



## Prof Christopher Exley PhD FRSB

### Systemic Toxicity of Aluminium Adjuvants

Professor in Bioinorganic Chemistry at The Birchall Centre, Lennard-Jones Laboratories, Keele University Group Leader – Bioinorganic Chemistry Laboratory  
Honorary Professor, University of the Highlands and Islands

Prof Christopher Exley is a Biologist (University of Stirling) with a PhD in the ecotoxicology of aluminium (University of Stirling).

His research career (1984-present) has focussed upon an intriguing paradox; “how come the third most abundant element of the Earth’s crust (aluminium) is non-essential and largely inimical to life”. Investigating this mystery has required research in myriad fields from the basic inorganic chemistry of the reaction of aluminium and silicon to the potentially complex biological availability of aluminium in humans. He is also fascinated by the element silicon in relation to living things which, as the second most abundant element of the Earth’s crust, is also almost devoid of biological function. One possible function of silicon is to keep aluminium out of biology (biota) and this forms a large part of the research in his group. They are also interested in biological silicification.

He is the author of over 100 articles including ‘Aluminium and the Human Brain’, ‘The Immunobiology of Aluminium Adjuvants: how do they really work?’ and ‘Silicon-rich mineral water as a non-invasive test of the ‘aluminium hypothesis’ in Alzheimer’s disease’.

Website: <http://www.keele.ac.uk/aluminium/>

Medical Blog: <https://www.hippocraticpost.com/?s=Exley>

#### **Abstract - Systemic Toxicity of Aluminium Adjuvants**

Aluminium adjuvants used in vaccines and immunotherapy are excellent advertisements for the aluminium industry. They sit nicely in the category of something which has been used widely over many years without any clear and obvious safety concerns. The aluminium industry and its evangelists love to tell us that since (as Dr Exley says) aluminium is found in every cell in the human body then it must be an essential element for life.

Our team at Keele University began to research aluminium adjuvants about 10 years ago as it was very clear in the vaccine literature that vaccine experts had no real idea how they functioned. They knew what effect they produced, that they were cheap and that they were considered safe. Our research has been focusing on their mode of action, why they are so effective as adjuvants in stimulating an immune response and whether or not they may be responsible for known serious adverse events following vaccination. We are making slow but sure progress and in this presentation you will hear what we have discovered to date.



**Mrs Rebecca Dutton**

**Scoliosis, Spinal Surgery and  
Metal Allergy**

Rebecca Dutton is a member of the MELISA Diagnostics team.

She worked in dentistry during the 1970s and was occupationally exposed to mercury. Her daughter was exposed to mercury in utero and developed syringomyelia and scoliosis.

In 2014, Rebecca was appointed lead activist to represent the UK in the Global Minamata Treaty, to ban mercury pollution. One of the successful outcomes, is the new EU regulation to ban dental amalgam use in children under 15 and pregnant and nursing women. This came into force in July, 2018, in 28 EU countries including the UK.

Rebecca runs two websites: [www.understandingscoliosis.org](http://www.understandingscoliosis.org) [www.mercurymadness.org](http://www.mercurymadness.org) and a support group. She is currently investigating the link between mercury exposure and scoliosis.

**Abstract - Spinal Surgery and Metal Allergy**

Idiopathic Scoliosis affects 2-3 percent of the population and in 80% of all cases no aetiological causes are identified. It is likely that the aetiology is multi-factorial. In this talk a series of cases are presented in which the majority of patients who have undergone scoliosis surgery have also been found to be allergic to their spinal hardware, both clinically and based on laboratory testing using a Lymphocyte Transformation Tests assay. The talk explores whether one of the underlying causes of

scoliosis was indeed exposure to metals in the first place and the impact of using metal rods in a patient with pre-existing metal allergy.

Understanding aetiological factors in scoliosis may help shed light on ways to reverse the changes and to ameliorate the lot of patients suffering with this long-term disabling condition. Drugs and surgery merely mask the problem or address the symptoms without addressing the cause. We put forward the case for routine preoperative metal allergy testing, especially for patients with a history of metal exposure or allergy to improve patient care and quality of life. A number of case histories will be presented as examples of how non-surgical treatments or the use of non-metal spinal hardware may serve as a viable alternative intervention for some patients.



**Dr Jose Mendonça Caridad, MD  
DMD PhD**

**Titanium: An Emerging Allergen**

Jose Mendonça Caridad is the director for the Head and Neck Surgery Unit, Adult Stem Cell Therapy Unit at POLUSA Hospital in Galicia, Spain where he is involved in both clinical practice and research. He is president of the NGO Surgeons of the World, focusing on the development and practice of Head and Neck Surgery in Africa.

He received his medical degree from Santiago University in Spain where he later completed a master's degree in microbiology, continuing with stomatology residency at the same university (DMD). After some time as a rural physician he followed a fellowship in Maxillofacial Surgery at UCLA with a special interest in orthognathic and reconstructive surgery and research into facial biomechanics. As a result of this he was awarded "Cum Laude" in his doctoral thesis (PhD).

Jose has been a university lecturer in oral surgery for both pre- and post-graduate programs and has lectured and published extensively on the topic of metal free regenerative surgery. He pioneered adult stem cell therapies in head and neck surgery and published the first paper on stem cells for advanced diseases such as radionecrosis and tissue regeneration.

He is a member of such notable medical associations as the American Association of Oral and Maxillofacial Surgeons, the International Society of Metal Free Implantology, British Society for Ecological Medicine amongst others. He is also a consultant in aeronautical medicine.

**Abstract: Titanium an Emerging Allergen**

In recent decades, Titanium has been used extensively and successfully in traumatology, oral surgery, dentistry, general surgery, cardiology and other medical disciplines. It has been considered a biocompatible and safe material with what appeared as supportive evidence from numerous studies. However, increasingly, a growing body of evidence is challenging the strongly held notion of titanium as an unassailable material in terms of its safety profile, especially in the context of an ever changing and toxic environment. Side effects such as hypersensitivity and corrosion are very much in evidence and well documented, but the relationship to chronic systemic disease remains vastly unknown. Furthermore, many other insults on human health have evolved in recent years and their effects on human physiology may be potentiated by the presence of metals including titanium. The high levels of food additives including titanium dioxide, as well as exposure to a vast array of electromagnetic fields may contribute to exponential injury when combined with metals placed in the human body. Infections, allergies, osteolysis, bone resorption, neuropathy, chronic pain, a number of other chronic inexplicable diseases are frequently reported by surgeons and dentists in connection to titanium.

The aim of the presentation is to describe the observations and insights regarding titanium based materials from a clinical and surgical perspective, showing new unpublished pathology as well as emerging integrative therapies designed to deal with these problems ranging from stem cell therapy and zirconia metal free dentistry to supportive nutrition and sunshine!

**Mr Simon Ellis MA, MBBS FRCS  
(Orth)**

**Selecting Implants for Metal  
Allergic Patients**



Mr Simon Ellis is an independent consultant in Trauma and Orthopaedic surgery, with a special interest in knee surgery. He is currently based in Kent and practices at the Kent Institute of Medicine and Surgery, The Spire Alexandra Hospital and One Ashford Hospital.

During his undergraduate training he was trained by Neil Thomas, Past President of the Knee Society. During this time with Neil he was taught arthroscopy and ACL reconstruction. Simon was then appointed Consultant Orthopaedic Surgeon to Maidstone and Tunbridge Wells NHS Trust in 1996. Initially as a general Orthopaedic Surgeon with an interest in knee surgery, but since 2001 he has specialised specifically in all aspects of knee surgery both soft tissue and replacement. Currently his elective orthopaedic practice is solely knee surgery.

In 2006, after visiting Professor Steven Howell, president of the International ACL society, Simon was able to share his knowledge and bring accelerated rehabilitation in ACL reconstruction to Kent with patients able to return to sport at 3-4 months following reconstruction. He is currently carrying out approximately 70 ACL reconstructions per year on both recreational and semi-professional athletes.

The majority of Simon's current clinical practice is the management of knee arthritis. He currently performs approximately 130 knee replacements per year with a high patient satisfaction rate. All joint replacement patients are entered into the National Joint Registry in accordance with current guidelines.

Simon remains an active member of the South East Knee Study group. This comprises expert knee surgeons from South East England and provides a forum for discussion of difficult cases.

### **Abstract: Selecting Implants for Metal Allergic Patients**

With the ever ageing population there is an ever-increasing demand for joint replacement. The advances in materials science have resulted in a wider of choice of prosthesis. The early 2000's saw the advent of metal on metal hip replacement which appeared in vitro to be more likely to give better long-term results however in vivo this resulted in catastrophic failure due to metal ion release. This has heightened awareness of the orthopaedic community to metal allergy and over the last 10 years it has become apparent that there is a group of patients for whom conventional joint replacement using stainless steel components containing nickel is inappropriate. The focus of this presentation is to review the evidence for the effects of metal allergy for patients undergoing joint replacement. Furthermore it examines the appropriate investigation to identify metal allergy. Finally consider the alternatives to conventional prostheses with a review of outcome data for these alternatives to provide reliable solutions for this cohort of patients. This presentation will review the published data and review the outcome of these alternatives in the National joint Registry in order to give advice for clinicians involved in the management of this group of patients who require prosthetic replacement.

