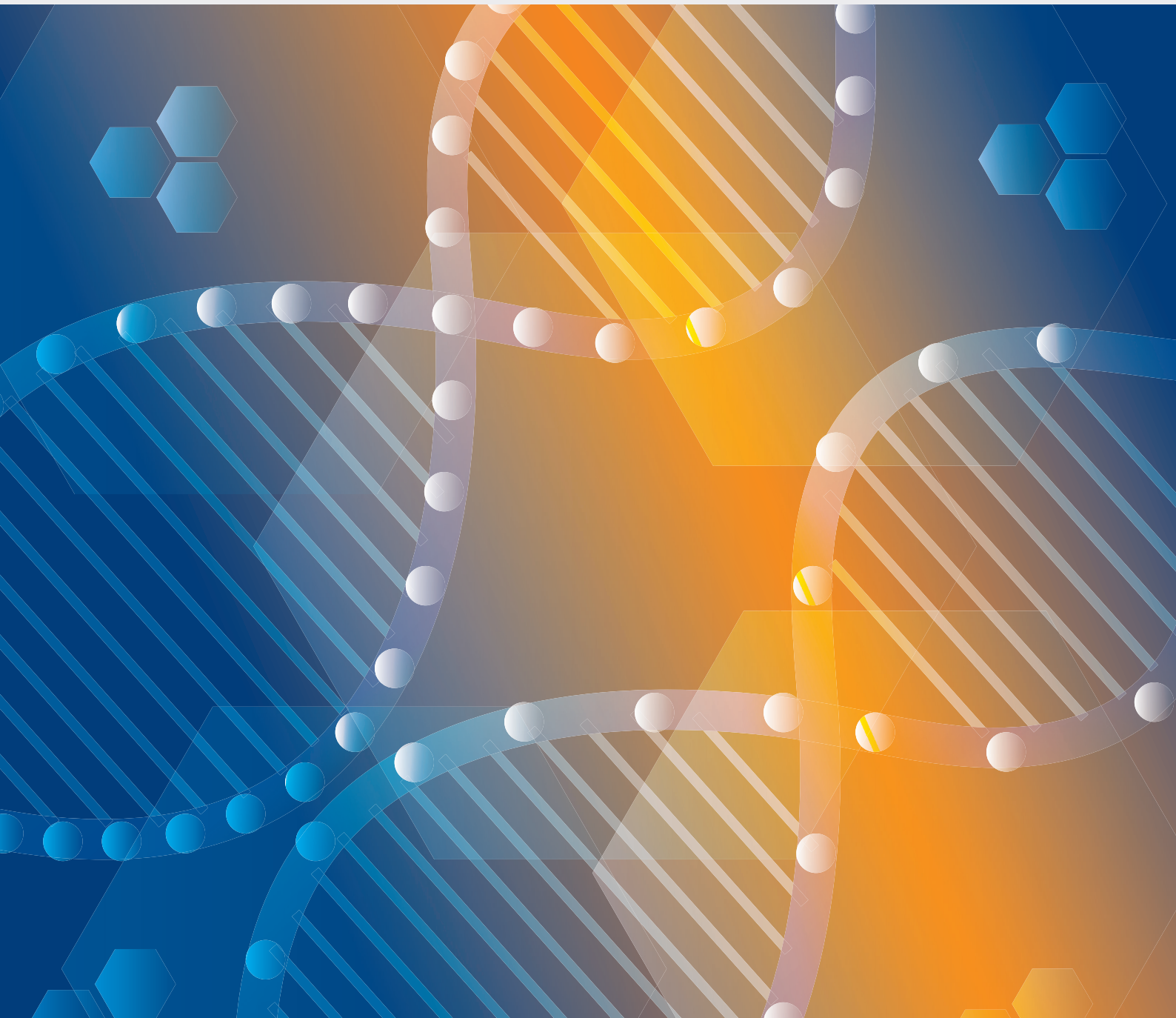


# Custom Oligonucleotide Synthesis

Supplying custom oligonucleotides for over 15 years



# Complex Bespoke DNA/RNA Oligonucleotides for your Diagnostic and Therapeutic Needs

Oligonucleotides are the backbone of molecular diagnostics and the future of personalised medicine. We synthesize and deliver the best DNA/RNA oligonucleotides, aptamers and triphosphates for your precise needs.

The use of oligonucleotides in therapeutic and diagnostic research and development is rising quickly as new solutions are sought for the diagnosis and treatment of illnesses. Cutting edge research often requires complex and oligonucleotides. The synthesis of these oligonucleotides at high purity requires a deep understanding of nucleic acid chemistry. Our experienced scientists can partner with you to design and synthesize oligonucleotides for your unique needs.

[www.atdbio.com](http://www.atdbio.com)

## The custom synthesis of oligonucleotides

- » Synthesis scales from 0.2  $\mu\text{mol}$  to 1 mmol and above, larger scales available on request
- » Unlimited modifications – from dyes and quenchers to modified bases and backbones
- » Purification using HPLC or PAGE
- » Analysis using UPLC/MS or CE
- » Lyophilised or adjusted to a specific concentration
- » Lengths of up to 200 bases, including complex modifications







# ATDBio now a part of Biotage, Oligonucleotide Experts since 2004

Biotage has unrivalled experience in the successful design, synthesis, and delivery of complex oligonucleotides and modified triphosphates for demanding applications.

## Out of the laboratory into the boardroom

Alan Cane on a company which is making a profit from the manufacture of DNA



Growth from technology

Making the complex biochemical that carries the genetic code is a profitable if prosaic business these days. Oswel, a commercial company based

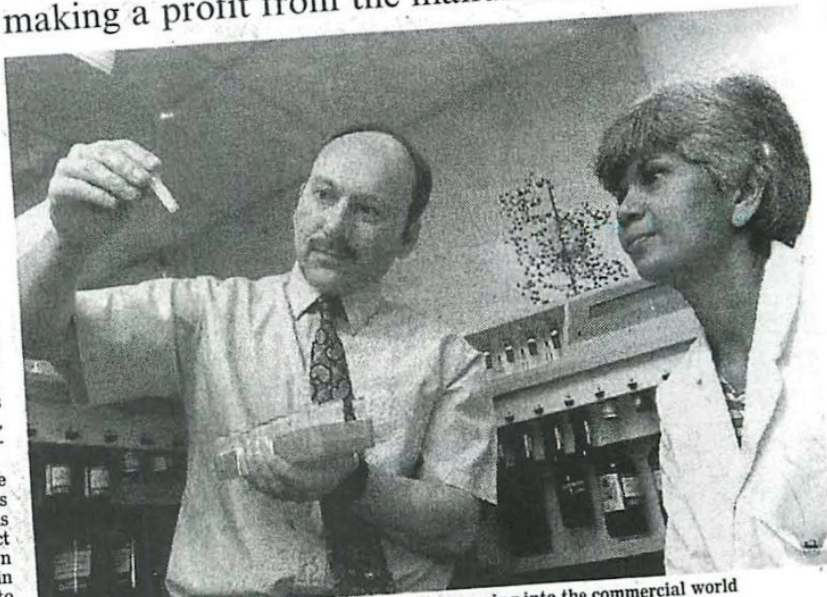
at, but separate from, Edinburgh University, has the process of manufacturing strands of DNA, the material of heredity, down to a fine art.

Customers are typically forensic science departments, teaching hospitals or biological laboratories. Orders are keyed into the company's computer network and, at the press of a button, one of Oswel's seven DNA synthesisers springs into life, conjuring up exactly what the customer ordered. The

fragments of the stuff of life. Oswel (Oligonucleotide Service, Wellcome Trust), was established in 1986 with a £96,000 grant from the Wellcome Trust and £2,000 from the university. Prof Brown, with a broad background in the chemistry of the genetic code, was appointed director; he now holds a personal chair in chemistry at Edinburgh.

The aim was to offer a service to the university's world-renowned biological sciences departments, providing oligonucleotides - gene fragments. Word of the quality of Oswel's products got around, however, and soon the unit was receiving orders from outside.

It was also intended to be self-financing. It advertises its services in scientific journals such as *Nature* and by direct mail and, since Prof Brown knows who is doing what in



## Providing High-Quality Complex Oligonucleotides to Scientists across the Globe Since 2004

Biotage's oligonucleotide synthesis service was established to provide high quality oligonucleotides to scientists around the world. Biotage oligonucleotides are used successfully in academic and commercial research in the fields of genetics, genomics, molecular biology, biochemistry, biotechnology and nanotechnology. We supply a wide range of custom-made unmodified and chemically modified oligonucleotides for both small and large scale applications. Our specialty is highly modified oligonucleotides - each oligonucleotide we make is unique, and we insist on the highest standards in synthesis and analysis to obtain the best possible quality for every partner.

into the commercial world

Perkin Elmer, the US company which supplies it with equipment and chemicals.

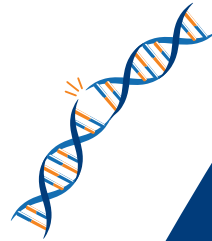
The next step is to move beyond the synthesis of DNA to DNA sequencing - determining the order of the chemical groups in DNA strands. Once the leading edge of gene research, this is increasingly yielding to automation.

Prof Brown looks set to reap the reward for the hard work he and his wife have put in over the past few years. The university, meanwhile, has seen its £2,000 investment turn into £500,000 in a decade and will continue to receive royalties on Oswel products.

Previous articles in this series appeared on August 10, 16 and 19.

# We Understand Your Applications

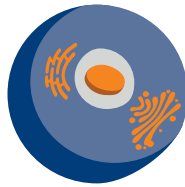
We are passionate about delivering the best possible custom nucleic acid-based products for your specific needs. Our technical experts will work with you to understand your precise application and apply our extensive knowledge of nucleic acid chemistry to deliver the optimal solution.



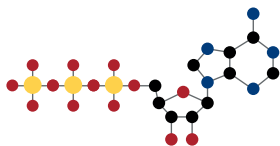
**Gene Editing**  
CRISPR/Cas



**Therapeutic Oligos**  
RNAi, siRNA, antisense



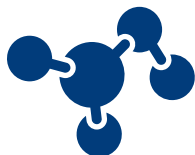
**Single-cell Sequencing**



**Aptamers & Modified  
Triphosphates**



**Commercial Assays**  
qPCR, NGS



**Synthetic Biology**

# Welcome to Our World!

## Why choose to partner with Biotage?

- » A dedication to understanding your specific applications and requirements, and utilizing our expertise to advise on the best solutions
- » A focus on quality, customer service and a high consistency of product
- » Proven track record of synthesising challenging oligonucleotides
- » State-of-the-art facilities for small- and large-scale synthesis, and their purification and analysis
- » Access to our dedicated oligonucleotide synthesis scientists





## A Proven Track Record

Our customers include some of the world’s most important and innovative biotech companies, academic institutes, and clinical laboratories.

We adapt our chemistry and processes to match your specific requirements – from small oligo batches for early-stage research, through to large-scale production suitable for inclusion in commercial biotech products. All produced in our state-of-the-art ISO9001-certified facilities.

**Discuss your requirements with one of our technical experts today.  
Contact us at [atdbio.com](http://atdbio.com).**



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## Literature Number: PPS674

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