News focus

Abbey ambitions to celebrate home of genetics

A century and a half after the ground-breaking work by Gregor Mendel in establishing the foundation of genetics, efforts are under way to develop a fitting commemoration of his work at his abbey home in Brno. **Nigel Williams** reports.

Standing at a busy city tram and bus interchange, it's remarkable to think that just a few meters away lies one of the most intellectually productive gardens in the world. But this is Mendlovo namesti (Mendel Square) in the beautiful and ancient city of Brno in the Czech Republic. And the garden lies within the grounds of St Thomas's Abbey, which fronts the north of the square. This was home to the friar and subsequently abbot Gregor Mendel, who founded the science of genetics with his work on peas grown on a small plot within the abbey garden next to the square.

Mendel's work with peas, by which he revealed the ground-breaking laws of heredity, is the stuff of all students of genetics, but there is a growing feeling amongst many scientists that Mendel has not had the recognition he deserves for his insights. It took nearly 40 years from the publication of his results for fellow scientists to begin to realize their significance, and a century after that, many feel Mendel deserves an appropriate commemoration. 'I knew that the results I obtained were not easily compatible with our contemporary scientific knowledge,' he wrote to a colleague in 1867. While Darwin, whose work was recognized in his lifetime, and whose home where he carried out most of his writing is now restored and adequately funded as a museum and exhibition, Mendel's enormous contribution to biology has so far not had such concrete recognition. But now an international group of scientists believe that the time is ripe to develop an exhibition, museum, conference centre and research laboratory to commemorate Mendel's achievements at the abbey. The plans have been backed enthusiastically by the present abbot who believes that Mendel is a great credit to the Augustinian order whose friars work in the community and are encouraged to pursue any intellectual talents they possess.

Part of the reason that it has taken until now to consider such possibilities has been the troubled history of Brno, unlike Downe in England where Darwin lived,

Abbey quarters: Part of the extensive abbey of St Thomas in Brno, Czech Republic, where Gregor Mendel was friar and subsequently abbot during the nineteenth century and developed his theory of heredity. (Picture: Stepan Bartos.)

Heritage site: The church of St Thomas's abbey in Brno, Czech Republic. Friars are not reclusive but active in the community and Gregor Mendel was a teacher alongside carrying out his studies in natural history and ground-breaking work on genetics. The abbey is now seeking a new role in commemorating Mendel's scientific achievements. (Picture: Stepan Bartos.)

because it has seen a succession of foreign dominance in government and ideology since Mendel's time in the nineteenth century. But in 1989 the Velvet Revolution saw self-government return to the then Czechoslovakia which split peacefully to form the Czech Republic and Slovakia in 1990.

The new state pledged to return all artifacts seized from the church after the Communist take-over following the Second World War. These included much of the abbey's collection of Mendelian material. A small collection — Mendelianum — was exhibited at the former abbey under Communist rule but access for non-Czechs was difficult and Mendel's artifacts remained very much a local event in spite of his global significance.

But things now look very different in Brno. The new Czech Republic is full of self-confidence and as open and welcoming as any western European country. Access to the abbey at Brno is no problem and all of the Mendel material has been returned to the abbey. This proved somewhat controversial, with many local people concerned about the return of Mendel artifacts from the museum to the abbey. But one of the aims of the new plans is to ensure the best possible display and access to the material.

Two other factors have prompted international interest in new commemoration of Mendel. Firstly, like Darwin, his life and work are very much tied up with where he lived — the abbey — where he carried out all of his experiments. Secondly, the abbey has changed little since Mendel's time and offers visitors a real sense of what it must have been like to live and work there 150 years ago.

A key champion is molecular biologist Kim Nasmyth, head of the Institute of Molecular Pathology in Vienna. Nasmyth believes passionately that Mendel deserves a more substantial tribute to his foundation of genetics and the subsequent spawning of biotechnology companies founded on his insights. With the new Czech Republic in place and great enthusiasm from the current abbot, Lukas Martinec, such opportunity is unique. Two further factors support such plans: the key local university is supporting the development of a Mendel commemoration but Jan Slovak, dean of sciences at Masaryk University says that it has backed off from a formal role in the project. "We are happy to act as informal partners to help move things forward," he says. University backing helps win local support for development plans, he says. The abbey also has a unique status within the Augustinian order and the abbot has a status equivalent to bishop and deals

Untouched: The present library at St Thomas's abbey remains largely unchanged since Mendel's time. (Picture: Stepan Bartos.)

directly with Rome, also cutting out any need to deal with the local religious administration in development plans.

A flagship for the new plans was the holding last month of a workshop on Genetics after the Genome co-organized by the European Molecular Biology Organisation (EMBO) and the Vereinigung zur Foederung der Genomforschung in Vienna. The meeting was attended by almost 100 scientists with sessions held in the newly restored, lavishly decorated, Baroque-style refectory. Jan Slovak, was hoping to relay all the sessions of the meeting live to Czech universities and to create an archive for further use.

"It will be a memorable experience for this group of scientists yet just the beginning of a lasting testimony to this extraordinary man," said Nasmyth.

Plans for the future include the restoration of his experimental garden and apiary. In 2004, the team are aiming for a Mendel Museum of Genetics and Mendel Life Sciences Centre within the abbey.

Alongside, a new exhibition opened in the part of the abbey that lies alongside the plot in which Mendel grew his peas. The exhibition opened last month and will run for a year, but there are hopes it will lead to a new permanent exhibition.

The exhibition, the Genius of Genetics is in three sections focusing respectively on Mendel's biography: his background and motivations; his research interests and methodology; and his experiments within the historical context of the puzzle of generation and the development of cell theory. These sections are illustrated with much historical documentation, which includes scientific instruments, Mendel's annotated books, letters, photographs and the plans for the glasshouse in the abbey garden where he conducted his experiments.

The exhibition is housed within the abbey in a space designed by the renowned Czech architect, Eva Jiricna. "The setting and the personality of Gregor Mendel made this a very special project," she said. "It was above all, our aim to give the exhibition the atmosphere of respect which Mendel's story deserves," she said.

A catalogue to accompany the exhibition has also been produced detailing the life of Mendel and the exhibits. Kim Nasmyth has written the foreward and geneticist Luigi Luca Cavallli-Sforza, from Stanford University, has contributed an essay on Mendel's greatness.

The exhibition was organised by an international team of curators and scientists including Marina Wallace, of the St Martin's College of Art and Design in London, and Martin Kemp, professor of the history of art at Oxford University. Both are directors of Artakt, which generates projects combining art and science. It researches and mounts innovatory exhibitions that illustrate history from a modern perspective and uses the newest technologies.

But such new developments lie within a building that exudes history. Although considerable deterioation changes occurred in parts of the abbey during the years of Communist government, restoration work is now going on. One wing of the abbey has been let as offices to raise rental income to help with restoration work. But one room remains miraculously unscathed. Amongst the austere whitewashed corridors and rooms of the abbey an extraordinarily lavish Baroque library has been virtually untouched. Staff at the abbey believe the library was locked at the beginning of the Communist regime and almost no one went in it for almost 50 years. Entering it now, it is easy to imagine that it it is little changed since Mendel's time.

The organising body behind the exhibition is the Vereinigung. The initiative is backed by leading international researchers including James Watson from Cold Spring Harbor and Paul Nurse from Cancer Research UK, as well as the city of Brno and president of the Czech Republic, Vaclav Havel.

Although the team face an uphill struggle in raising funds for such a novel project the hope is that the sheer intellectual significance of Mendel's achievements will win through. "Mendel's work gave us a new outlook on the nature and causes of our very inheritance. The abbey of St Thomas, therefore must be considered a key part of mankind's intellectual heritage," said Nasmyth.