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Obituary

John Clark 1951–2004

Bruce Whitelaw
Department of Gene Function and Development, Roslin Institute, Scotland, UK

The death of John Clark last year has science of a great leader. He was a visionary man who made substantial contributions and John's legacy in animal bioscience and biotechnology confirms him as a world leader.

I first met John in 1986. He was on one side of the table and I was on the other; my interview for a job in his group. Right from the start John encouraged me in my work. This ability to support people was one of John's hallmark traits. Many have passed through John's group – many have benefited from his support. Indeed, he has encouraged people within and out with his group and was always welcomed by colleagues around the world.

John is widely known for leading the pioneering work on animal bioreactors. This work was based on the simple premise that proteins needed to treat human disease could be produced and harvested from the milk of transgenic animals. Those of us involved in this project will remember with pride these exciting times. In addition to progressing the state of the art with regards to transgenic livestock, John also saw the opportunity for commercial exploitation of this technology. Indeed, John's foresight placed him at the vanguard of combining research grant and commercial funding of science. Although now more common, in the 1980s there were few labs that successfully linked these complementary funding sources. The pharmaceuticals in milk work provided the intellectual basis for the establishment of PPL Therapeutics. The rigours of the commercial world have lead to the closure of PPL Therapeutics but the concept is still actively promoted by other companies around the world. It is sad that John wont see the concept all the way through to commercial reality.

This project established John Clark as a leader in animal bioscience and biotechnology. He believed in the potential that molecular genetics and gene transfer offers. John was excited about the potential of GM livestock but was aware of the technical limitations of the current methodology. Work in his department lead to the development of the nuclear transfer technique, spectacularly generating Dolly the sheep. The resulting cloning debate missed the reason why nuclear transfer was developed. Having a cell-based system to produce animals allows the sophisticated molecular biological techniques of gene targeting to be used; and this is exactly what John did, demonstrating that gene knock-outs were possible in sheep.

True to form, John was quick to realise that one of the main legacies of nuclear transfer was not in the cloning of animals but rather the concept that one cell type could be reprogrammed to become another. Thus, opening up the truly exciting opportunity of novel cell therapy strategies. Characteristically one of John's last ventures again demonstrated his acute awareness of what was exciting and daring in science. He responded to the news that the first human embryo stem cells had been derived, by developing his own research projects to use those lines.

John Clark was ever open to embracing the potential of new methods and how they could be combined to advance science and it was no surprise that he was repeatedly recognised for his contribution to science. Most notably by being awarded an OBE in 1997 and elected a Fellow of the Royal Society of Edinburgh in 1999. John had an impressive career development from post-doc in the early 1980's to Institute Director 20 years later. For many of us John was destined to great things and it was no surprise when he was appointed Director of Roslin Institute. Indeed, he was destined to go on to greater things in science. It is sad loss that we will not see this potential fulfilled.

John demonstrated many of the key traits needed to be successful in science. He was alert to new ideas, which he combined with imagination. He certainly had a sense of adventure and his enthusiasm empowered his colleagues. Then again he would not shrink away from tough decisions. Those who worked with John Clark, learnt a lot from him. His acute knowledge of the present enabled his perceptive foresight to see the benefits offered by the exciting area of genetics, stem cells and transgenic research. We have lost a world-recognized scientific leader able to share his enthusiasms and pioneer visions but also a man whose humanism and great kindness touched those who had the chance to work with him.