



# MURUR

2014



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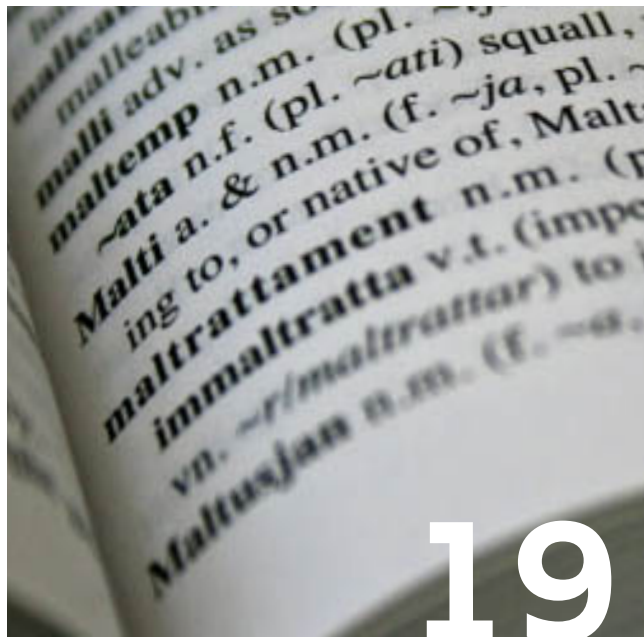
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Many thanks goes to the team for their hardwork and initiative in making this publication a reality.

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The same thanks goes to all those who contributed to Murmur, be it by writing articles or by carrying out interviews and collecting information.

Thank you for your dedication!

*Whilst every effort has been made to ensure that the information contained within this magazine is accurate and up to date, MMSA and its members cannot take responsibility for any errors.*

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## wordfromthe EDITOR



Dear reader,

This edition of Murmur is a special one for two reasons. Firstly, it's being published at the beginning of the academic year, rather than at the end of it. And secondly, this Murmur seeks to celebrate the history of our association and the medical heritage of the Maltese islands.

My aim for this year's Murmur was to promote our association's core values.

On one hand, you may read about the MMSA's past: how we began and how time has shaped us to our present organization. You may also read about the way in which medicine developed in Malta throughout the centuries. How it developed from myths and traditions to the organised healthcare service we know today.

This publication also celebrates the successes of past members of our association. Members who have made a name for themselves and for the whole country. A whole article has been dedicated to ground-breakers in medical research and innovation, in the hopes that one day, all of us leave that single yet veritable mark, no matter how small, which will help save lives.

This Murmur also features the successes of our present members: the voluntary work they do abroad, their meetings with top medical professionals, their appeals to save lives by donating blood. These are all values which we uphold as MMSA. These are the values which will make us excellent doctors and caregivers.

I hope that you find this publication informative. It is the fruit of the work of medical students from all five classes in our course. I owe this publication's content and design entirely to them.

**Gabriel J. Ellul**  
Murmur Editor and MMSA President '14 - '15

# Local Wisdom

In the next few pages, MURMUR takes a look at several Maltese doctors who have richly contributed to medical research. These are true testimonials that when you are passionate about something, the sky is truly the limit.

by Melise Mifsud

## Dr Ludvic Zrinzo

Mr Ludvic Zrinzo is a Maltese neurosurgeon who works in London, UK. Married and the father of two daughters, he studied medicine in Malta and completed his neurosurgical training in London and Los Angeles. In London, he is part of a multidisciplinary team which includes neurosurgeons, neurologists, psychiatrists, MR physicists and other specialities. Apart from providing a clinical service, this team is conducting several interesting clinical trials.

### Functional Neurosurgery

I had the opportunity of meeting Mr Zrinzo while he was in Malta as a Visiting Consultant. His passion for the brain and neuro anatomy is only matched by his willingness to teach. He is clearly fascinated by the function and structural importance of the human brain. He explains that functional neurosurgery does not treat structural problems of the brain. It tries to address pathology that affects its function, as with Parkinson' disease, dystonia or obsessive compulsive disorder.

Functional neurosurgery involves placing small lesions or electrodes in critical places of brain circuits. This does not cure the underlying condition but – by modulating brain activity - it can drastically improve symptoms in well-selected patients. Mr Zrinzo considers every patient as a potential research opportunity to learn more about the functional anatomy of the brain in an ethical manner.

Mr Zrinzo's parents, Laurence and Sylvia, are both Professionals in the field of neurology and together they

established neurosurgical services in Malta. Perhaps it was inevitable that their son develops such an interest in neuroscience. However, Mr Zrinzo first became interested in functional neurosurgery while he was an elective medical student in Sweden, attached to a surgeon performing stem cells transplant in patients with Parkinsonism secondary to MPTP poisoning. He explained that the stem cells transplants were successful for these patients but unfortunately did not give the same benefit to patients suffering from idiopathic Parkinson's disease.

Mr Zrinzo explains: "When you're thinking about functional neurosurgery you are forced to think about the physiology of the brain and pathophysiology of neurological disorders. The skill set is different to general neurosurgery, when you are most interested in the brain's structure and how to minimise disrupting it, for example while you are removing a tumour."

### Brains predict the future

I was quite taken aback when he asked me the following question: "What is the survival advantage of the brain?" He explained that the brain is essentially an organ of prediction. It generates an internal model that tries to predict what is going to happen. This model is then compared to sensory feedback and an error message is generated to refine the task and adjust the predictive model. However, if the prediction is completely wrong, the brain fails to generate a useful error message and the whole system collapses. A practical example illustrates this point: "Have you ever

climbed the stairs in the dark? What happens when you think there is one more step at the top ... but there is not? Your internal prediction is wrong, and the system fails so you tend to stumble and fall."

### Emotions and the brain.

Mr Zrinzo explained how basic emotions are an internal model of your environment. Internal emotions that drive a "fight or flight" response are most appropriate in dangerous environments. A "breed and feed" response is better suited to safe environments. Organisms with internal models that are more accurate at reflecting the environment are more likely to survive and pass on their neural circuitry to their offspring.

An added benefit would be the ability to accurately predict the internal 'emotional state' of other organisms: is it 'friend' or 'foe'? Such organisms would need a robust mechanism to identify its own internal emotional state from internal models of the emotional state of other organisms. This 'concept of self' is the first step towards 'consciousness'.

### What is intelligence?

Although some of us find it hard to define intelligence, Mr Zrinzo suggests a simple phrase: "Intelligence is having a greater ability to predict the future." I found this simple explanation amazing and astonishingly true. This made me realise how important it is to understand concepts as well as detail - Mr Zrinzo tries to make things as simple as possible and this certainly helps students understand otherwise complex topics.



### Clinical trials in DBS

One of the clinical trials currently underway in London explores the impact of deep brain stimulation (DBS) on patients with extremely severe OCD. One of the enrolled patients was so severely affected that she spent many years of her adult life in psychiatric institutions. Despite having obtained a doctoral degree, obsessions and compulsions intruded into every aspect of her life – fear of contamination would result in a four-hour ritual after passing urine, with showers taking over twice that time. To avoid trips to the bathroom she would limit her food and water intake leading to malnutrition and problems with renal function. So far, DBS has had remarkable results with reduction in symptom severity such that a trip to the bathroom now takes 5 minutes, she has managed to move into her own home and has started doing voluntary work.

### The scientific method

When I asked Mr Zrinzo about the benefits of his research we ended up talking about the scientific method. This is the process of developing a hypothesis and testing whether it accurately predicts the observations made during a scientific experiment. This cultural phenomenon is what provides humans with amazing predictive powers. The scientific method allows us to predict when the next solar eclipse will occur and to predict which medication can reduce high blood pressure. The scientific method is simply a cultural extension of the biological function of the brain – the ability to predict the future more accurately, explains Dr. Zrinzo.

Deep brain stimulation is a particularly powerful tool when conducting clinical trials.

Implanted brain electrodes can be switched on or off using patients as their own blinded controls. Symptoms can be assessed when the electrodes are on or off. Patients can benefit greatly from such a technology and at the same time scientific knowledge is accrued as we gather more knowledge about the function of the brain.

Serendipity may also play a role. For

example, some patients with both Parkinson's disease (PD) and OCD underwent DBS for their PD but noted that their OCD symptoms also improved. This led researchers to investigate the role of DBS in OCD.

"Is their room for improvement?" I ask. "Without a doubt" came the immediate reply. "Indeed, unexpected failure can be the biggest incentive for exploration allowing old useful theories to be replaced by new better ones.

**"Malta has few natural resources but we have a thirst for knowledge. There are many excellent Maltese doctors that have much to offer and, internationally, we punch way above our weight when it comes to contributions to medicine."**

Together with Dr Aquilina, Consultant Neurologist, Mr Zrinzo provides a DBS service to Maltese patients. However, the small population size makes it difficult to carry out clinical research. Nevertheless, every patient remains a research opportunity. Indeed, a local patient is the subject of a case report being prepared for publication by the local neurology team. "Case reports have a role to play as they add to the sum total of human knowledge."

When I ask about the global role of Maltese doctors I get the following reply: "Malta has few natural resources but we have a thirst for knowledge. There are many excellent Maltese doctors that have much to offer and, internationally, we punch way above our weight when it comes to contributions to medicine."

It was a pleasure to meet Mr Zrinzo and I also feel proud that he represents our country abroad. I look forward to learning about the results of the many clinical trials of DBS that are currently underway in London.



# Dr Victor Grech

Many of us medical students focus our minds on just one thing: medicine. The sheer amount of work which we have to do to pass through medical school places a devastating burden on our time, to the detriment of our pursuit of other activities.

The same cannot be said for Prof.s Victor Grech who, albeit being a paediatric consultant, with a special interest in the field of cardiology, still finds the time to publish a vast number of research papers, a record number for any Maltese medic, as well as pursue philosophy, culture and art.

As soon as we entered into the office, we couldn't help but notice an oil painting placed in a corner of the room. Victor Grech is also known for his delight in painting typical Maltese landscapes, a hobby he enjoys doing in his free time.

Being the editor of the Malta Medical Journal, as well as the creator and chief editor of a Paediatric Cardiology Journal, the first of its kind, the consultant paediatrician takes research to heart, no pun intended. He explains how cumbersome it was to acquire the necessary skills to write a scientific paper at the time when he was working on his PhDs. He recalled a call he had received from the University of London, where the Statistics Office informed him that, as a PhD student he would not be receiving any help for the statistical analysis of his thesis data.

**"...for the past years he has delivered talks during intensive 3-day sessions offering attendees the chance to get to grips with the intricacies of writing a scientific paper"**

But that did not hinder Prof.s Grech, who now plays a leading role in the seminar organised by the Malta Institute for Medical Education, MIME. So much so that for the past years he has delivered talks during intensive 3-day sessions

offering attendees the chance to get to grips with the intricacies of writing a scientific paper. This opportunity is a goldmine, he explains, recalling the problems he and other contemporaries had to face to write scientific papers.

As if the field of paediatric cardiology isn't taxing enough, Victor Grech also pursues the humanities, with publications ranging from the philosophical concepts gained from the StarTrek series to the impact of prostheses in our everyday life. "A mobile phone is a prostheses in itself," he explains, "It allows us to communicate, to remember: we absolutely rely on it."



With regards to the former, Victor Grech is also organising a StarTrek symposium, to be held next July in Malta. Being the first of its kind as well, the symposium aims to extract the philosophical notions present in the StarTrek movies and to his delight, it has already attracted the attention of foreign academics, who are willing to travel across continents to attend it, at personal expense.

Victor Grech has always been fascinated with the implications of science fiction. The underlying philosophical notions which dominate such movies is intrinsically linked to a broader philosophical and artistic aspect of

humanity. During the interview he even went on to explain the underlying themes in the latest James Bond film, Skyfall, explaining how art and scenery were combined to portray Bond's rebirth as a top British agent, following years of intelligence work.

This pursuit of art and the humanities, along with his strong medical background, has also led Prof.s Victor Grech to co-chair the Humanities, Medicine and Sciences Programme. Working with the Faculty of Arts, Prof.s Grech along with other pacesetters of the medical Profession, is aiming to use this programme to encourage multi-disciplinary research in the field.

**"A mobile phone is a prostheses in itself," he explains, "It allows us to communicate, to remember: we absolutely rely on it."**

But some of his greatest achievements was the publication of numerous papers on Pubmed, with at least one of them making it on the British Medical Journal. His ground-breaking research on sex ratios at birth have shed light on a trend which had previously been unnoticed. Prof.s Grech discovered that males are born at a higher ratio to females in the lower latitudes of the Euroasian continent and that this trend decreases further north. This shocking discovery was marked as a matter of "public interest" and has led to Victor Grech speaking live on the BBC World News as well as featuring on a number of international newspapers, such as the Daily Mail and Washington Post. All the more shocking is his recent discovery that the pattern of male to female births is reversed in the North American continent, with boys being born at a higher ratio in Mexico than in Canada.

The pursuits of Prof.s Grech have made the headlines and will undoubtedly keep on making a name for us Maltese on an international level.

by Sahra A. Haji

## Dr Johann De Bono

Johann De Bono is a Maltese doctor from Birzebugga, currently married to the Scottish family doctor, Dr Hazel De Bono. They have 3 children. Having left Malta at the age of 17 to pursue university studies, he wishes he could spend more time in his homeland but jokes that he finds it tough to convince his wife to spend the hot and sunny summers there. He enjoys a variety of hobbies including hill-walking, cycling, chess and playing football, and supports Liverpool football club. He also enjoys listening to a variety of music including classical, blues and jazz.

In 2003, Dr Debono was elected a Fellow of the Royal College of Physicians. That year, once he finished working in Texas, he started working as a senior lecturer and Medical Oncology consultant. This was in the divisions of Cancer Therapeutics and Clinical Studies at the UK Institute of Cancer Research (ICR), the academic part of the Royal Marsden Hospital. It is here where he has made phenomenal breakthroughs into the treatment of prostate cancer. It is here where he has helped develop over 100 new drugs over the past decade, some of which are now available to patients and is currently in the process of evaluating more than 20 drugs for early clinical trials.

At the ICR, he now also works as Professor in Experimental Cancer Medicine and since 2011, he was appointed the new director of the Drug Development Unit following on from Professor Stan Kaye. In 2010, he was awarded the Malta Order of Merit

His work has also made him a candidate for the Republic Day decoration by the Maltese president

**'The drug taken with a steroid was so effective that the trial was stopped early to allow those men taking placebo and steroid to start taking the drug.'**

This medical researcher spends practically half his working days in the lab and half with patients. However, what keeps him passionate and driven is how far his research has helped thousands of people from all four corners of the world. He receives personal messages from patients' families from all over the world who thank him for his work and dedication.

Some of Dr Debono's research papers pertain particularly to designing molecular targeted drugs that kill cancer cells but still spare the patients' normal cells thus "giving the right patients the right drugs at the right time".



He is famous for designing a drug, abiraterone acetate and leading its successful phase III trial of just over 1000 prostate cancer patients at the Royal Marsden Hospital. Men participating in the trial had already undergone unsuccessful chemotherapy, surgery and had taken anti-androgen drugs to stop the production of testosterone but the disease had progressed to more advanced stages, so that their only option of hope was ultimately the drug trial itself.

The drug taken with a steroid was so effective that the trial was stopped early to allow those men taking placebo and steroid to start taking the drug. Abiraterone acetate is comparable to how Herceptin was successfully used for prolonging the life of advanced breast cancer patients with the Her2 receptor

type. After the prostate cancer patient trial, the drug is now being tested on patients with breast cancer and may even be of benefit in future to children with rare inherited diseases. This is because the drug works by suppressing hormone production from the tumour itself.

**"After the prostate cancer patient trial, the drug is now being tested on patients with breast cancer and may even be of benefit in future to children with rare inherited diseases."**

With abiraterone acetate, patient live longer from 5 months to considerably longer, with an average survival of 14.8 months in comparison to only 11 months for placebo. The drug decreases mortality by 1/3, drastically reduces pain thus obliterating the need for morphine. It improves personal well-being, survival rate and quality of life – some patients have reported going back to work, swimming, travelling and even started cycling again. The drug had minimal side-effects, which include weight gain and fatigue, but a large enough trial has not been carried out to check if a small minority of patients suffer from something more severe due to the drug.

Dr De Bono also led other drug trials for cabazitaxel and enzalutamide, again both for the treatment of prostate cancer with particular benefit and increased survival for advanced, castration-resistant prostate cancer patients. Both abiraterone and cabazitaxel have been approved in Europe and by the Food and Drugs Administration (FDA) in the USA for use in metastatic advanced prostate cancer. In Malta, abiraterone acetate is available as an oral pill but only in the private sector. Abiraterone became available on the UK NHS in 2012 and patients must take a daily dose of 4 pills.



by Sahra A. Haji

# Dr Michael Camilleri

Michael Camilleri is a Maltese doctor who now works at the Mayo Clinic in Rochester, Minnesota, USA. He is able to speak Maltese, English, French, German, Spanish and Chinese.

His M. Phil thesis title was on the "Mechanism and Pharmacological Inhibition of Bile-Acid Induced Secretion in the Rabbit Colon, University of London". His first fellowship was in internal medicine and gastroenterology followed by Gastroenterology training at Hammersmith Hospital, London, UK. His second fellowship lasted for 2 years at the Mayo Clinic and he has been an official staff member there since 1987.

Currently, Dr Camilleri is a consultant in the Division of Gastroenterology and Hepatology in the department of Physiology and Biophysics at the Mayo Clinic, Professor of Medicine at the Mayo Medical School and Professor of Physiology and Pharmacology at Mayo Medical and Graduate School. Furthermore, he is associate director of the clinical research training program at the Mayo Clinic for which he mentors junior staff and medical trainees in the field of clinical enteric neuroscience. This may explain why he has been a recipient of K24 grant for 10 years from the National Institute of Health.

**"Dr Camilleri has published over 500 peer-reviewed scientific studies and editorials and over 150 book chapters and books."**

Dr Camilleri has published over 500 peer-reviewed scientific studies and editorials and over 150 book chapters and books. He is the founding editor of *Clinical Gastroenterology and Hepatology*, the editor of *AGA perspectives* in addition to being the editor of *Neurogastroenterology and motility*. For his research at the Mayo Clinic, he holds the R01 and American

Recovery and Reinvestment Act (ARRA) grant from the National Institute of Health (NIH).

As well as continuing to improve patient care, his other main areas of research at the Mayo Clinic are focused on gastrointestinal tract (GIT) motility disorders, obesity and pharmacogenetics. This involves studying the physiology and pathophysiology of human GIT motor and sensory functions along with the development and improvement of new therapeutic approaches.



He looks at functional gastrointestinal disorders, gastric accommodation, visceral hypersensitivity, as well as adrenergic and serotonergic control of gut motility and gut sensation. This is to help our understanding in the reasons why patients develop GIT motility disorders and how to treat them. He is also involved in multicentre clinical trials leading to approval and marketing of new drugs for the disorder he studies.

In terms of the GIT pharmacology, he aims to show proof of efficacy of new medicinal drugs for the treatment of gastrointestinal motility and functional ailments.

**"As a result of his research, he has helped develop novel and often non-invasive diagnostic techniques replacing invasive and less accurate or less specific diagnostic tests to study these diseases in his lab."**

His focus on pharmacogenomics looks at understanding the factors such as the role of inherited genes, which determine people's appetite and the sensation of fullness. This could be one of the fundamental factors governing the control of obesity in 3 categories of patients: normal, overweight and obese. He also aims to improve our understanding on how to individualise therapy based on genetic differences among people as his lab studies the genetic factors that lead to delivery of excess bile to the colon to cause diarrhoea.

He studies GIT diseases arising primarily from inside the gut tube or secondarily arising from diseases like diabetes mellitus, scleroderma and neurological disorders. As a result of his research, he has helped develop novel and often non-invasive diagnostic techniques replacing invasive and less accurate or less specific diagnostic tests to study these diseases in his lab. This involves investigation of genetics, nerves, muscles, epithelial lining and contents of the GIT. His lab is also working on developing new ways of diagnosing diabetes gastroparesis such as using breath tests and treating this disease using ghrelin agonists and 5-HT4 agonists.



by Theresia Dalli

## Prof Christian Scerri

Many of us students, are familiar with Prof. Chris Scerri who back in 2012 was appointed the Head of Physiology and Biochemistry. Back in 2006, a team of Maltese researchers, led by Chris Scerri, had discovered that a previously unassociated gene contributes to the development of coeliac disease. The association of the gene, a variant of the gene CD59, is the result of three years of research at a University of Malta lab. The research team made the discovery after examining the DNA of six people who suffered from gluten intolerance, together with 9 close relatives. Once the researchers isolated the matching parts of the DNA, the researchers began combing through all the different genes in that section of the DNA. Several prior studies have shown that only individuals exhibiting HLA-DQ2/DQ8,

which account for approximately 30% of the worldwide population, were predisposed to coeliac disease. Although HLA-DQ2/DQ8 does not cause gluten intolerance on its own, it can combine with a number of genes to cause coeliac disease.

According to Chris Scerri, the results showed that all those patients who suffered from coeliac disease had both HLA-DQ2/DQ8 and a variant of CD59. The study also confirmed that people who had HLA-DQ2/DQ8 or CD59 alone did not suffer from celiac disease, providing strong evidence that the two combine to cause gluten intolerance. The research carried out also proved that the gene variant CD59 is also rare in Malta with only one family out of the 100 screened testing positive for it.



by Michelle Marie Boffa

## Ruzar Briffa (1906-1963)



*Note from author: I would like to thank Consultant Dermatologist Dr. Dino Vella Briffa, for providing some material used in this article.*

Most of us picture doctors as purely academic people, however, this is far from the case in a number of individuals. One such figure in Maltese history is Ruzar Briffa, a doctor whose great literary contributions make him one of the pillars in Maltese literature. However, due to the immensity of his contributions to Maltese culture, his medical feats are often overshadowed and forgotten. Ruzar Briffa was in fact one of the pioneers in the control of leprosy in Malta.

Following his first scholarship, he started working as a junior doctor in the skin disease section of the Floriana Central Hospital, and eventually he was appointed senior consultant in skin disease in the said hospital, as well as a leprosy control officer and visiting consultant at the St. Bartholomew Leprosorium in Malta and Chambray General Hospital in Gozo. As a doctor, Ruzar Briffa was described as a dedicated physician of humanity, as he strove to combat leprosy in Malta by alleviating the living conditions

of inmates at St. Bartholomew's Leprosorium and introducing new treatments for the condition soon after they became available abroad. He also promoted the abolishment of the law for compulsory segregation of lepers – a move that was eventually enacted in 1953. During the Bubonic Plague outbreak in 1936-1937, he worked as an assistant medical officer at the Lazaretto Isolation Hospital. During World War II he was medical superintendent at the Blue Sisters Emergency Hospital and for some time he was chief consultant at the War Memorial Hospital for Children.

Sadly, the extent of Ruzar Briffa's contribution in the field of leprosy was only fully acknowledged posthumously, when in 1973 St. Bartholomew's Leprosorium was renamed 'Sptar Ruzar Briffa' and in 1988 he was given the pro Merito Melitense title by the Sovereign Military order of St. John.

Incidentally, Ruzar Briffa's death anniversary lies close to World Leprosy Day!

# Prof Adrian Vella

Prof. Adrian Vella, who currently resides in the USA, graduated in 1993 from the University of Malta Medical School. He is a Professor of Medicine at the Mayo Clinic College of Medicine and has been part of the staff at Mayo Clinic in Rochester since June 2001.

Adrian Vella is currently the research chair for the Endocrine division. He is the addressee of two R-01 grants from the NIH and spends most of his time in research. His clinical interests revolve around the diagnosis and management of hypoglycemic disorders and his research interests concentrate on Endocrinology, Diabetes, Metabolism and Nutrition, with special focuses mainly on genetic variation in and pathogenesis of type 2 diabetes, and the connections with the environment. 'His studies focus on TCF7L2 (a transcription factor that may modulate signaling pathways necessary for blood glucose homeostasis) and so far he has picked up how individuals with the disease-associated variant(s) of this gene secrete less insulin during an oral glucose tolerance test.' (Mayo Clinic, 2014).

**"... understanding the factors that drive the progression from prediabetes to diabetes will help in the prevention of diabetes..."**

Adrian Vella further explains: "It is clear that diabetes arises out of a complex interaction between genes and the environment. A variant in TCF7L2 confers the strongest genetic predisposition to DM and is associated with progression to DM from the prediabetic state. However, the mechanisms by which this occurs are still unidentified. TCF7L2 encodes a transcription factor that regulates proglucagon expression in the gut. Hence, it was assumed that this gene predisposed to diabetes through changes in incretin hormone secretion and, perhaps, beta cell responsiveness to incretins. However, in a study

examining glucagon-like peptide-1 (GLP-1), secreted in response to an oral challenge, we demonstrated that the diabetes-associated allele of TCF7L2 did not alter concentrations of active and total GLP-1. Moreover, in a separate cohort, insulin secretion in response to pharmacological concentrations of GLP-1 was likewise unaffected by TCF7L2. Other diabetes-associated variants in WFS1 and KCNQ1 also do not alter these parameters. Intriguingly, variation in GLP-1R alters response to infused GLP-1, but the clinical significance of this in predicting response to incretin-based therapy is unknown. More importantly, GLP-1 secretion does not



seem to decrease as beta cell function decreases in prediabetes — implying that defects in GLP-1 secretion do not play a part in the pathogenesis of DM."

Adrian Vella continues: "In an Olmsted County cohort of persons without DM, we have observed a parallel decrease in insulin secretion and action as fasting and postprandial glucose concentrations rise. At present, we are actively exploring mechanisms, such as the timing and amplitude of insulin secretion that might explain this coupling. Persons with diabetes-associated common genetic variation seem to be particularly affected by this coupling of insulin secretion and action."

**"In an Olmsted County cohort of persons without DM, we have observed a parallel decrease in insulin secretion and action as fasting and postprandial glucose concentrations rise."**

Moreover, another research topic of interest for Adrian Vella is the pathogenesis of pre-diabetes and the remission of type 2 DM associated with bariatric surgery for medically complicated obesity. Adrian Vella explains: "The surgery that is most commonly undertaken for this purpose is Roux-en-Y gastric bypass, with remission rates of about 80 percent for type 2 DM. In such circumstances, caloric restriction, incretin hypersecretion in response to increased delivery of calories to the hindgut, vagal denervation, and, perhaps, altered bile acid kinetics and secretion may all play a role in the remission of DM. Moreover, remission — or lack thereof — after such surgery again provides an opportunity to examine the heterogeneity of beta cell function present in such patients and may provide further insights into the plasticity, or otherwise, of islet function at various stages of metabolic disease."

In conclusion, understanding the factors that drive the progression from prediabetes to diabetes will help in the prevention of diabetes, as well as identify targets for rational prevention and treatment strategies for type 2 diabetes. Moreover, the search for genetic predictors for treatment response in type 2 diabetes will help individualize therapy for diabetes in given patients

One must appreciate how important Prof. Adrian Vella's work is, as Diabetes mellitus is responsible for substantial morbidity and death, with costs of about \$170 billion a year in the United States alone. The situation is more or less the same in Malta, with the numbers of Diabetic patients on the rise.

by Elissa Sultana

## Sir Temi Zammit (1864-1935)

Sir Themistocles Zammit, more commonly known as Sir Temi Zammit was born on the 30th of September 1864, married the Noble Aloysia Barbara, widow of Mr. E Laferla in 1898 and died on the 2nd of November 1935. Sir Temi Zammit, was a scientist, doctor, chemist, academic, archaeologist, writer and statesman, yet there is no in-depth biography that looks into all his professions and few of his personal papers have survived the years. Due to this, it is not easy to trace his career and pinpoint all his contributions. This article will mainly bring to light his career as a doctor and a scientist.

Sir Temi Zammit graduated as a Doctor of Medicine and Surgery from the University of Malta in 1889, and with Dr Fabrizio Borg he founded and edited *La Rivista Medica* (The Medical Review). From the 15th of March 1890 to January 1892 the review had 46 issues in all, all consisting of 8 pages, which were mainly abstracts and commentaries in Italian of medical papers, with the majority of them humbly signed 'T Z'.

The 24th December 1890 was an important date for Zammit as he was appointed an Analytical Chemist to the Government of that time and had the help of two assistants. As an Analytical Chemist he took part in courses in analytical chemistry at the 'École Supérieure de Pharmacie' in Paris even though there are no specific records of him at the École.

**"...the discovery that apparently healthy goats could suffer infections of brucellosis, and be carriers of the disease, was 'one of the greatest advances ever made in the study of epidemiology'."**

After spending time at King's College in London, when back in Malta, precisely around September 1896, he took the earliest recorded X-ray photograph in

Malta: that of a human hand, thought to most likely be his own. Moreover, one of his earliest documentations date as far back as 1898, where he reported two cases of poisoning by a local plant.

Between 1916 and 1920, Sir Temi Zammit was appointed Director of the Public Health Laboratory. This probably had to do with all his hard work and important findings through experiments with Mediterranean or Maltese Fever (now known as Brucellosis). His findings were of utmost importance to the general public and indeed, the discovery that apparently healthy goats could suffer infections of brucellosis,



and be carriers of the disease, was 'one of the greatest advances ever made in the study of epidemiology'. This discovery led to the elimination of the disease among British soldiers and sailors within a year and revolutionized ideas about animal vectors of disease.

His first recorded experiments with Brucellosis modified the Widal precipitation test where bacteria and sera are mixed in a tube; Zammit observed the mixture on a slide and used a microscope to see agglutination. This, together with established episodes of milk poisoning, were published in Annual reports, spoken about at a BMA

meeting, and also mentioned in his BMJ paper.

In 1902 after conducting a survey of Brucellosis in Maltese residents and comparing it with typhoid fever, concluding that it might be insect-borne, the Secretary of the Royal Society suggested that Dr. Zammit should be given time for his studies on Malta Fever.

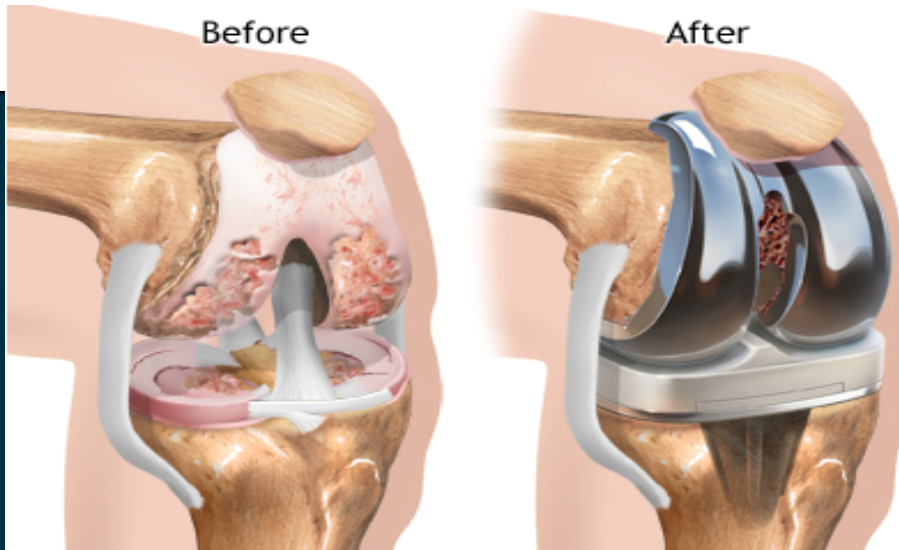
**"Apart from Brucellosis and Typhoid fever, Zammit paid important contribution by studying diverse epidemic diseases and published reviews on Tuberculosis, Leprosy, Cholera and Malaria, amongst others."**

Apart from Brucellosis and Typhoid fever, Zammit paid important contribution by studying diverse epidemic diseases and published reviews on Tuberculosis, Leprosy, Cholera and Malaria, amongst others. TB in the civilian population of Malta (as opposed to British servicemen) had a low incidence and Zammit suggested that Malta would be a good place for recovery and treatment of the disease. In 1900 he was appointed to the Leprosy Board, and read a paper in 1902 on his treatment of a young woman as he 'had seen many cases of leprosy treated with ordinary drugs'.

His expertise on this branch of Medicine was recognized and appreciated, so much so that he was requested to go to Naples on the 17 October 1910, at the appeal of the Italian Government, to give advice on the cholera epidemic. After investigating cholera in 1904, with Caruana Scicluna he wrote about several cases of Malaria when soldiers from malarious areas were sent to Malta.

Zammit's knowledge of bacteriology was evident in his early editing of the review journal and his reading of the literature to write the reviews. In Paris and London he visited leading laboratories and in Malta was very active in the local medical societies.





# Navigation techno

Dr. Ulrich Rebers is a German orthopaedic surgeon who has expertise in more than 10,000 surgical interventions of which more than 5,000 are joint replacements, including 1,500 computer-navigated total knee replacements. He is also the medical director of the International Knee and Hip Center – Malta, which he runs along with his wife and CEO, Xenia Lorenz-Rebers. This clinic has introduced the computer-assisted navigation system in Malta, a system at the cutting edge of technology from Germany.

X-rays have long been utilised as a method of investigating joints, the knee joint included, with the major drawback being the 2-dimensionality of the imaging. The navigation system enables 3-dimensional visualisation by creating a virtual model of the joint. This technology additionally allows real time detection of the area of interest intraoperatively thus saving time during surgery whilst ensuring unparalleled precision. This idea was originally coined by 'Brainlab' which used this system during brain surgery to better visualise tumours during their resection. It has also

been adopted by other specialties including ENT, but in orthopedics it is mostly used for the knee joint. Precision is of crucial importance during knee replacement surgery. This procedure allows surgeons to achieve accuracy to the nearest 1 mm hence its widespread use internationally.

Dr. Rebers compared the navigation system to a standard GPS system. One antenna is placed on the femur and another on the tibia. Each antenna has three reflecting bores, which will reflect signals onto the system, picked up by two infrared cameras. The femoral head and ankle act as the proximal and distal ends of the joint respectively. The surgeon then goes on to marking the femoral head proximally and the lateral and medial maleoli distally with the system then calculating the centre of the knee joint using a special pen-like device that sends information to the infrared cameras. Finally, this device is used to 'shade' over the surface of the femur (femoral epicondyles) and the tibia (tibial plateau). This data is then transferred to a computer which uses specific software to create a 3D model of the knee joint. An

experienced individual should take no longer than ten minutes to carry out this procedure.

Traditionally the centre of the mechanical axis of the knee joint is found manually by means of rods placed in the intramedullary





Knee replacements are common surgical interventions, especially for treating patients suffering from osteoarthritis and other forms of arthritis. This year, a novel computer-assisted navigation system has been introduced for the first time in Malta, aimed at refining the quality and precision of knee replacements performed.

# Technology in Orthopaedic Surgery

By Gianluca Fava, Abigail Mula and Darren Rodgers

canals of the femur and tibia. This is typically associated with considerable blood loss, hence one other advantage of the navigation system is that intraoperative risks such as Staphylococcal infections are considerably reduced. Besides creating an accurate virtual model

of the knee this system also provides information regarding the extent to which the ligaments are balanced which is of particular significance because it determines the functional outcome of the knee replacement surgery.

This navigation system is currently used in 25-30% of the 2,200 hospitals in Germany, each one costing around €100,000. However, according to Dr Rebers, it is not just about buying the system, it also involves a lot of training. Such training at a senior house officer level should however not totally replace conventional methods of knee replacement procedures since in about 1 out of 300 operations, the fixation of the antennae may be lost and conventional methods may

have to be adopted instead. The navigation technology offers more security for patient and surgeon: the results are open and traceable at any time because every step of the surgical procedure is monitored and stored in the system resulting in real proven records.

The degree of precision and efficiency this system offers makes it a good prospect for the future of knee replacement surgery, ensuring a better quality of life to the patient and a lowered risk of the need to re-operate.

For more information regarding this technology visit: <http://www.knee-hip.eu> knee the official facebook page: <https://www.facebook.com/InternationalKneeandHipCenterMalta>



*"The navigation system enables 3-dimensional visualisation by creating a virtual model of the joint. This technology additionally allows real time detection of the area of interest intraoperatively thus saving time during surgery whilst ensuring unparalleled precision."*



# Medicine in Malta: A HISTORICAL OVERVIEW

Medicine has always played a prominent role in Maltese history and tradition. Throughout the centuries, medical practice develop from a religious cult to a domestic tradition and finally to a science within itself. The following pages give an overview of some of the fundamental elements which mark our country's rich medical heritage. The article is divided into three main sections: the buildings related to the provision of medical care, the treatments used to treat common maladies in Malta and the discoveries which hail from our island nation.

## **Building used for medical purposes - Laying the foundation: the Maltese health Infrastructure**

The earliest hospital in Malta was the *Hospital of St. Francis* in Rabat which in 1372 was already functioning under the rectorship of a Franciscan Niccolo` Papalla appointed by the King of Sicily. The hospital cared for a number of persons, mainly too old or too poor or otherwise incapable of caring for themselves, foundlings, and patients.

The first hospital in Gozo owed its origin to a bequest made by Francesco Bonnici on the 22 February 1454. The establishment dedicated to St. Julian (but also known as the *Hospital of St. John the Evangelist and of St Cosmos and St Damian*) consisted of a few dwellings near the gates of the citadel at Rabat/ Victoria.

The advent of a foreign organized militia to Malta dates to the arrival of the Knights of the Order of St John of

Jerusalem in 1530. Known for their hospitaller traditions, the Order soon established a hospital at Vittoriosa. In 1574, this hospital was subsequently transferred to a new building in Valletta. Rather than restricting their hospitals to members of the Order, the *Sacra Infermeria* catered for the needs of all segments of the population including orphans and foundlings, and thus functioned more as a general hospital rather than a military or naval establishment.

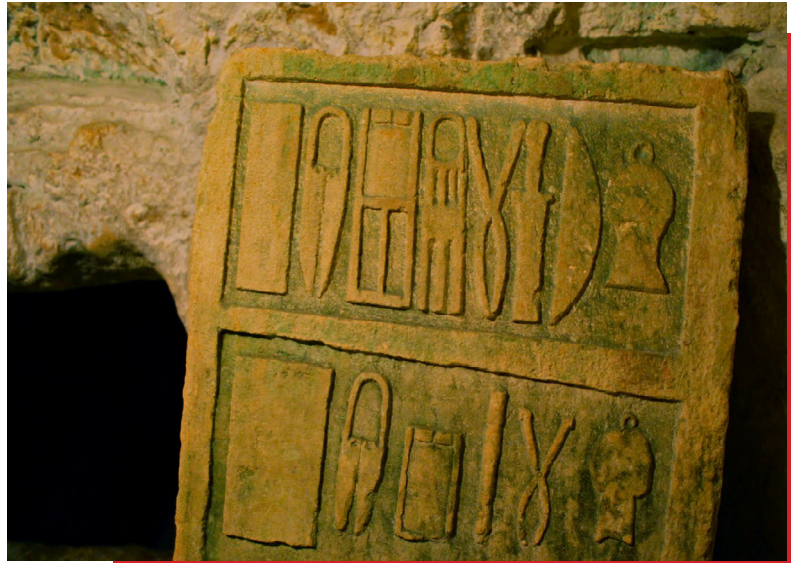
*The Casetta (Valletta)* - Since the Sacra Infermeria, during the period of the Knights, was reserved exclusively for male patients, a need for a number of beds to care for sick women was felt. In 1625, Catherine Scapi had set apart a small house in Valletta, known as Santa Maria delle Scala for the care of poor infirm women, the house eventually being moved to different premises. This small hospital was closed down after the founder died in 1655. A new woman's Hospital known as the Casetta or Ospidaletto was re-established in Valletta by Grand Master Martin de Redin in April 1659

*The Civil Hospital (Valletta)* - Under French rule, the civilian hospital services for males were transferred to the Hôpital Civil. On the 18th June 1798, Napoleon issued Article 12 wherein it was declared that the hospitals were to be reorganized on a new system and the property accruing from closed convents was to be used for that purpose.

*The Central Hospital (Floriana)* - The Central Hospital at Floriana was adapted from a building built by Grand Master De Vilhena in 1734, known as the Conservatorio, set up to house pauper girls and teach them various useful crafts. It was transformed into a general hospital for both sexes in 1850 and patients from the Valletta Civil Hospital and Casetta were transferred there. In 1954 patients were transferred to the new St Luke's Hospital and the building became the Police GHQ.

*St Luke's Hospital* started to be built when the Central Hospital of Floriana became too small. All patients from the other hospitals were taken there in 1954. In 1978 a new extension, named Karen Grech Hospital was opened for children and pregnant women. As of late 2007, St. Luke's hospital has ceased to be Malta's main general hospital, having been replaced by the *Mater Dei Hospital*.

*Religious-run hospitals* - The changing attitudes of the sick population towards seeking hospitalization which occurred in the 1950s, initiated a trend towards the development of religious-run private-care hospital services. The first private hospital to be opened in Malta was run by the Sisters of the Little Company of Mary (Blue Sisters) and



named Zammit Clapp Hospital or Blue Sisters Hospital.

*Nicola Mallia*

### **History of medications - Just a spoonful of sugar....**

Our knowledge of the history of medical practice in the Maltese Islands, especially that preceding the Arab rule owes itself to the discovery of archeological remains excavated in the past few decades, rather than detailed documentation. It is for this reason therefore, that we do not know as much as we would like to about this turbulent period of Maltese history. It would therefore be more ideal to kick things off with the advent of the Phoenicians, whose lengthy presence on our Islands left with it a telling legacy.

Towards the end of the Bronze Age, Phoenician seafarers colonised the island (circa late 8th to 7th century BC). The Phoenician influence spans many years, seeing as it was also continued under the Cartaginians (circa 55 BC). Unfortunately, little is known about the Phoenician and Cartaginian people and the impact they had on the history of Maltese medicine. The Phoenicians and Cartaginians believed illness was the work of evil spirits which could only be repelled by the magical powers of amulets or by specific incantations. We do know that the community was well aware of the necessity of prohibiting

burials within the city walls in order to prevent the transmission of disease. These extra-mural burials gave rise to a number of necropolis in the periphery of the ancient towns.

With the southern expansion of the Roman Empire, it was only a matter of time until this major force took control of the Islands. The Roman occupation introduced high standards of personal and domestic hygiene. They viewed cleanliness and health as dependent upon an adequate water supply – an ever-present problem in Malta. The Romans remedied this by constructing large cisterns in every estate, structures which can still be seen even today. An example of a typical large Roman cistern can be seen in association with a large country house at Ta' Kaccatura near Ghar Dalam.

Remains of private and public baths have been excavated at various localities around Malta, emphasising the importance the Romans gave to hygiene in the prevention of illness. These baths were fed by a constant supply of water which was conveyed through underground lead pipes from nearby springs or cisterns. The bathing habits of the Romans was to move first into a tepidarium for a warm air bath, then to the caldarium the hot air room where after profuse perspiration the bather took a warm bath. This was followed by a cold dip in the cold room

or figidarium.

The early Roman chose to threat himself and his family rather than develop a theoretical medicine as had the Greeks. The Hellenistic influence which started in the third century BC slowly changed these attitudes with the emergence of the professional physician. In fact a tomb slab found in a catacomb at St. Paul's Catacombs in Rabat indicates the final resting place of a medical physician. This slab contains fourteen diagrams displaying an open instrument case. It includes the representations of two surgical scissors, two medicament boxes, two hinged surgical tongs or forceps and a vaginal speculum with a screw mechanism for opening, amongst others. The presence of these sophisticated medical implements used in surgery suggest a highly organized and advanced profession.

Osteoarthritis is perhaps the best documented disease of the era. Two lumbar vertebrae found in a Roman grave showed marked lipping round the upper and lower margins of their bodies - a feature typical of chronic osteoarthritis, probably a result of repeated strain, particularly compression of the backbone from humping heavy loads. The Roman period also provides us with the first written document relating to medical disease on the Islands. St. Paul was shipwrecked on the Island along with the evangelist Luke (a physician), who documented illnesses prevalent on the Islands. Perhaps most significantly is his recording of the presence of dysentery with fever.

Christianity was associated with the cult of Christ the Healer, and under the Byzantine emperors the practice of medicine passed into the hands of the Church, and priest and doctor became the same. The approach of the Byzantine 'doctor' was that disease was a punishment resulting from sin. A number of saints were invoked against special disease. The lack of archeological remains means that the medical practices of this era are shrouded in mystery. The seventh century saw the rise of a new Mediterranean power which originated in Arabia. By the eight century all of North Africa and part of Western Europe was in Arab hands,

with the conquest of Malta by the Arabs occurring circa 870 AD.

f lumbar vertebrae found in a Roman grave showed marked lipping round the upper and lower margins of their bodies - a feature typical of chronic osteoarthritis, probably a result of repeated strain, particularly compression of the backbone from humping heavy loads. The Roman period also provides us with the first written document relating to medical disease on the Islands. St. Paul was shipwrecked on the Island along with the evangelist Luke (a physician), who documented illnesses prevalent on the Islands. Perhaps most significantly is his recording of the presence of dysentery with fever.

*David Cassar*

Although the Arabs left an indelible mark on our culture and language, it is unfortunate that their contributions to medical practice in Malta have been lost to time. Having said that, the advances made by the Normans, Angevins and Aragonese were often influenced by Arab practices, and the recordings of the latter provide an indirect testimony.

A characteristic feature of these medieval overlords of Malta, was a growing interest in public health. Ordinances published by Roger II and Frederick II laid the foundations for improvements in sanitation, with regulation of the disposal of waste material in ditches outside Mdina, and the burning of plague-infested cargo. Later the Knights Hospitaller would expand on this, improving the quarantine and burial practices used to control the numerous epidemics of cholera, small pox and scarlet fever which plagued the Islands.

Medical practice was very much a Church-run business, with the learned clergy mostly contributing to daily medical care. This was increasingly standardised by the Knights Hospitaller, who would found the Sacra Infermeria and provide the first pseudo state-run health service providing bedding and white bread for all poor patients, and even executing their last wills and testaments.

The Knights also improved medical education, with Grand Master Nicolas Cottoner founding the Chair of Anatomy and Surgery in 1675 and amassing a library of pertinent literary works. Pharmaceuticals were increasingly being used by the Knights. They often used both New World plants and local herbs to produce cheap medicines. A poignant example is the use of *C. coccineum*, a mushroom from Fungus Rock, to treat dysentery, ulcers and even irregular menstrual bleeding.

Surgery had a rockier medieval history, with the Council of Le Mans in 1247 forbidding clergy from "cutting" and "burning". This meant surgery fell into the hands of less skilled lay physicians, although many Jewish practitioners took up the craft until their banishment in 1493 left a void, filled once again by the Knights. Much of the surgery practiced was gynaecological, with midwifery and assisted delivery instrumentation growing rapidly and at times exceeding standards elsewhere in Europe. Examinations of skeletal remains show that dental and orthopaedic care was also well advanced, whilst rheumatological and vascular treatments still left much to be desired.

However, perhaps the greatest contribution to medical practice made in the medieval era, was most surprisingly, the advancement of the concept of patient-centred care, a particular priority for the Knights as already shown. Medicine was taken out of the realms of theory and experimentation and placed firmly in the real world, anchored by a humanistic drive which remains the cornerstone of modern practice.

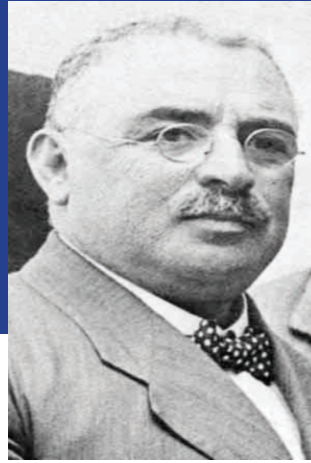
*Sander Grima*



# Discoverers: Charting a new horizon

## A history of Maltese Discoveries

▶ Sir. Temi Zammit



### Sir Temi Zammit and Brucellosis

Sir Themistocles Zammit, or as more commonly known, Sir Temi Zammit, specialised in bacteriology in London and Paris after graduating in medicine. He was a doctor, scientist, chemist, writer, academic, archaeologist and statesman, and is mostly renowned for the discovery that contaminated milk acted as the vector for the transmission of brucellosis (*B. melitensis*) to humans. He was a very accomplished scholar and for a period of time he was also the Rector of the University of Malta.

Initially, Sir Temi Zammit thought that the transmission of Brucellosis was through mosquitoes. After proceeding with infecting two goats with brucellosis, and noting their unapparent infection with bacteria in their milk, urine and blood, he explored the possibility that milk could be the vector for the transmission of brucellosis. This discovery was vital for the elimination of undulant fever, and led to its almost total eradication and Dr Temi Zammit's knighthood.

*Suzanne Cauchi*

### Dr. Ćensu Tabone - The eradication of Trachoma in Gozo and other advancements in the field of ophthalmology

▶ Dr. Ćensu Tabone



Dr. Vincent "Ćensu" Tabone (1913-2012) made several important contributions in the field of ophthalmology and in the eradication of trachoma, which is an infectious disease caused by the bacteria *Chlamydia trachomatis*. It causes scarring of the inside of the eyelid which, if left untreated, caused damage to the cornea and led to blindness. Trachoma became endemic in the Maltese Islands when the British troops were brought to Malta from Egypt in 1802 and where Trachoma was also present. Dr. Tabone headed a campaign to eliminate Trachoma in Gozo. He used oral sulphonamides, sulfa drops and sulfa ointments as well as aureomycin and terramycin used topically and 2 years later, there were only 6 cases out of 721 left suffering from this disease.

Tabone strived to see Trachoma eradicated completely and insisted that the government supports a nationwide campaign which would involve screening and compulsory treatment to be offered free of charge.

Tabone was the first ophthalmologist hired by the World Health Organisation (WHO) as a consultant on Trachoma eradication. He travelled extensively to replicate his method by helping set up trachoma control programs and performing numerous surgical procedures. Dr. Tabone also noted the high relative frequency of

vitamin deficiency associated with keratomalacia, as another cause of blindness.

*Vanessa Mercieca*

### **Dr Joseph Borg & colleagues - Thalassemia.**

Thalassemia, is one of the commonest gene blood disorder in Malta. It occurs if either the alpha chains or the beta chains that make up haemoglobin are faulty, resulting in defected, abnormal adult haemoglobin. As a result, common effects of thalassemia are fatigue, shortness of breath and jaundice, amongst others. Some thalassemia sufferers even require frequent blood transfusions.

Maltese scientist Dr. Joseph Borg and his research team have conducted a breakthrough research that could provide a cure for millions of thalassaemic victims. In his study, Borg discovered a way to increase the levels of foetal haemoglobin, which can compensate for the non-functional adult haemoglobin. This can be done by preventing one key molecule from

causing a gene switch from foetal haemoglobin to adult haemoglobin, as normally occurs at birth.

Dr Borg hopes that in the near future, a medicine could become available which would inhibit this gene switch, and hopes that the result would be to get patients transfusion dependent.

*Stephanie Farrugia*

### **Professor Johann de Bono - The Maltese Story of Cancer Breakthroughs**

Cancer research has proven to be both reclusive and promising in the last decade alone, and the need for innovative curative treatments is sorely felt. As of publication of this edition of Murmur, the latest statistics from GLOBOCAN 2012 show that there were 14.1 million new cases of cancer in 2012 alone, and this is expected to rise to 19.3 million new cases per year by 2025.

It is expected of us to look into the ever-increasing pool of new cancer research

initiatives, which day-in and day-out struggle to find the cure for cancer. Amongst these many people sparks a Maltese talent, Professor Johann de Bono, described in a previous article of this magazine.

Born in Malta, a graduate of Glasgow University, and now the director of both the Drug Development Unit at the Institute for Cancer Research and Royal Marsden University, Professor de Bono is not lacking in the numerous awards and merits he has received in recognition of his work, and is currently involved in the development of treatment for advanced cancer patients – his newest project is that of molecular-targeted therapies. Such therapy is astounding in that unlike other cancer treatments, only cancer cells are affected by molecular-targeted therapy leaving healthy cells otherwise untouched. This is a potential goldmine in the medical world as it allows patients to retain the function of their normal healthy cells, whereas current chemotherapy although extremely helpful, has several unpleasant side-effects including gastrointestinal upset, hair loss, etc.

*Matthew Baldacchino*

▶ Dr. Joseph Borg



▶ Prof. Johann de Bono





# The Maltese and their Medical Maltese

By Daniela Tonna

It's another early Monday morning at Mater Dei, and the routine history-taking was first on the list. Looking around to find a friendly face which was not so intimidating, I spot an elderly gentleman, with a petite woman, supposedly his wife, sitting next to him. I make a beeline towards him, eager to fill in yet another sheet of questions. Introductions, name-taking and smiles were first on the list, followed by some history-taking.

This elderly gentleman told me, "Kelli affan qawwi, speċjalment peress li nżertajt kelli ċmajra, u t-tabib baġħni mill-ewwel l-isptar". Being Maltese, I would expect to understand this quite easily. But this was not the case!

These medical Maltese words are seldom used within our generation and often tend to refer to something common in nature. Some expressions are simplified so much that they are compared to something used in everyday life.

Curiosity took over and looking up such expressions, with the kind help of Dr. Michael Spagnol, I discovered tens of new expressions and words, some of which are quite entertaining!

These are some of them:

## **Biswit il-Kelb**

Literal Translation: Close to the dog

Clinically referring to: Lymphadenitis (swelling of lymph nodes)

## **Rabarbu**

Literal Translation: Rhubarb (herb)

Clinically referring to: previously used as a laxative

## **Tappijiet**

Literal Translation: a plug

Clinically referring to: Suppositories

## **Taqliba**

Literal Translation: overturned, chaotic

Clinically referring to: gastrointestinal discomfort

## **Telgħetli boqqa**

Literal Translation: gagging on something eaten

Clinically referring to: Regurgitation

## **Xquq is-Safra**

Literal Translation: yellow cracks

Clinically referring to: cracked heels

## **Vixxi**

Literal translation: intestines

Clinically referring to: diarrhea

## **Ħżieža**

Literal translation: small, bubble-like blisters

Clinically referring to: ringworm

## **Riħ Triq**

Literal Translation: Wind road

Clinically referring to: chapped lips

## **Affan**

Clinically referring to: difficulty breathing (dyspnea)

## **Ġbajjar**

Literal translation: Weak

Clinically referring to: an old form of anti-inflammatory medication

## **Ħġieġa tad-deni**

Literal Translation: glass of fever

Clinically referring to: thermometer

## *References*

L-Aċċent - Ħarġa nru 9 April 2013 - Id-Dipartiment tal-Ilsien Malti tal-Kummissjoni Ewropea

With the kind help of Dr. Michael Spagnol (Id-Dipartiment tal-Malti L-Istitut tal-Lingwistika)



# Cross-Border Health Directive and its implications

By Keith Pace

The word globalization has become one of the buzz words of these last two decades. And, it is hardly surprising, given the ease with which we can travel from one country to another and communicate with friends and colleagues all over the world. In this age of networking, the world has become a global village in which the same restaurant chains and retail brands can be found in practically every city in the world. With this in mind, we turn our focus to the European Union, where the concept of borders has become only a formality and freedom of movement is one of the pillars on which the union stands. One can imagine the huge amount of ramifications this has on international and national law across the board, including in the medical sphere.

In February 2011, the European Union approved the Directive on Cross-Border Healthcare. This was done with the aim of allowing European citizens, no matter where they live, to receive medical treatment across the EU, and to be reimbursed for it. The directive lacks details as to financing of health care and therefore may be applied to both the public and private healthcare setting. However, the reimbursement will not exceed the price paid for the treatment in the patient's own country. Any difference in price would have to be forked out by the patient in question.

Prior to this directive citizens could receive medical attention by benefiting from their national security scheme whilst in another EU member state. This required prior authorization and sometimes meant that patients would be denied treatment as the member states were only bound to grant authorization if care was necessary within a medically justifiable time limit which was too short for travel back to the respective member state. The new directive aims to tackle this by creating a framework for cross border healthcare. It focuses on the rights of patients to be reimbursed for treatment anywhere in the EU, without the need for prior authorization

from the respective member state. Moreover, citizens would have the right to make informed decisions about their treatment by consulting national contact points established under the new directive.

The directive's success is very much dependent on collaboration by all the member states. In October 2013 Tonio Borg, the European Health Commissioner, had said 'From today, all EU countries should have transposed the Directive on Patients' rights in Cross-border Healthcare, adopted 30 months ago, into their National law'. The reality is that few of the 28 member states have done so. This makes one wonder whether the directive is yet another hollow gesture with very limited opportunities actually being created for EU citizens. Unfortunately collaboration isn't a strong point of the European Union in the sphere of medicine. To illustrate this, one can look at the EU's legislation on drugs which remains a thready compilation of policies, with insistence from member states to retain their own national protocols. Similarly, the initiative to streamline clinical trials in the EU is also facing many challenges as members once again prefer to retain their national procedures. One could also hardly forget the Anti-counterfeiting Trade Agreement (ACTA) which threatened to strengthen monopolies of multinational drug companies in developing countries, by stifling generic competition.

If collaboration is achieved the directive has the potential to be a huge milestone in terms of freer movement of patients, and data within the European Union. The EU now stands at a deciding point on whether this opportunity can truly be seized. One can only hope that the best interest of, not only that today's patients, but also that future generations of patients, is kept in mind.



By Leonard Callus, Gabriel J. Ellul and Matthew Pizzuto

# Our Association, Our History

The Malta Medical Students' Association (MMSA) was established in 1951 and is one of the oldest student associations found at the University of Malta. Before 1951, it was known as the Maltese Branch of the British Medical Students' Association. This organisation was created not only to represent the Maltese medical students but also to improve the Maltese public health system and the Maltese society's way of life, especially with regards to marginalized communities. Through the years, it managed to attract more members and organize itself much more than other student organisations found at the University of Malta, arguably becoming the most active student organisation for the past 10 years. In order to collect information about the history of the MMSA, we asked doctors who were active in this student organisation during their years as medical students. Some of these doctors formed part of the MMSA more than 20 years' ago, while others have recently graduated and have just started their career as doctors or undergoing their foundation years.

The following are the doctors who kindly helped us write this article:

- Prof. Alex Felice – MMSA President in 1971. Graduated as Medical Doctor in 1971
- Dr. Joe Cassar – MMSA President. Graduated as Medical Doctor in 1990
- Dr. Jean Karl Soler – Medi-Scope journal editor and mostly active in his third year. Graduated as Medical Doctor in 1990
- Dr. Pierre Schembri-Wismayer – MMSA President in his 4th year. Graduated as Medical Doctor in 1991.
- Dr. Pierre Mallia – MMSA Vice President. Graduated as Medical Doctor in 1992
- Dr. Calleja-Agius – MMSA Editor of Murmur in 1996 and Medical Education Officer. Graduated as Medical Doctor in 1999.
- Dr. Ann Victoria Farrugia – MMSA Public Health Officer 2010-2011 and MMSA President 2011-2012. Graduated as Medical Doctor in 2013

We would like to thank these medical doctors for sharing their experiences with us and thus helping us write this article.

## Activities

As time passed, MMSA came up with new events and campaigns, some of which were first organised by the doctors interviewed for this article. It is interesting to note

that these events still occur today and have been improved by newer generations of MMSA members.

Almost all the doctors that were interviewed mentioned that MMSA was always popular when it comes to organisation of leisure events. Dr. Schembri-Wismayer, Dr. Cassar and Dr. Mallia told us that what we today know as "Il Ballu" was known as the Carnival Party during their time. Each and every faculty at University organised its own main leisure event during different times of the year and used to invite the students from the other faculties. The Faculty of Engineering used to organise the New Year's Eve Ball and the faculty of Architecture used to organise a musical activity known as Ġeblastona. According to Dr. Mallia, the Carnival Party used to be organised in Gianpula and hundreds of students from different faculties used to attend.

Sports Day is of paramount importance to the MMSA because it is one of the main events by which we can promote a healthy lifestyle through physical activity. It is interesting to note that the MMSA Sports Day was first organised when Dr. Joe Cassar was active in the MMSA, way back in the 1990s. Dr. Pierre Mallia also said that this event was once joined with another event: the MMSA University Clean-Up. He explained that during this event, which preceded the MMSA Sports Day, MMSA members once managed to gather fifty bin bags full of garbage and sent a picture to the Times of Malta to show what they had achieved.

Before the start of our Christmas holidays, the MMSA nowadays organises a Christmas party for consultants, the MMSA Board of Directors, secretaries and coordinators,

together with lecturers and consultants. It is interesting to note that this event was started by Dr. Pierre Mallia himself and was intended as a token of appreciation for the work done by the lecturers and consultants in the teaching of medical students.

MMSA was responsible for organising student exchanges and electives from way back in the late 1960s when Prof. Felice was part of MMSA. He also explained that in 1972, MMSA even hosted the IFMSA (International Federation of Medical Students' Associations) Winter Meeting here in Malta.

Dr. Schembri-Wismayer told us that at first, international exchanges were restricted to European countries. MMSA members used to sign contracts with other IFMSA members that allowed Maltese medical students to go for international exchanges in different countries. Dr. Calleja-Agius mentions that during her time, the countries that offered us exchanges and electives were increased. In contrast, nowadays, MMSA organises exchanges and electives to far away countries such as China, Japan and the U.S.A.

MMSA was always at the forefront when it comes to improvement in the quality of education given to medical students. Dr. Schembri-Wismayer claimed that he was the first to start an education feedback system in order to improve the quality of the education given to medical students. During his time, it was difficult to organise this because computers were still relatively new, but they still managed to collect feedback forms manually from each student and present the results directly to the Dean.

Dr. Calleja-Agius founded the SCOME branch of MMSA whilst Dr. Farrugia as Public Health Officer initiated two important Public Health Campaigns: the Mental Health Campaign and the Climate Care Campaign. Both these campaigns are still organised today under the Standing Committee for Public Health (SCOPH) and improved throughout the years. Dr. Calleja-Agius mentions that during her time as Medical Education Officer, MMSA was invited to Xarabank to discuss the role of MMSA in sexual health education amongst young people.

Last but not least, MMSA was responsible for several publications, some of which are still done today. Dr. Felice told us that MMSA used

to create a medical journal known as The Chesspiece. It was first published in 1948 (before MMSA was originally founded) with Charles Xuereb as its first editor. The journal served to promote contributions from both medical students and qualified practitioners on various aspects of medical practice, a role quite similar to that of Murmur. It was last published in 1979. According to Dr. Schembri-Wismayer, Murmur was then first published during his period as a medical student and new issues continue to be released on a yearly basis. In 1997, Dr. Calleja-Agius was the editor of Murmur.

### **Passion, Involvement and Medical Student life**

Being involved in MMSA can be sometimes viewed as something which "comes naturally", as highlighted by Dr. Mallia, or else by a desire to get involved, as stated by Dr. Schembri-Wismayer and Dr. Felice. Dr. Farrugia mentioned that she wanted to get involved from the Training and Resource weekend (a weekend which is still done every year) whilst Dr. Calleja-Agius became interested after hearing about MMSA from 5th year medical students.

MMSA is an organisation which is always interested in the social aspect of university, not just the academic aspect, states Dr. Cassar. All seven doctors said that being involved in the MMSA was something they did with a passion, because they believed in its potential.

Dr. Felice mentioned that way back in the 1960s and early 1970s very few students took an active role in it although they were very active members. This thought is reinforced by doctors who graduated in the 1990s (Dr. Calleja-Agius, Dr. Schembri-Wismayer, Dr. Cassar and Dr. Mallia). As time went by, the number of medical students gradually increased, leading to MMSA we know today.

According to Dr. Farrugia, about half of the medical students took part in one way or another in MMSA events and its organization. All six doctors also mentioned the fact that MMSA was student-centred and entertaining. Dr. Soler mentioned that it was the Mediscope, the medical student's journal which made him become more involved in MMSA whilst Dr. Calleja-Agius was the editor of

Murmur back in 1996-97.

The MMSA board was made up of only 5-7 people back during Dr. Felice's time. This number rose to 10 in the 1990s, as pointed out by Dr. Mallia. After the turn of the century, the executive board had grown to 13. And at present there are 15 members on the board of directors, and 3 supervising council members.

The medical course is not an easy one and some may wonder as to how people manage to get involved so much in the MMSA, as well as pursue their studies. Even back in the 1960s, as illustrated by Dr. Felice, MMSA gave students a sense of leadership, something which would be beneficial in their careers as doctors in the future. Dr. Mallia said that the being part of MMSA and its different committees gave them certain skills, such as working within one team for a common goal. They deemed this to be useful when they graduated and worked as part of a multidisciplinary team.

MMSA also gave medical students the chance to meet other fellow medical doctors from around the world. As Dr. Schembri-Wismayer pointed out, MMSA organised, and still organises, exchanges abroad, gives students an opportunity to do research, both locally and abroad, and makes students more aware of the importance of feedback.

Dr. Calleja-Agius admits that the idea of going to elective programmes was very appealing and she went to five different electives during her time as a medical student. Dr. Cassar emphasized this point by saying that the MMSA gave students a new dimension to their student life at university. Dr. Farrugia remarked that MMSA helped her develop practical skills, such as taking blood pressure, and helped her develop more holistically. She said that the outreaching activities helped her improve her communication skills with the general public, as well as to positively contribute to the health of the Maltese public.

# from **one** heart TO THE **OTHER**

By Melise Mifsud

Being medical students, one of our wishes is surely that of saving lives. Maybe we find ourselves imagining finding the cure of a rare disease, being the most efficient emergency doctor or maybe going in some country to help cure the poor. All of these dreams make us look like a hero. But few of us realise that these dreams can become reality right here and now! All you need to do is give some blood: it metaphorically goes from one heart to the other and truly saves thousands of lives.



## "I live healthy to give the best blood possible"

Ivan Brincat is an ex policeman and has been giving blood for the past twenty-five years. When interviewing him, Brincat stated that his aim in living a healthy lifestyle is to ultimately donate the best blood possible. He feels that this is part of his duty. After all, by doing this he is helping those who need him, which is ultimately what his job was about, explains Ivan Brincat.

For many years he used to take care of the new recruits and did his best to persuade them to start giving blood regularly. He used to accompany them when they went to give blood for the first time, so as to make them feel at ease.

He explains that the satisfaction felt after donating blood is incomparable to the prick of the needle. A small sacrifice may save many people.

## "They gave him blood upside down and saved him"

These were the grateful words of a couple whose son was involved in a car accident a few months ago. The accident was a horrible one. In fact the patient ended up upside down in his car-seat. There was no time to lose and he had to be given blood right there and then, at the site of accident.

This was the first time that blood was given outside a hospitalised environment in Malta. From this accident, the couple realised the importance of donating blood, especially if you are an O-negative, like the mother. This is the type of blood that saved their son. If no blood were available at the time, their son would have died. O negative is not only one of the rarest types of blood, but it is also a universal donor given to all people independent on the type of blood they has. The couple decided to start donating blood, putting aside

their fear and everything else that was holding them back. In fact when I met them, it was their second time donating blood and they were determined to continue doing it as long as possible.

## "The results proved that she was anaemic... blood donations have helped her these past four years"

In the hottest months of our typical Maltese summer, Tania Micallef's six year old girl, started shivering. The incident happened in August, and she was feeling cold. Urgently she had to be rushed into hospital and given blood as her iron levels were too low. She is now ten years old, and has been receiving blood regularly in order to be able to manage her condition.

Her mother Tania feels grateful towards blood donors. Being a donor herself she feels that it is everyone's duty to donate blood.

## What do you prefer to donate: Blood or money?

I took the initiative of doing a brief survey to see what Maltese medical students prefer to donate, whether they prefer to give blood or whether they would rather give money. Out of a 100 medical students, 61 answered that they would prefer to give blood. The other 39 chose to donate money.

# Helping People. CHANGING LIVES.

Some medical students often choose to travel overseas as part of a group of voluntary workers, to aid those less fortunate than us. *Shana Marie Buttigieg* interviews four of these volunteers, so as to hear what they had to say about this life-changing experience.

## Q: Where did you go and for how long?

I went to Catania for a 1-month long summer camp for children coming from poor or difficult backgrounds, organized by the Missionaries of Charity (Sisters of Mother Theresa of Calcutta) and the University Chaplaincy.

## Q: While most of the medical students choose to go for an exchange/elective, you opted to go abroad and do voluntary work. What led you to this choice?

I had long been hearing from family and friends about how fulfilling such an experience could be. I wanted to broaden my horizons and step out of my comfort zone, and I wanted to be useful and share what I could with others. This experience also involved living with a group of people coming from different University courses or professions and whom I did not know prior to this experience, as opposed to an exchange/elective which can be done individually or with friends and people with a similar background. This was another challenge that I chose to face

## Q: How did you prepare yourself for this experience?

As a group we had several meetings and fund raising activities before we went abroad. We had a lot of preparations to do regarding the activities for the summer camp. Personally, it also involved a lot of reflection and mental preparation – before going there I had many doubts and uncertainties about whether I had made the right decision and if I was going to be able to work with the kids and the rest of the people involved in a successful way.

**Name:** Rebecca Borg



## Q: Did you meet your expectations?

My expectations were met, and exceeded!!! It was a marvellous experience, fun and mind-opening. I made new friends, I absolutely loved working with the kids (though at times terribly demanding!), and I observed the love and care the Missionaries of Charities put into their work with the poorest of the poor.

## Q: Name a particular event/situation that you will remember from this experience?

There are several lovely moments and memories to cherish. I cherish the day when I helped out in the 'mensa' (soup kitchen) organized by the sisters for the poor and homeless of Catania. Or the daily coach trips to the beach with the kids, with all the noise and singing. Perhaps one of the most touching recollections was a morning assembly when we volunteers shared our dreams and aspirations with the kids and the kids, ranging from the very young to the adolescent ones, shared theirs. It was moving to see their hopes for a better future, to see them wanting to be better than the grown-ups they see around them.

## Q: Is there something you wish you had known before going on this trip?

Not really. It was a good experience, including any surprises I found out on the way!

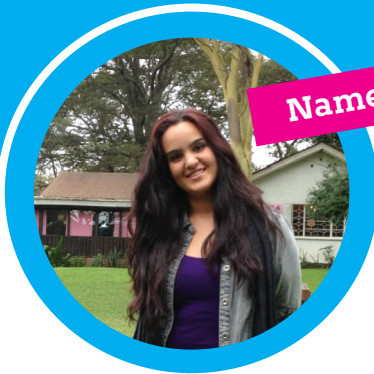
## Q: Do you suggest this experience to other medical students? Why?

Yes, definitely. It is an experience that makes you aware of a world that is outside of what we normally see, it helps you grow as a person, helps you reflect on a great number of things, and helps you develop a lot of social skills. All of this I think is a great asset to becoming a good doctor. And it was also a fun experience, discovering new cultures and places.

## Q: What do you advise to those who are thinking about doing voluntary work abroad?

I would say go ahead, it is, without doubt, a worthwhile experience. Look out for opportunities offered; there are various groups that offer such possibilities. Joining a group may be a help to organize things and to ensure a safer experience. Choose a type of group that you think you can work in, but don't be afraid of testing your limits a little. Prepare yourself beforehand from here, mentally and also regarding the activities that you will be doing once abroad. And then once there, enjoy it as much as you and give it your all! You'll come back a bit wiser, a bit happier, and with a great wish to do it all over again!





**Name:** Thea Dimech

**Q: Where did you go and for how long?**

I went to a city in Tanzania called 'Arusha'. I was there for two days, shy of a month.

**Q: What did your work involve?**

I helped out at a clinic, depending on where I was needed. Most mornings I helped out at the lab where I drew blood, helped with Widal testing or helped prepare slides with blood smears to test for Brucella and Malaria. In the afternoons I either assisted in minor surgery or helped out in the clinic rooms, where the patients saw a doctor for the first time and were assessed.

**Q: While most of the medical students choose to go for an exchange/elective, you chose a different kind of experience. What led you to this choice?**

I am very much fascinated by humanitarian aid. It takes a great deal of skill and dedication to be able to organize such a large group of people and resources to provide aid during disasters; be it poverty, war or natural phenomena. One day I would very much like to be part of such a movement and volunteering seemed to be a good way to start.

**Q: How did you prepare yourself for this experience?**

In my cringe worthy case– I didn't. Prepare myself, that is. I applied to an online organization which acted as a 'middle man' to TVE (Tanzania Voluntary Experience) – the organization which placed me in the clinic one random day at 11pm in June. It was therefore, a very much spontaneous decision, despite

the fact that I had mulled it over for a very long time. That placed me about six weeks before I was due to leave on the second of August and I still had to get my visa and flight tickets fixed. And my vaccines. My passport and visa arrived two days before I was to fly out. After that I went out and bought the biggest SPF 60+ sunblock I could find, DEET spray, and every medicine I thought I might need.

In retrospect, I would not do this again, much of the stress and hassle could have easily been avoided had I been better prepared but at least it makes for a great story during parties.

**Q: Did you meet your expectations?**

The experience greatly exceeded my expectations, I just wanted to see if voluntary work was for me, I did not expect for the whole experience to affect me so much. Some of the volunteers I met are the most amazing people I have ever had the pleasure to encounter. I made friends with some great locals who worked at the clinic and was greatly humbled by the patients who came to the clinic.

**Q: Name a particular event/situation that you will remember from this experience?**

A fellow volunteer, who was working at an orphanage and asked me if the clinic would have a look at one of her boys who had suddenly stopped walking, became very shy and stopped interacting with other kids. I asked the Doctor who ran the clinic and he approved. The next day they got this six year old boy over. We discovered that the previous month he fell with his bike, his foot got caught on in the chain and by now his foot had swollen and was so painful he could hardly walk on it any longer. It was an accident that had happened because his family could not afford proper footwear. If treated immediately, even with a simple bandage and proper cleaning,

a lot of complications could have been prevented. It was very frustrating seeing how not having enough money for a proper pair of shoes could possibly end up in this six year old losing a foot. Luckily, it did not come to that. Some local anesthetic, proper debridement and some sutures did the trick and the little cutie was up and about a week later like nothing had happened.

**Q: Do you suggest this experience to other medical students? Why?**

I would suggest this experience to anyone and not only to medical students. I think being born in one of the 'richer' societies gives us a false sense of entitlement from the universe. I used to believe that if I behaved a certain way and I worked just as much, then I needed to be rewarded. I think our society enables this line of thinking. We expect that to work a forty hour week means that you can afford to eat. We expect free healthcare to be our right so much so, that we complain if it does not meet our standards. We know that access to clean water is our right, and as such we expect this to always be available just because we deserve it. To me, the idea that somewhere, there is a man who works twelve hour days, seven days a week and still struggles to feed a family of three was surreal. The idea that patients walk for three hours and sat in the waiting room for another two to test their three month old for Malaria, just boggled my mind. The realization that the universe does not magically align itself for everyone who works hard so that they can have, even the barest of human needs really left an impact on me. I think it is this false sense of entitlement which enables us to forget that we are obliged to help those in need. Once you truly see and believe that other people may be doing the best they can and barely getting by in life, it becomes more difficult to ignore the need to help others.

**Q: Where did you go and for how long?**

In 2009 I spent 2 weeks in Naples and in 2010 I spent July in Catania. During both summers I worked with a group of Maltese volunteers together with the Missionary of Charity sisters. Our work involved organising a summer camp for the street children.

**Q: What did your work involve?**

On a daily basis our work involved taking the children to the beach, having lunch with them, doing crafts indoors, taking them to the park and playing outdoor games. We also used to help out in the soup kitchen, where the Missionaries of Charity used to feed the adult homeless people. These people used to be dirty, shabby and unappreciative many times, but despite that the sisters never ceased to show them love.

**Q: While most of the medical students choose to go for an exchange/elective, you chose a different kind of experience. What led you to this choice?**

I always wanted to do voluntary work. People have given so much to me during their lifetime - my family, educators, friends, so it was my turn now to use some of my time for others. I thought that since I would eventually be working at the hospital for the years ahead, I just grabbed the opportunity and left for voluntary work. It's easy as a student, with work commitments it becomes a more complicated process

**Q: How did you prepare yourself for this experience?**

This included planning meeting in Malta, preparation of craft material and coordination of the groups.

**Q: Did you meet your expectations?**

I didn't expect much since I had never been on voluntary work before. So I was open to whatever was going to happen. I was initially shocked by the social difficulties I was faced with. When I think of Italy, what comes to mind is usually the history, coffee, culture, art and passionate people that it is so famous for. But when I met the street children, I was truly shocked. These children had no families, or if they had, they had to struggle to live with them. Many of them had siblings stealing from shops or already in prison. I wasn't prepared for that. I wasn't prepared to find such a life in a European city so close to Malta.

**Q: Do you suggest this experience to other medical students? Why?**

Yes of course. I would recommend this experience to everyone including all students! Take the opportunity, look around, there are many!

As for medical students, yes, I would strongly encourage voluntary work. You will be working with people on a daily basis. Develop your skills at being patient, kind, a good listener and perseverance. It's not just about how much theory you know. There are many aspects to becoming a good doctor, and that includes learning to be truly humane. You will meet a wide range of characters during your career and with them come different attitudes, and you will need to know how to deal with them. Every experience teaches you so much.

**Q: What do you advise to those who are thinking about embarking on a similar type of work experience?**

Look around, help out a little. There's need for helping hands locally too! May it turn out to be a very enriching experience for you all :)

**TIPS**

**1** Get all your vaccines and possibly malaria pills in order (Hint: the people at the 'Immunisation Unit' at the Floriana Health Centre are really helpful and excellent at their job and will even look up exactly what you need according to where you are going.)

**2** Photocopy every piece of important documentation and keep copies of you in every piece of luggage. That is passports, visas, Maltese embassy address, credit cards, etc...

**3** Chances are you have a long trip ahead. Pack a travelling blanket. Airports are often cold and sleeping in transit time can be challenging.

**4** Learn how to start a fire.

**5** Be prepared to immerse yourself in a different culture even if it means eating things you've never eaten before or catching questionable methods of transportation.



**Name:** Dr. Anne Fenech M.D.

**Voluntary work:** In 3rd year and 4th year, summers 2009 and 2010

by Thea Dimech

**6** Do not make friends with any farm animals which unexpectedly show up tied up to the front door. Hint... Most don't make it past dinner time. (I'm so sorry Lilly the Goat...)

**7** Oral rehydration solution and probiotics... Diet changes can cause you to run faster to the bathroom than you had ever imagined you can.

**8** If you can, ask beforehand what donations the orphanage/ clinic / school you will volunteer in needs. Pencils, cotton wool, drawing books - all consumables may be needed!

**9** Pack clothes you're willing to leave behind - you may meet people who need them more.

**10** Expect to learn how much of nothing you know, every day.

**Q: Where did you go and for how long?** I went on a voluntary work experience in Addis Ababa, Ethiopia, which lasted for three weeks.

**Q: What did your work involve?**

My work involved working together with other volunteers in the Mother Teresa Home of the Dying run by the Missionaries of Charity, looking after bed-ridden and ill homeless people by doing basic general services such as wound-dressing, feeding, hairdressing, and giving individual care. I also helped in looking after children with cerebral palsy, and babies, and also spending some of my time with the orphans residing in Kidane Meheret Children's Home run by Franciscans of the Heart of Jesus, by organizing games, and generally giving them the attention they need.

**Q: While most of the medical students choose to go for an exchange/elective, you chose a different kind of experience. What led you to this choice?** My original plan for Summer 2014 was to go on an elective. I've always wanted to do voluntary work abroad, especially in countries where people are in desperate need of hope, but I kept putting it off, thinking that I'll be better prepared for such an experience in the future. However I figured that now is the time to act; to invest in my youth, and with my last summer as a student hurtling towards me, I felt that I had no choice but to abandon other plans, and give it a higher meaning. The ways of the world sometimes seem to revolve around the idea of 'survival of the fittest'. In a competitive world such as medicine, it is easy to forget to be humble, and that we are all part of the same thing in the end. I believe that we are all connected, and that we need to become more aware of how to use our potential in order to aid those who are almost forgotten from the world and live in extreme poverty.

**Q: Do you suggest this experience to other medical students? Why?**

I think every student should do voluntary work, as it not only makes one more altruistic but also one learns how to live in simplicity. With regards to medical students, being a volunteer in a ward full of sick patients with nothing but gauzes and bandages to clean their awful wounds will truly prove to be an intense experience. I realized how truly blessed we are with regards to our health care system. I used to have a hard time coming to terms with the fact that these sick people needed hospitalization; but hospitals there don't admit terminal patients; instead they leave them dying in the streets. The sisters of Mother Teresa are truly beautiful people; they dedicate their whole lives attending to these dying patients, giving them at least shelter, food, and some dignity.

**Q: Do you think that this experience will change you as a person? If so, in what ways?** Our experiences in life shape who we become, and I hope that this one will help me to grow as a person, because although I will be giving my time and energy to people there, I believe they will give me much more in return in terms of learning about the essential things which really matter, and also about their different culture and way of life. I also hope that this experience will inspire me to carry out further similar projects on a larger scale in the future, together with other people with the same ideals. Finally, I think that what makes a good doctor is not just the acquisition of accurate medical knowledge and experience, but it also is to be a maturely developed person ready to take that step further and humbly understand patients and what they go through.



Name: Stephanie Grech

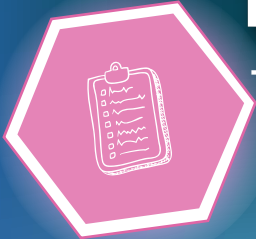


MMSA

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TRAINING & RESOURCE DEVELOPMENT WEEKEND



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