life in health promotion can assist a healthy start to life across the world. You can find out more about it along with her other books, The Allergy Epidemic and The Calling here: http://bit.ly/1MUBqXj