The history man

A Californian book dealer has created a unique archive of molecular biology's achievements. But some historians are uneasy about such a valuable resource resting in private hands, says Rex Dalton.

REX DALTON

Treasure trove: Jeremy Norman (top) displays a proof of Watson and Crick's DNA paper.

Collecting historic scientific documents seems to be in Jeremy Norman's genes. His late father, a prominent San Francisco psychiatrist, spent a lifetime building a library of medical books and records. Now the son — a dealer in rare books for more than 30 years — has created a unique collection: an archive of documents and other artefacts relating to the history of molecular biology.

Over the past four years, Norman has quietly been acquiring laboratory notebooks, correspondence, photographs and galley proofs of landmark journal articles. His collection is a treasure trove of material from many of the world's best-known biologists, including numerous Nobel laureates. Norman promises to make his archive available to science historians. But those assurances have not placated some researchers for whom the idea of such a resource being privately owned, rather than residing in a public museum, is anathema.

For anyone familiar with the early days of molecular biology, being shown the Jeremy Norman Molecular Biology Archive is a jaw-dropping experience. The collection is housed for now in a secure but secret location, until a permanent home is constructed in the San Francisco suburb of San Anselmo. Bespectacled and scholarly, Norman carefully pulls binders of records from a safe the size of a double-width refrigerator. The names on the files read like a *Who's Who* of the field's founders: Francis Crick, James Watson, Max Delbrück, Maurice Wilkins, Sydney Brenner and many more.

Controversial depiction

The file marked "Crick", for instance, contains the galley proof of the 1953 *Nature* article, co-authored with Watson, reporting the discovery of the double-helix structure of DNA. Norman acquired it from a third party, who obtained it from Crick years ago.

Norman also possesses one of the dozen or so original copies of *Honest Jim*, Watson's first draft of a manuscript that — in watered-down form — became *The Double Helix*. Even the published book was controversial, because of its colourful depiction of the players in the race to determine the structure of DNA — Watson famously said that he had never seen Crick "in a modest mood".

Another binder includes page after page of correspondence between Rosalind Franklin and her scientific colleagues. Watson and Crick, working at the University of Cambridge's Cavendish Laboratory, based their insights on Franklin's X-ray crystallography data, collected while working in Wilkins's lab at King's College London — and many scientists feel that her contribution was for years downplayed. "One letter is generally considered important," enthuses Norman. "But to have almost all the correspondence between two people is very rare."

As Norman moves from file to file, the joy he takes from the collection is obvious. He has the air of a patron of the arts, and has been collecting rare books and documents since childhood. Shortly after graduating with a degree in history, he opened a shop selling rare books, specializing in science. Now 55, Norman has over the years bought and sold several collections of scientific and technical documents, always seeking to be, as he puts it, "ahead of the market". His current holdings include an archive relating to the history of aerospace, up to the 1957 launch of Sputnik 1, and another on the history of computing, from the seventeenth century until 1976.

But Norman insists that the molecular biology archive will never be traded. Eventually, he says, it will be donated to a public institution — possibly his *alma mater*, the University of California, Berkeley. In the meantime, he says historians and other researchers can seek access to the records.

Nevertheless, some science historians complain that there are no long-term guarantees, and fear that the collection may eventually be broken up and sold, with important papers disappearing into the drawing-rooms of wealthy collectors. Indeed, the

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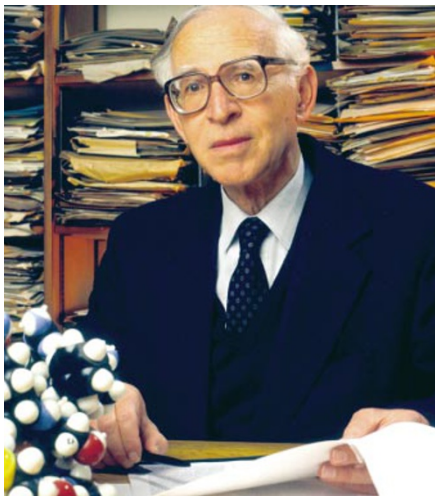

Handed over: Aaron Klug, 1982 chemistry Nobel laureate, sold his papers to the archive.

medical collection of Norman's father was auctioned piece by piece by Christie's in 1998. "Archives are for ever," argues Spencer Weart, director of the American Institute of Physics Center for History of Physics in College Park, Maryland. "You need an institution, not a private individual, in control."

Donation dilemmas

Norman rejects this criticism. "Before I did this, the papers of all these famous people were ignored; they were just sitting there," he says. "Now people are screaming. Had institutions preserved the papers, I wouldn't have been able to buy them."

Some experts have a degree of sympathy with this argument. Marcel Caya, an archivist at the University of Quebec in Montreal, is an advocate of public archives, but concedes that universities and libraries are often strapped for cash to catalogue and house scientists' donated papers. Wilkins, who shared the 1962 medicine Nobel with Watson and Crick, recalls trekking to the Churchill Library in Cambridge in the mid-1980s to review the papers of his former supervisor, John Randall. "They weren't organized," he says. "There was just piles of stuff in cardboard boxes." Eventually, says Wilkins, the library was "prodded" to catalogue Randall's papers.

Irrespective of fears about Norman's collection eventually being broken up, some archivists in Europe have expressed misgivings about scientific documents leaving the countries in which the work was done. Last year, for instance, the chairman of Britain's Historical Manuscripts Commission, Lord Bingham, wrote to Aaron Klug, then president of the Royal Society, noting his concern about the loss to British heritage represented by the export of the papers of pioneering British molecular biologists.

That letter placed Klug — who won the chemistry Nobel in 1982 for his development of crystallographic electron microscopy and studies of the complexes formed between nucleic acids and proteins — in a somewhat delicate position. In 1973, the Royal Society and the Historical Manuscripts Commission created a unit to catalogue the archives of contemporary scientists. Now based at the University of Bath, the unit encourages the donation of papers to scientists' own institutions, or other public archives. Yet Klug had sold his original papers to the Norman archive, rather than donating them to his institute, the Medical Research Council's Laboratory of Molecular Biology (LMB) in Cambridge.

Klug told *Nature* that his reply to the commission noted that he "had been given assurances that the collection is intended to finally be donated to a major academic institution in the United States where they would be securely kept and free access be given to researchers".

This seems to have satisfied the Historical Manuscripts Commission, but the idea of scientists selling their papers is still viewed with distaste by some researchers. There are rumours of large sums of money changing hands, but scientists whose papers are in the Norman archive are unwilling to discuss the issue. Klug and Wilkins declined to comment on the fees they had received when questioned by *Nature*, as did Max Perutz, also of the LMB, who shared the 1962 chemistry Nobel for his studies of protein structures.

Norman's agent in these deals was Al Seckel, a cognitive neuroscientist at the California Institute of Technology in Pasadena who trades in rare scientific documents in his spare time. Seckel appears to have turned up, offered to purchase documents for the Norman archive, and if a deal was struck, provided the scientists with copies of the originals to retain for their own files.

Free access

Other scientists have provided Seckel with material for free. Vittorio Luzzati, an emeritus investigator at the Centre for Molecular Genetics in Gif-sur-Yvette near Paris (part of the French national research agency CNRS), worked with Franklin, and remained a close friend until her untimely death from ovarian cancer in 1958. Early last year, after Klug vouched for Seckel, Luzzati provided a handwritten letter from Franklin and some old reprints of scientific articles. The idea of payment was never discussed. "I didn't charge," Luzzati says. "I don't want money."

Luzzati also lent Seckel his collection of photographs of Franklin, for which there are no surviving negatives. Luzzati says Seckel was to make digitally enhanced copies for the Norman archive, and return the originals along with improved copies. But when *Nature* visited the Norman archive, Luzzati's original photographs were still in the collection. Norman says he was unaware of any agreement to return them, but he has now done so.

The big test of Norman's intentions, however, will be the ease with which interested scholars have access to the archive. The London-based journalist Brenda Maddox — wife of former *Nature* editor John Maddox — visited the Norman archive in March for several days, as part of her research for a forthcoming biography of Franklin, and was impressed by the collection. "I had several 'Eureka!' moments," she says.

Archivists who are fretting about the private ownership of such an important collection wonder how many researchers will have such moments in the future. ■

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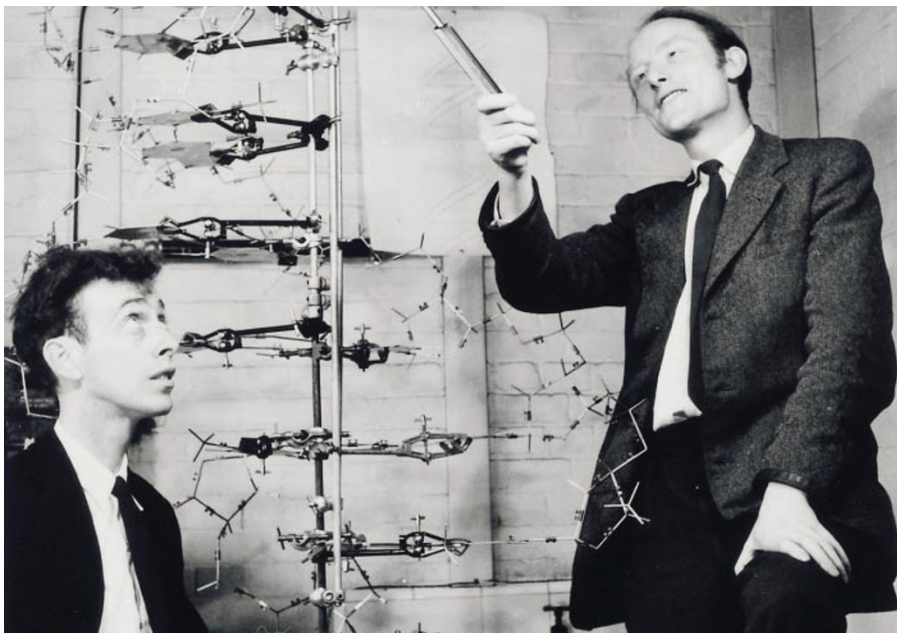

Double act: the archive contains a draft of Watson's colourful book about his work with Crick (right).