

# Scientific integrity must always come first

→ Emma Mason

Challenging medical orthodoxies is essential in the interests of good science and improving patient care. All top-class doctors do it, but few enjoy the battle as much as breast cancer specialist **Michael Baum**. He has been called ‘provocative’ and ‘perverse’, but a career championing evidence-based patient-centred medicine has left him with huge respect among his colleagues.

**M**ichael Baum attributes his willingness to take controversial standpoints and to challenge conventional wisdom and dogma to the experience of his childhood Friday night dinners.

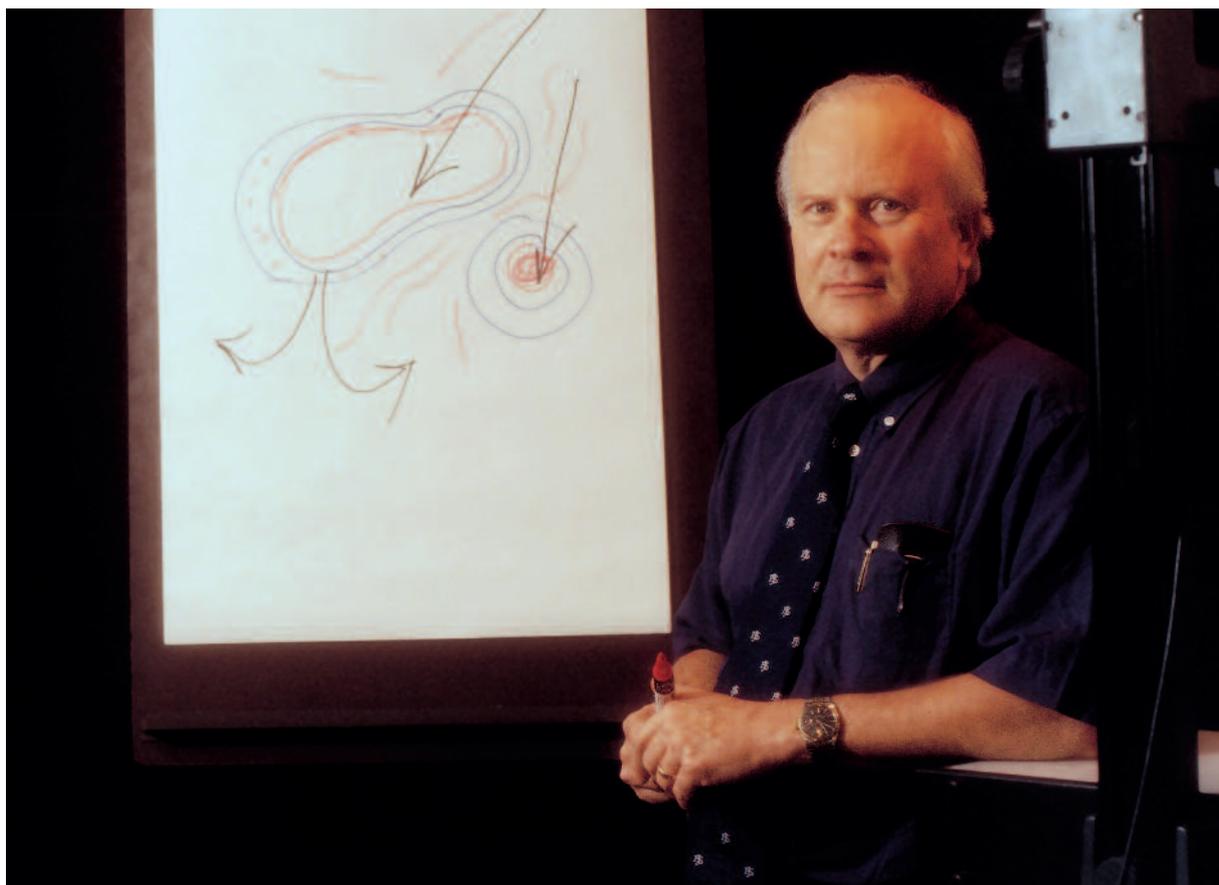
He was born into a large, boisterous Jewish family. Every Friday the family would gather together for dinner to celebrate the start of the Sabbath and to discuss the issues of the day. Having three brothers and a sister to compete with in the rowdy dinner-time discussions, he soon learned that, in order to make any impact at all, the best thing to do was to take the opposite view point to everyone else.

This trait has stayed with him ever since. His scientific training and his work to improve clinical trials taught him the importance of evidence-based medicine. He would argue with his friends and colleagues, but respect their point of view and, when confronted with convincing evidence, would be open-minded enough to change his mind. Sometimes he has found himself arguing vociferously against something that only a few years earlier he had been promoting just as strongly – such as the value of breast cancer screening.

Perhaps his most public disagreement has been with Prince Charles, heir to the British throne, over alternative medicine. In an open letter to the *British Medical Journal* he accused the prince of using the accident of his birth to promote unproven cures for cancer.

A deafening silence followed, and then slowly others emerged from behind the parapet to agree with him. “Well done Michael Baum, you deserve a knighthood at the very least for putting your head on the block yet again and having the courage to say what most of us believe, but usually feel too cowardly to express in the presence of the Royals. See you in the Tower. From your fellow heretic, Lesley J Fallowfield,” wrote the professor of psycho-oncology at the Brighton and Sussex Medical School, Brighton, UK, three months later.

Baum, professor emeritus of surgery and visiting professor of medical humanities at University College London, is untroubled by this royal blight on his career. At a Festschrift held in his honour, he told *Cancer World*: “Without doubt the single most important thread running through my whole career is scientific integrity; that you don’t spend your



career seeking popularity. You have to retain your intellectual and scientific integrity and everything follows from that. And it's been a hell of a lot of fun along the way."

The Festschrift (a tribute by admirers), held at the Wellcome Trust in London in November, saw friends and colleagues from all the different stages of his working life describe the man and his work in affectionate but robust terms.

#### A PASSIONATE MAN

"An extraordinary man," said Tony Howell (University of Manchester, UK). "A passionate man who often feels quite strongly about certain matters

and feels he needs to do something," said Lord Turnberg (past president of the Royal College of Physicians) referring to Baum's spat with Prince Charles. "Working with Mike was totally harmonious – I always did what he told me!" said Terry Priestman (New Cross Hospital, Wolverhampton, UK), who then revealed that Baum had described the Baum/Priestman surgical team to an elderly patient as the "Starsky and Hutch of breast cancer". "He was mostly right, but sometimes wrong," said Hans-Jörg Senn (chairman of the St Gallen oncology conferences, Switzerland). Fallowfield compared him to George Orwell, whose book *Nineteen Eighty-Four* marked the year when she first started

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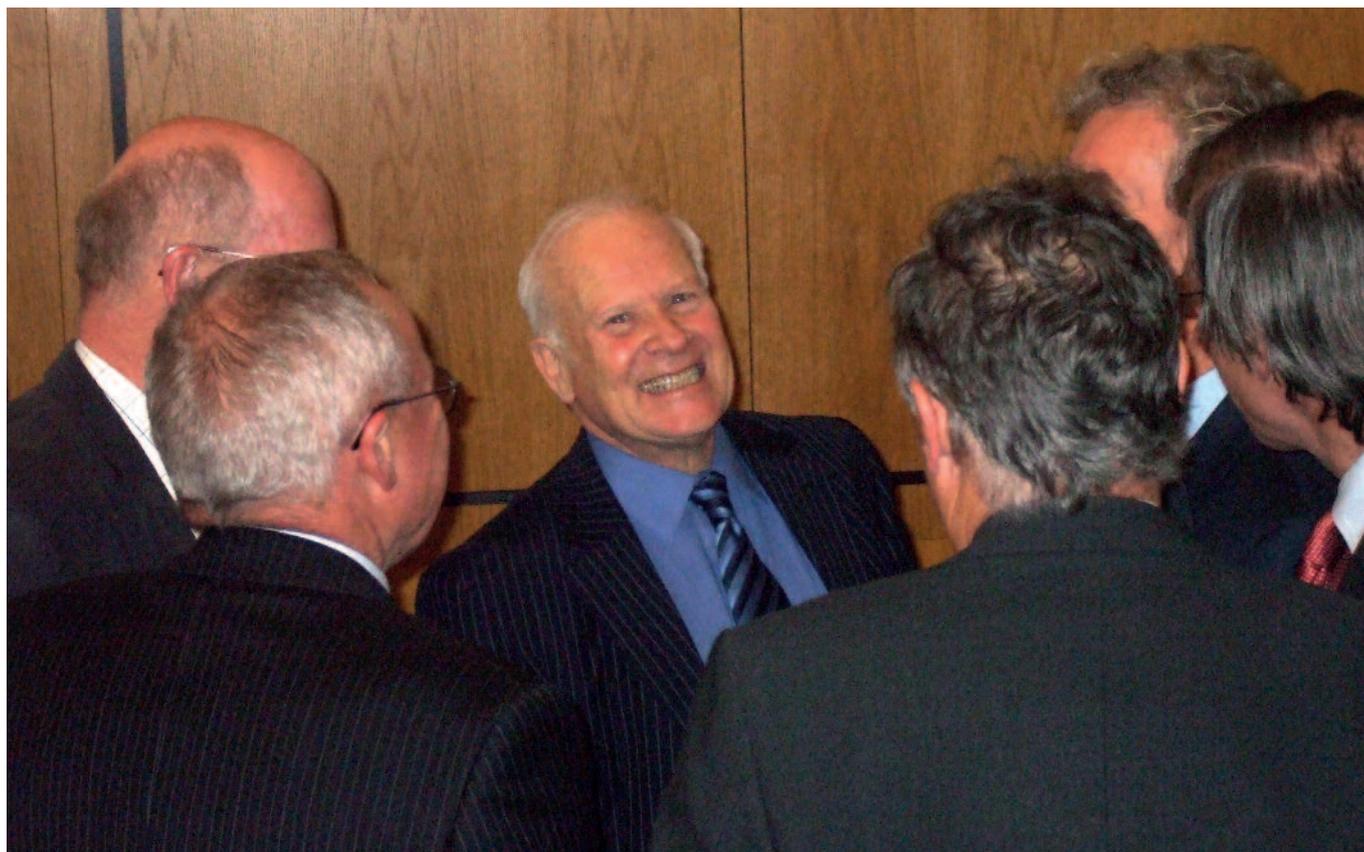
collaborating with Baum, saying he was “erudite and prescient, but not right about everything,” that he liked to “challenge individuals and the establishment,” and that “Mike’s views are provocative, occasionally perverse, even extreme, but he challenges us to think harder.” David Berstock (Clatterbridge Hospital, UK) was more forthright: “He was prone to the odd bout of apoplexy.”

Younger colleagues who had been helped and nurtured by him in later years spoke fondly of the advice he gave them (and others). Mohammed Keshtgar (Royal Free Hospital, London) said Baum’s first advice to him was that “[I needed to] make up my mind whether I wanted to go for money and

prestige or a spirit of enquiry. For money you need to go into private practice. Perhaps unwisely I chose a spirit of enquiry!” He recalled how Baum had decided to campaign for a breast cancer *un*-awareness week and issued the following advice to the “testicle squeezers of the men’s health lobby”, which was to “keep your nose out of my anus, your hands off my balls and stop interfering in my life.”

Nick Ross, the UK television presenter with whom Baum set up *HealthWatch* to campaign against health fraud (the ‘quackery’ of alternative

[The main man. Surrounded by colleagues at the Festschrift held in his honour last November](#)



medicine), said in a recorded address, “It takes a good doctor to be evidence based in all he does. It takes a really good doctor to campaign wholeheartedly for clinical trials in his own field of expertise. It takes a *great* doctor to have a great skill and judgement and yet keep questioning his judgement in the open way you do.”

The Festschrift covered Baum’s career from his early days in medicine in Cardiff, Wales, through to chairs in surgery he held at King’s College London, the Royal Marsden Hospital and University College London.

#### CHAMPIONING QUALITY OF LIFE

From the beginning Baum had an interest in quality-of-life issues and what is now called psychosocial oncology, after watching his mother, Mary, die from metastatic breast cancer in 1974, at a time when attempts to alleviate the pain from the disease and the toxic side-effects of the palliative chemotherapy were limited and largely ineffective.

While at Cardiff he developed the technique of linear analogue self-assessment, and he and Priestman modified it to develop a 10-point scale to give a global measure of quality of life. This was one of the first attempts to measure patients’ subjective response to cancer and its treatment. “Now the floodgates were opened to exploring more holistic ways of looking at the subject,” said Priestman.

Baum went on to establish the first nurse counselling service at King’s College Hospital in 1981 and the first psychosocial oncology research team at the same time. He has had a long and productive working relationship with Fallowfield in which he has supported, encouraged and contributed to her work on psychosocial oncology – ensuring that patients were properly informed about their treatments and the choices available to them – and on improving the communication skills of the medical profession. His early work on advocating the use of lumpectomy and breast conservation (rather than mutilating mastectomy) was part of trying to improve the treatments and quality of life for his patients.

In 1970 he established the first UK multicentre collaborative group for trials of treatment for breast cancer and, in 1980, the first purpose-built clinical trials centre in the country. His early interest in the best ways to improve and run randomised clinical trials has formed the cornerstone of his belief in the importance of evidence-based medicine.

“Every single trial that I have been associated with, I have insisted that there has been a robust biological hypothesis that we were testing. That way... whatever the result is, that is valuable because you are learning more about the disease,” said Baum.

This is at the centre of his argument with the alternative health lobby: that they can’t and won’t produce rigorously tested evidence to support their claims that their treatments provide benefit.

#### CHALLENGING UNPROVEN THERAPIES

“I’m against alternative medicine, not complementary medicine. When I’m asked what is alternative therapy, I say that it’s treatment that doesn’t work and I am against treatment that doesn’t work. If anything can be shown to work, using the same scientific integrity that we apply to our study, we adopt it. There’s no conspiracy. Complementary therapies that complement what we do and make patients feel better or live better is OK by me. But, again, you have got to be able to demonstrate that it does improve quality of life. My problem with the complementary and alternative fraternity is that they are too bloody lazy, they just want it to be received wisdom. They haven’t got the guts, the courage, the integrity, or they’re too bone idle, to actually test their beliefs.

“At the same time, I am knowledgeable about the subject. I was chosen to chair the EUSOMA [European Society of Breast Cancer Specialists] working party on complementary and alternative medicine. I was co-chairman of the EORTC [European Organisation for Research and Treatment of Cancer] working party on complementary and alternative medicine. I know what I am talking about. In the same way, Professor Edzard Ernst, a

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friend and colleague – we co-author stuff – is professor of complementary and alternative medicine and they [the CAM lobby] hate him. They hate him because he is unable to demonstrate that much of this stuff works.”

During his time at King's he set up the National Health Service breast screening programme, establishing the first centre in the UK. Subsequently, he became so concerned about the effect that false-positive results were having on women's health and wellbeing that he changed his mind about the benefits of screening and has since argued against its widespread use.

Work on demonstrating a survival advantage of adjuvant tamoxifen for early breast cancer, which has contributed to a 30% fall in breast cancer mortality over the last 15 years, produced the interesting observation that the drug also reduced the incidence of subsequent contralateral breast cancer. This led Baum to collaborate with the statistician Jack Cuzick, now at the Wolfson Institute of Preventive Medicine, London, on the first IBIS trial, which investigated the use of tamoxifen to prevent breast cancer in women at high risk of developing the disease because of an inherited genetic susceptibility.

Baum's research interests then moved on to aromatase inhibitors, and, at the Royal Marsden Hospital, he and his colleagues established the ATAC trial – conducted by the biggest international cancer trials group in history – which demonstrated the superiority of anastrozole over tamoxifen for treating women with hormone-responsive disease. This trial is still continuing, and results from the first 100 months were reported at San Antonio in December.

Amongst his current interests is the international TARGIT trial (TARGeted Intra-operative radio-Therapy), which delivers all the radiotherapy required during the surgery to remove the tumour. If it proves to be as effective as the early results suggest, it will save women weeks of daily travel to and from hospital, and resolve problems of adherence



Beside every successful man... With his wife Judy in Dubai, February 2007

(when women can't or won't turn up for their follow-up radiotherapy).

“The other interest is mathematical modelling of breast cancer and the models that are being made for distant metastasis. I have written a lot on that.” In a paper in December's *Nature Clinical Practice Oncology* (vol 4, pp 699–710), Romano Demichelli, Baum and others review the evidence on how removing a primary tumour can actually accelerate metastatic cancer. “People talk about enigmatic breast cancer, the enigmatic disease, we are saying that all the so-called enigmas, the outlying facts that cannot be incorporated into a model, can be explained by chaos theory.”

### CONCERNS OVER MORALE

When asked about future challenges in breast cancer, Baum said, “My current concern is the morale of the medical profession. I've just come back for a short contract with the National Health Service at University College Hospital and I'm finding the morale amongst the profession very low. Academic departments are closing. I cannot see where the new

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generation of academic clinicians are coming from. There’s absolutely no incentive now for young doctors to pursue an academic career. I think the greatest challenge to future success is to address the fundamental problem of medical training, academic training, governance and healthcare delivery. Everything is stacked up against academic excellence now.

“Even when you have a really important, innovative breakthrough, your masters in the health service aren’t interested. I cannot interest anyone within the NHS to take intraoperative radiotherapy seriously. It’s taken off all round the world, so we are in the very country where it was pioneered and we are having the greatest difficulty in getting it supported.”

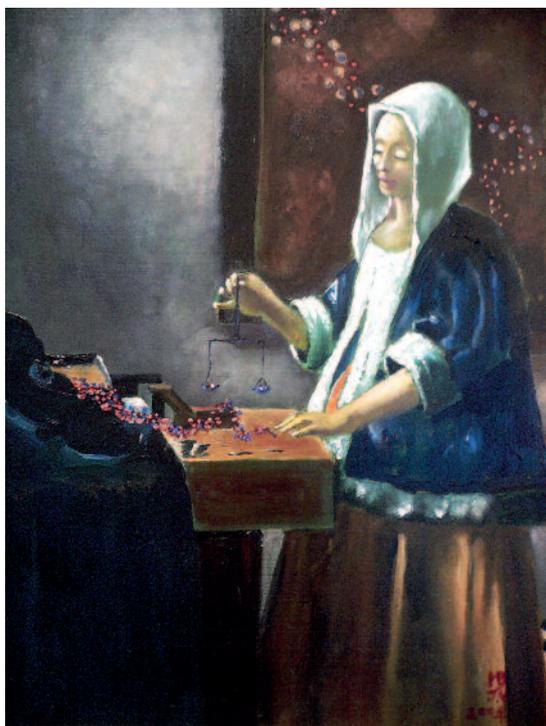
Baum has received numerous awards and honours during his career including the gold medal of the International College of Surgeons, the Miami breast cancer award, the San Antonio award and,

most recently in March 2007, the prestigious Swiss St Gallen lifetime achievement award for the treatment of breast cancer. It is this award of which he is perhaps most proud. “You look back at the previous awardees and they are all men for whom I have the greatest respect and upon whose shoulders I have stood: Bernie Fisher, Gianni Bonadonna, Umberto Veronesi... To follow that, in a way that has to be the greatest honour. And I received an engraved Rolex watch and enough money to make a very nice party for my 70th birthday with all my family and friends.”

When receiving the St Gallen award, Baum was able to announce that his sister had benefited from the past 30 years of clinical trials of breast cancer treatments. Diagnosed with the disease in the 1990s – Baum suspects there is a familial genetic predisposition – her treatment was completely different to that given to their mother, both in terms of its efficacy and its toxicity, and she is alive and well today.

As his family, friends and colleagues gathered for the Festschrift, many of them paid tribute to Judy, Baum’s wife. “I believe that behind every successful man there is a most understanding, caring and supportive woman,” said Keshtgar. Judy has brought up their family, played a full share in the areas where work and social events have overlapped, and fielded numerous evening phone calls from colleagues wanting advice or to share their latest exciting discovery.

At 70 there is not much sign of Baum slowing down, and nor would it appear that his colleagues want him to. Nick Ross said, “The trouble with a Festschrift like this is that it can sound a bit like an obituary or a wake. We expect a lot more of you in the future, Mike. This is just a half-way house.”



**Genetic testing.** This painting is Baum's interpretation of Vermeer's "Girl weighing pearls". The importance of approaching patients on a human as well as a medical level has been a key theme throughout Baum's career