

**13th NIH SCIENTIFIC MEETING
INCORPORATING THE
4th NATIONAL CONFERENCE FOR CLINICAL RESEARCH**

**KEYNOTE ADDRESS
“ADVANCING MEDICAL RESEARCH- THE NEXT STAGE”**

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By

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Distinguished speakers and participants to the 13th National Institutes of Health Scientific Meeting incorporating the 4th National Conference for Clinical Research, Assalamualaikum Warahmatullahi Wabarakatuh, Good Morning and Salam 1Malaysia.

Introduction

Twenty four centuries ago, it was already clear to at least one person that scientific enquiry could improve human health. This person was Hippocrates. Various medical research breakthroughs seen over the years, but more so reported within the last century, would have made him proud. A classical example was the discovery of the structured *DNA* in 1953 which has brought better understanding of the intrinsic biology pathways of human disease. The present era offers more promise for medical research progress than ever before. The identification of the small molecule *Imatinib* for example, has resulted in the changing of therapy for patients with newly diagnosed chronic myeloid leukemia. This new treatment has reportedly brought about complete hematologic

remissions in 95% of patients, which previously would have been deemed impossible.

The ongoing revolution in biomedical sciences is of an unprecedented magnitude; accelerating dramatically, and, promises almost unlimited opportunity for medical research. The future is very promising. Targeted therapies such as the one described, have and will continue to have a major but favorable impact on the management of a variety of malignant diseases. It is the nature of this revolution and the promise of its impact on health that will drive medical research to new frontiers.

Staying Competitive in Medical and Health Research

Ladies and Gentlemen

The importance of medical research and its potentials in solving health issues are unquestionable. We are now living in challenging and exciting times. Researchers in the pioneering fields of genomic studies, biotechnology and nanotechnology are all riled up with new possibilities of improving quality of healthcare through innovation and new discoveries. It is with this belief that the Ministry of Health is on a relentless journey not to be left out, and, strives to be amongst the front runners in the field of medical research. Nevertheless, as we gear towards the next stage of research, it is important to relate all our endeavors to the government's *4 key philosophies* and *4 basic values*. As researchers, all of the 4 basic values must be given greater emphasis in all our research activities. These are: *innovation and creativity, fast in making decision and prompt in action, integrity, and value for money*. Only when we practice and inculcate these values can we truly aspire to reach greater heights, and, at the same time gain the public's trust and confidence for our research.

But being the best on the local front may not amount to much if the international community does not know and acknowledge your existence. We must deliver and not merely put labels on our institutions to claim we are good. It is a competitive world out there, and we have to strive for excellence in what we do. We have to back up claims with evidence. Internationally, based on the *IMD World Competitiveness 2009 Yearbook*, we are positioned among the top 40 countries in the world in gross expenditure for research and development (GERD), or 0.64% of the Gross Domestic Product (GDP). In Asia, we are ranked among the top six countries which include Japan, China, South Korea, Taiwan and Singapore. Malaysia has done reasonably well, but certainly can do better.

Ladies and Gentlemen,

To further encourage research, the Government has allocated approximately RM90 million for the Ministry of Health under the 9th Malaysia Plan. Strategies have been formulated and implemented towards improving human capital development as well as in modernizing medical infrastructure. Complemented by the introduction of regulatory and ethical oversight towards better ensuring the safety of human volunteers, I can confidently say that at least in Asia, we are well on our way towards emerging as a choice location in the area of clinical development studies. We have also grown from strength to strength in the area of patient registries. To date we now have 36 registries. Their establishment gives us the opportunity to further extent our understanding about the natural history of diseases, evaluate access to treatment and their resulting health outcomes.

What I have described above, shows that we now have the means, resources, and support system to further advance medical research. On its part, the MOH is not about to rest on its laurels. It will continue to strengthen the foundations and groundwork for the health research system, especially the research skills of our

current “stock” of researchers and, to increasing the number of new researchers to meet new research demands.

Contributing to Malaysia’s Economy: Creating Avenues

Ladies and Gentlemen

Medical research in Malaysia today has the potential to be one of the country’s economic drivers. In this aspect, the MOH recognizes the critical role that the local pharmaceutical industry plays in attracting foreign investments from major international drug companies. With such a strong presence of these multinational companies, I would like to see Malaysia position herself as the region’s preferred clinical trial destination in the not too distant future. This is not wishful thinking. To date, industry sponsored trials have witnessed an escalation with well over 147 trials. In 2009 our MOH sites had participated in 10 internationally funded investigator initiated trials. For 2010, up till May this year, the MOH is involved in 17 (53%) of the 32 international trial being conducted in Malaysia. Still on the topic of commercialization, our oldest research institution - the *Institute for Medical Research* has patented 14 research products to date. The IMR’s R&D agenda also includes development of diagnostic tools. The latest is filing of the pattern for a chip based microarray assay for the detection, genotyping and analysis of antibiotic resistant strain of *Mycobacterium tuberculosis* (MTB). The development of this diagnostic assay is important because the chip, consisting of specifically designed oligonucleotide probes, can differentiate MTB from other mycobacteria, and also detect resistant genes using the same platform. For stem cell research, IMR has successfully generated bio-engineered an ocular surface tissue which can be used for the treatment of limbal stem cell deficiency (LSCD) – a severe corneal abnormality. Ethical approval has been obtained for the next

phase of the study which is conducting clinical trial using the bioengineered tissues.

But should we remain contented? There is a growing clinical research industry out there which has a large potential for further economic development, including attracting foreign investments. I believe it is critical for us to pursue our vision to ensure that Malaysia emerges as a strong contender in the pharmaceutical and therapeutics sector, as well as in medical and diagnostic biotechnology. I believe there is a need for us to further step up efforts towards commercialization of more research products. For those amongst us in this hall involved in medical and health research either as local investigators, industry players or regulators, I call upon you to seize this window of opportunity. On this note, I would like to see the Institute for Medical Research and the Network of Clinical Research Centres - both from the National Institutes of Health of the MOH, to play a more instrumental role in advocating this vision, and at the same time spearhead the assault towards placing Malaysia to be amongst the front runners. Thus, a conference such as the one organized this morning is apt and timely. It not only brings together local and international experts to share and exchange ideas, but it also opens up greater opportunities for networking and collaborative research.

Ladies and Gentlemen,

Although *applied research* cannot be said to be in the same league as clinical trials or research in biotechnology, it nevertheless has contributed towards the country's economy. Being in the business of *Health*, we do not need to be convinced about importance of health as a pre-requisite for national development. In the past, Malaysia has proven that investments in health and education improved the quality of its human capital; which in turn has a multiplier effect on productivity and employment. The health of the people has been a major contributor towards the country's transformation - from being mostly a

commodity producer then to a manufacturer of high tech products. Today, as we tread the path that will transform Malaysia into a high income nation status, we will no doubt be depending on a healthy workforce to see us through to reach this new destination. Given the significant contribution of medical research in preventing and combating diseases, it is important that we do not scoff and belittle applied and basic science research. Especially for the latter, this is a time of unprecedented opportunities for innovation. The revolutionary development and expansion of genomics and proteomics have opened new realms - allowing us the opportunity to develop more effective vaccines, search for molecular markers for diagnosis and disease susceptibility and invent innovative tools to intervene, before diseases strike. We need to re-visit the screening and diagnostic methodologies in our fight against old foes such as *Dengue* and new threats such as cancers.

Translating Research into Health Gains

Ladies and Gentlemen

Despite the many discoveries and breakthroughs we have today, a substantial gulf remains between the discoveries and converting them into innovations that can be applied to patients. Given the ever-growing sophistication of our scientific knowledge and the additional new discoveries that are likely in the future, many individuals, even amongst the professional groups here in this hall, I am sure, still harbour an uneasy but quite realistic suspicion about this gap of “*what we know and what we do*”. It took a long time for this enlightened approach of translating research into action to take hold. However, we still have a long way to go. The man-in-the-street and political leaders are increasingly talking about the lack of success we have in translating research findings into medical practice and personal behaviour. And it is not just recent research results that are not finding their way into action, there is plenty of evidence that “old” research outcomes that have been lost in translation as well. We are not reaping the full public health benefits of our investments in research. It is the responsibility of researchers to

translate the remarkable scientific innovations into health benefits that are recognized and accepted by those that it is meant for – our patients and the community at large. Thus, I do hope all of you will seriously ponder about what I've just said and realize how important your research responsibilities are.

Translational research focuses on interdisciplinary approaches in which basic discoveries made in research settings have the potential to progress to the patients. Progress in translational research is arguably the most dynamic area in medical research and has led to major discoveries both at the “bench” and “bedside”. There is already broad international consensus for the need to move to a translational research paradigm. Two types of translation have so far emerged: Type 1 translation – translating basic science discoveries into cutting-edge therapeutics; and Type 2 translation – translating cutting-edge therapeutics into mainstream primary care. Today there is even talk of the need for a third translational layer – that is, bringing evidence-based medical knowledge into everyday life at home, at work, and in the community at large.

Accelerating translation of research findings into action or practice will require more powerful engines of creativity and ingenuity in the communication of results. An important means of facilitating the communication is via the development of policy briefs and research highlights – technical documents published in user friendly formats for the consumption of non-researchers such as policy-makers and planners. Innovative thinking is needed to construct new approaches that are able to translate complex research findings to simpler and digestible information. Part of the strategy will be to invoke some mindset and organizational change by inculcating the culture of critical thinking.

Ensuring better translation of research into action calls for two important components:

- i) Creation of a “*new breed of research teams for the future*” –comprising of multidisciplinary experts including media specialists trained in a wider range of skill sets spanning across the traditional biomedical and behavioural sciences to include communications, and
- ii) The use of far more advanced and complex resources and methods than ever before.

Committing Policy Makers and Health Care Providers to Evidence-Based Decision Making

Ladies and Gentlemen

Sir Winston Churchill once said, “*The price of greatness is being responsible and accountable*”. Thus, the responsibility and accountability of each and every healthcare provider must always be in ensuring the safety of their patients. Likewise, the responsibility of health policy makers and administrators must be in making correct decisions on the best possible use of available but limited resources. For their judgments to be well-informed, and to reduce the risk of their being misinformed, policy makers and administrators must have access to the best available evidence and the capacity to use that evidence appropriately. However, decisions about programmes are too often made without systematically or transparently accessing and appraising relevant research evidence. Reasons for the failure to do this include inadequacies with all of the following: access to available research, capacity to use research appropriately, and management of conflicts of interest.

On this note, policy makers and clinical practitioners have two things in common – they should be informed by rigorous, transparent, and up-to- date information, and, they need to be provided with the capacity to translate and apply the evidences. It is with this realization that the recently concluded 63rd *World Health*

Assembly resolved to strengthen the links between research, policy and practice. The *World Health Organisation* on its part will work with member countries in advocating for greater resources to support the translation of research into this knowledge interface.

For us, the call made at the *World Health Assembly* could not have come at a better time. The MOH is in the process to modernize and re-shape the health system to better meet the evolving needs of the public, whilst ensuring improved equity, better accessibility, and sustainability. Along the aspirations of **1 Malaysia**, the MOH has formulated **1 Care**, to transform the current health system based on the concept of solidarity. On this note, the scientific and medical community, specifically the research fraternity, will have a major part to play in providing the knowledge and evidences through applied research. Applied research is expected to play a more significant role; and I call upon the NIH component institutes and the other research organizations to join forces to contribute towards ensuring the success of the transformation process.

Forging Partnerships to Advance Medical Research

Ladies and Gentlemen

Advancing medical research to the next stage also has its own set of challenges. In this 21st century, these difficulties include:

- Constrained funding sources and increasing costs of research,
- News about financial conflicts of interest and scientific misconducts by researchers that threatens to erode public trust,
- Tensions between the cultural norms of research organizations and industry that cloud growing partnerships, and
- Increasing complexity and legality of retrieving personal health information

The inter-connectedness of the above challenges magnifies their difficulties and importance. Nevertheless I am of the opinion that the myriad of issues can be resolved through collaborations and forging partnerships. I believe this is the solution so as it has been proven in many instances that successful medical innovations are usually the result of enhanced cooperation between various organizations. In the coming years, successful relationships between researchers, clinical practitioners, regulators, and industry players, will be the key factor to push advances in medical research to the next level. Partnership models can yield high quality research and in some cases at lower costs. In addition, such co-operations may be able to facilitate sustainable funding, improve education and research career opportunities, and strengthen harmonization of regulation and ethical conduct. Partnerships also place heavy demands on both partners, and, high quality research may take longer to be established and completed. But given the fact significant contributions of successful relationships in medical research far outweighs their disadvantages, it is important that we continue to set the right environment and strengthen collaborations and alliances be it at local, regional or international levels.

Conclusion

Ladies and Gentlemen

In conclusion, I would like to quote a saying from Barbara Hall, *“The path to our destination is not always a straight one. We go down the wrong road, we get lost, and we turn back. Maybe it doesn’t matter which road we embark on. Maybe what matters is that we embark”*. Greatness in research can never be accomplished if we do not act; and therefore, we can never hope to bring clinical and applied health research onto the next level. But that is not what the moment calls for. That’s not what we came here to do. We did not come to fear the future. We came here to shape it. Now is the time where we must bring the best ideas together, and show that we can still do high quality research, advancing it to the

next stage, whatever the odds may be. Everyone in this hall knows what will happen if we do nothing. Just as a research idea that serves no purpose if it is not translated into action, research findings when kept confined within the world of researchers alone, will be useless.

I still believe we can act even when it is difficult. I still believe we can replace gridlocks with progress. I still believe we can do great research, and that time is here and now. Your participation in this conference over the next few days is the first step of our new journey to advance research in Malaysia to the next stage.

Last but not least, to all our foreign speakers, I wish you a pleasant stay and hope you will bring back fond memories. Whilst you are here, do take the time to visit our beautiful country; and to all participants, have a fruitful conference.

Dengan lafaz "*Bismillahirrahmanirrahim*", I hereby declare the **13th NIH Scientific Meeting incorporating the 4th National Conference for Clinical Research** open.

Sekian. Wabillahi Taufiq Walhidayah Wassalamualaikum Warahmatullahi Wabarakatuh.

Thank you.