

Under the Microscope with Wendy Ungar

A recent AllerGen-supported study has revealed that children from low income families have less adequate asthma control than children from higher socioeconomic backgrounds.



Dr. Wendy Ungar, Senior Scientist, The Hospital for Sick Children in Toronto and her Programme C research team have published a series of papers that describe how inadequate asthma control is associated with lower income, more primary care visits and exposure to asthma triggers.

Ungar's study *Financial barriers to medication use in children with asthma: Effect on health outcomes* involved cross-sectional data analysis of a clinical study of 879 asthmatic children between the ages of 1 and 18 residing in the Greater Toronto Area.

"We found that only 11% of children met the requirements for acceptable control as defined by the *Canadian Pediatric Asthma Consensus Guidelines*," said Ungar. "Children from low-income families tend to have poorer controlled asthma which has been associated with higher total healthcare costs."

Ungar's study suggests that children from low income families may have less access to needed medications and spacers or be less likely to adhere to prescribed medication which may contribute to the lower levels of asthma control. "Canadian children definitely don't control their asthma as well as they should and this may be associated

with a difference in socioeconomic or psychosocial factors which must be addressed in vulnerable populations," said Ungar.

Ungar will soon be releasing a report which shows that children whose mothers are homemakers have a better home environment i.e., are exposed to fewer sources of allergens such as stuffed animals, carpeting and pets.

"When the mother is at home, there appears to be fewer environmental triggers for children with asthma," Ungar said. "The exposure to tobacco smoke, which is another common trigger, was found to be more common in lower socioeconomic homes."

Ungar added, "We need to teach parents about triggers and show them how these triggers can be eliminated i.e., by adhering to asthma action plans and removing exposure to sources of dust mites, washing linens, removing stuffed toys and not putting the child's room in the basement.

"To make these issues known and to discuss how we might improve drug benefits for children with asthma, we held a workshop supported by AllerGen, to bring together researchers, physicians, drug plan managers, consumer advocates, asthma nurses, educators and parents."

Ungar said it was the first time stakeholders with a common interest in pediatric asthma, who wouldn't usually have the opportunity to talk to each other, could come together to discuss these topics and

express different points of view.

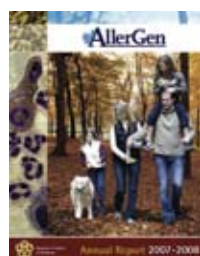
"I was fortunate enough," she said, "to have had an AllerGen-supported trainee, Shannon Cope, who immersed herself in this research and had numerous publications from her master's degree; this was a very positive experience for her.

"AllerGen has been instrumental in bringing together researchers with common interests. For example, Michael Paterson, Scientist, Institute for Clinical Evaluative Sciences has been a co-investigator on a lot of the work that I've done, as has AllerGen's Anita Kozyrskyj, Associate Professor, Department of Pediatrics, University of Alberta," Ungar said.

Coming from a health economics background, Ungar has delved into the financial impact of asthma on society. She recently edited a book which will be published shortly by Oxford University Press called *Economic Evaluation in Child Health*. This will be the first English language text book with a focus on pediatric economic evaluation and includes a chapter on asthma.

With more projects in the pipeline, Ungar hopes to continue to understand the differences in asthma control resulting from income levels and/or socioeconomic status so that she can develop recommendations that influence policy makers, physicians and drug plan managers as well as educate asthma sufferers and their family members, leading to better health and healthcare for Canadians.

Annual Report 2007 - 2008



AllerGen is pleased to announce that its 2007-2008 Annual Report is now available online at www.allergen-nce.ca.

AllerGen's fourth annual report highlights Network accomplishments over the past year across all areas of activity – research, capacity building, networking, partnership development, and knowledge and technology exchange and exploitation.

AllerGen Agenda

Winter 2009

www.allergen-nce.ca

Request for Proposals (RFP) 2009-2012

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AllerGen is supported by the Government of Canada through the Networks of Centres of Excellence Programme

In February 2009, AllerGen invited proposals for multidisciplinary, networked and partnered programmes of research that it could support to 2012 towards the achievement of its goal of reducing the impact of allergic and related immune diseases nationally and globally.

AllerGen's Fourth Annual Conference, *Innovation from Cell to Society*⁴ in Ottawa February 15-17, 2009 will provide researchers with an opportunity to discuss the RFP process and develop networked, programmatic research proposals during facilitated workshops. These workshops will facilitate networking, promote the establishment of multidisciplinary research teams, and help investigators to identify future research opportunities and priorities in collaboration with partner organizations for the period 2009-2012.

Letters of Intent (LOIs), due on March 15, 2009, will be reviewed by AllerGen's Research Management Committee (RMC) and members of the AllerGen's International Scientific Excellence Advisory Committee (ISEAC) in early April 2009 for alignment, priority and fit with the Network's mandate and strategic goals. Following this review, a limited number of applicants will receive invitations to submit Full Proposals. Full Proposals will be due May 31, 2009, and will be reviewed by the arm's-length ISEAC in June 2009. Applicants will receive notification of the outcome of the full reviews by mid-July 2009 and successful teams will begin to receive funding installments August 1, 2009.

Proposals that cut across research programmes are encouraged. A commitment to multidisciplinary research is critical.

AllerGen's overarching research objectives are to:

1. Understand the causes of the allergy epidemic;
2. Facilitate the development of new bio-molecular research-based platforms, tools and processes;
3. Facilitate the development of new products and services for allergic disease and asthma management;
4. Advance professional and lay knowledge about allergic diseases; and
5. Train highly qualified personnel nationally in allergic disease research, knowledge translation and innovation.

Proposals for new, smaller scale, strategic research and knowledge translation and commercialization initiatives arising from Network research investments are welcome at any time throughout the year. Funding for these three types of initiatives is available through separate processes outlined at AllerGen's website at www.allergen-nce.ca/Research/In-Year_Research_Funding_Programme.html.

Interested parties are encouraged to view the AllerGen website at www.allergen-nce.ca/Research/RFP2009-2012.html and check for alignment of proposed research with currently funded projects and programmatic areas.

AllerGen's next conference

Feb 7 - 10, 2010

Fairmont Le Château Frontenac,
Quebec City

Innovation from cell to society⁵

Mind-Body Interactions and Allergic Disease Team Identifies Strategic Research Opportunities 2009-2012

On December 10-11, 2008, AllerGen Programme B: Diagnostics and Therapeutics Research Leaders, Dr. Dean Befus and Dr. Anita Kozyrskyj, both from the University of Alberta, hosted a strategic planning workshop in Winnipeg, Manitoba for Network investigators interested in AllerGen's Mind-Body Interactions and AllerGen Disease research.

This workshop provided investigators working on projects aligned with AllerGen's Mind-Body Interactions and Allergic Disease research thrust an opportunity to report on their research progress and identify and prioritize future directions for high impact research investments aligned with potential for social and economic impact.

The workshop was attended by 24 participants, including researchers, research trainees, research administrators, policy makers and the Scientific Director of AllerGen NCE Inc.

Numerous strategic opportunities were identified by workshop participants in mind-body research related to health and allergic diseases. These opportunities fell into four categories of research – biomarkers, epigenetic analysis, interventional studies, and the development of a nationally-networked, multidisciplinary programme of research integrating societal and biologic interventions and stress studies leading to policy and therapeutic outcomes for allergic and related immune disease.

NCE research programs distinguish themselves from those supported by the national research granting councils by virtue of their interdependent, networked research teams working across disciplines and institutions, and in partnership with potential end-users of the research results. Ideally, NCE researchers work in virtual teams on complex problems that would not and could not be addressed by individual researchers working alone. These research teams are funded to

be transformational agents of innovation that develop, protect, translate and apply knowledge for economic and/or social benefit to Canada.

Workshop participants recommended that AllerGen Mind-Body Interactions and Allergic Disease researchers develop research proposals for 2009-2012, of which the majority have short-term deliverables and impacts on user sectors over the next three years. An additional recommendation was that there should be extensive planning to develop a research programme that will take AllerGen's Mind-Body research to the next level.

AllerGen Mind-Body researchers will reconvene at the AllerGen annual conference to develop high impact, interventional research foci to 2012, as well as to initiate planning to develop a transformational, multidisciplinary and nationally-networked research program to 2019.

Policy, Ethics, Law and Society (PELS) Advisory Committee

The AllerGen Policy, Ethics, Law and Society (PELS) Advisory Committee held its inaugural meeting on January 12, 2009 in Toronto.

The need for a PELS Committee was identified by the Board of Directors and Research Management Committee (RMC) at the December 2007 strategic planning retreat. This Committee will provide advice and support for connecting Network researcher and decision-makers across levels and sectors including government in Canada.

This Committee is chaired by two members of AllerGen's RMC, Dr. Susan Elliott, Professor, School of Geography and Earth Sciences, McMaster University and Timothy Caulfield, Research Director, Health Law Institute, University of Alberta, Faculty of Law.

PELS Advisory Committee Members include:

- Lisa Cicutto, Associate Professor, Faculty of Medicine, Division of Respiratory, University of Toronto
- Alina Gildiner, Assistant Professor, Department of Political Science, McMaster University

- Samuel Godefroy, Director Health Canada, Bureau of Chemical Safety
- Christine Hampson, President and CEO, The Asthma Society of Canada
- Anthony Levinson, Assistant Professor, Department of Psychiatry & Behavioral Neurosciences, McMaster University
- Diane Loughheed, Associate Professor, Department of Medicine, Queen's University
- Mark Raizenne, Director General, Public Health Agency of Canada
- Elinor Wilson, President and CEO, Assisted Human Reproduction Canada

The PELS Committee is a standing advisory committee reporting to AllerGen's RMC and exists to advise and support the RMC in its:

- Facilitation of the translation of AllerGen research that has clinical, policy, ethical, legal and/or social implications;
- Identification of emerging PELS issues that warrant a policy response from the Canadian allergic and immune disease research community; and

- Establishment of enduring links between AllerGen researchers and Canadian clinicians and policymakers.

To achieve this mandate, the PELS Committee will promote the use a variety of tools, including workshops, policy papers, consensus meetings and the commissioning of research. With promotion of the public good as its guiding principle, the PELS Committee will seek to ensure that its activities are informed by the best available evidence.

The PELS Committee has a number of new initiatives planned including a workshop that aims to expedite ethics reviews of nationally, networked multi-site research programmes, and the development of two Knowledge Translation (KT) planning tools tailored for AllerGen researchers – one for Biomedical Researchers and the other for Clinical, Health Services and Population/Public Health Researchers. These tools will assist Network Investigators in developing KT plans from the outset of their research projects.

Two minds work better than one

AllerGen's social scientists and epidemiologists are collaborating to determine how prevalent food allergies are among Canadians and how effective allergy warnings are on food labels.



Dr. Ann Clarke, a practicing allergist at McGill University Health Centre and Professor at McGill University in Montreal, and Dr. Susan Elliott, Professor, School of Geography and Earth Sciences, McMaster University in Hamilton are examining Canadian survey results to better understand food allergies and community response.

The Programme C: Public Health, Ethics, Policy and Society study, *Surveying Canadians to Assess the Prevalence of Common Food Allergies and Attitudes towards Food Labelling and Risk* (SCAAALAR), is surveying 9,000 individuals across the country to determine the percentage of Canadians affected by peanut, tree nut, fish, shellfish and sesame allergies and examine the effectiveness of labelling policies by the food industry.

Food allergies are common in Canada. Results from an earlier study by Clarke show that about 1.5 per cent of elementary school-aged children in Montreal are allergic to peanuts.

Clarke is focusing on the prevalence and food labelling section of the study and Elliott is examining risk perception of allergy, with the ultimate aim of reducing the social and economic impact of allergies globally.

"We come from very different areas of expertise," said Clarke, "so we each bring a different slant to the study which enables us to look at a whole realm of questions."

Clarke says that there is a need to educate consumers and their families on the importance of reading labels.

"Education must start from the beginning," she said, "if you have symptoms you should seek the appropriate medical advice and once diagnosed, it is important to educate the individual, family members and teachers about avoiding certain foods, recognizing appropriate symptoms and treatments."

Drs. Clarke and Elliott both have AllerGen funded trainees assisting them with this research.

Clarke added, "Thanks to AllerGen, these students get the opportunity to see what is really involved in research, such as writing grants, securing funds and collecting data."

"AllerGen has provided the seed funding for this project and this has enabled us to leverage partnership funding from other organizations," explained Clarke.

The SCAAALAR project is now largely funded by Health Canada, and since July 2008 private donors have jumped on board including McMaster University's Institute of Environment and Health, McGill University Health Centre, Montreal Children's Hospital, Anaphylaxis Canada, Association québécoise des allergies alimentaires, and the Allergy/Asthma Information Association.

"Food allergy is a major priority and AllerGen appreciates the need for this collaboration among researchers with different areas of expertise," said Clarke.

It is hoped that results (which should be available in late 2009) will help Canadian policy makers ensure that sufficient resources are allocated to help companies develop clear and safe food product labelling practices.

AllerGen's Strategic Focus 2009-2012

With NCE funding secured to 2012, AllerGen enters into its next three years of NCE support. Between 2009 and 2012 AllerGen seeks to invest in nationally networked research teams demonstrating excellence, productivity and offering unique capacity building opportunities. This next phase of research funding will encourage research that builds on and extends existing AllerGen and partner investments with potential to accelerate social and economic impact through application of research results to real world problems and challenges faced by partner organizations, sectors of the Canadian economy and/or society.

AllerGen research priorities include three research foci of strategic importance to the generation of new knowledge with potential for social and economic impact in the areas of allergic and related immune disease.

1. Programme A – Gene-Environment Interactions

Strategic Focus: Genetics, environmental exposures, and gene-environment interactions in allergy and asthma

2. Programme B – Diagnostics and Therapeutics

Strategic Focus: Biomarkers, immune monitoring and drug development/discovery

3. Programme C – Public Health, Ethics, Policy and Society

Strategic Focus: Allergic disease management and surveillance

In addition, four cross-programmatic, multidisciplinary research thrusts fostered by AllerGen since 2005 are continuing research investment priorities for 2009-2012.

Established Cross-programmatic Teams

4. The Canadian Healthy Infant Longitudinal Development (CHILD) Study

5. Food Allergy and Anaphylaxis

Emerging Cross-programmatic Teams

6. Mind-Body Interactions and Allergic Disease

7. Occupational and Work-related Allergy and Asthma

Funding research projects leading to social and economic benefits for Canadians is a priority of both the NCE program and AllerGen. Knowledge translation is the all-important link between discovery and development and is the bridge between the laboratory and the social and economic benefits that accrue to Canadians from public investment in research