Hidden treasures

In the first of a monthly series on small museums, **Alison Abbott** profiles the University History Museum in Pavia, which recalls the key role of northern Italy in Enlightenment science.

Antonio Scarpa (1752–1832) was by all accounts a tyrant. But the best legacies are often left by those who are hated or feared by their colleagues. Scarpa's legacy is a marvellous suite of anatomical preparations. Dried and browning or bobbing in preservation fluid, they are held by the University History Museum in Pavia, Italy. Scarpa's own pickled, dismembered head watches over from a high alcove, nearly two centuries after his death.

Scarpa's cache, extended during the nineteenth century, is just part of the museum's remarkable and diverse collections, including several centred on other famous Pavian professors, such as Alessandro Volta and Camillo Golgi. Together, these holdings represent some of the major turning points in the history of science and illustrate the key role that northern Italy played in those times.

Pavia became a major European centre of science after the 1770s. Empress Maria Theresa and her son and successor Joseph II imposed Enlightenment 'Education and Science Plans' on this distant outpost of their Austro-Hungarian empire, in the region of Lombardy. The plans insisted on experimental scientific method, and advised that teaching and research should be carried out by 'masters of proven merit or those with great promise'.

Many Pavia professors left their name to science in the subsequent two centuries — think of Volta's volt, Golgi bodies in the cell, or the drug scopolamine named after the naturalist Giovanni Scopoli. Scarpa himself left Scarpa's ganglion (in the brain), Scarpa's triangle (in the thigh) and a record nine further eponyms.

Some professors also left their body parts, willingly or not. In addition to Scarpa's head, the museum displays his kidneys and four of his fingers, eerily swollen in their preparation fluid, their skin starkly whitened, their nails blackened. The aneurism that killed mathematician Vincenzo Brunacci in 1818 sits nearby. The bladder of the influential naturalist Lazzaro Spallanzani, who died of kidney cancer in 1799, is probably uncomfortably close, given that Scarpa hated him beyond reason. A dozen or so bony skulls of professors and other local heroes line up on a high shelf, among them a plaster cast of Volta's unusually large skull. These were probably used by nineteenth-century phrenologists.

These grotesqueries were far from gratuitous. They were assembled in the noble service of morbid anatomy, a new science, introduced by the Paduan Giovanni Morgagni (1682–1771), which related for the first time symptoms of a disease to the state of an internal organ. A yellow skin, for example, could be revealed on autopsy to be associated with a degenerated

Pavia's frescoed anatomy theatre: built for Antonio Scarpa to demonstrate dissection.

liver. Scarpa was Morgagni's favourite pupil.

Most of the anatomical preparations in the collection were dissected at autopsy by Scarpa and his pupils from ordinary patients passing through Pavia's reputed San Matteo hospital. Each had something to demonstrate about a particular disease. They provided a base for another new science — physiology — and guided surgeons wanting to intervene ever more subtly in the workings of the body.

A collection of skeletons includes a sobering number from post-natal deaths. These, and a few wax anatomical models in the voluptuous Florentine style, were also used for teaching, which Scarpa took very seriously. When he took up his chair in Pavia in 1783, Scarpa ordered the construction of a modern anatomy theatre to demonstrate through dissection. This architectural jewel, decorated with frescoed angels holding aloft the silver and ivory surgical instruments that Joseph II donated in 1786, is now part of the museum.

Golgi, who won a 1906 Nobel prize for physiology or medicine, and Volta — whom Napoleon made a count in 1810 — have a room each in this colonnaded eighteenth-century

museum. Golgi's microscopic preparations, instruments, drawings and other memorabilia tell the story of his many scientific achievements, including the 'black reaction', a stain that allowed researchers to see individual nerves under the microscope for the first time. In Volta's room are 150 or so intriguing pieces of apparatus, which he used or invented. The museum's collection of historical physics instruments was extended to more than 800 items in preparation for the 1999 bicentenary of Volta's invention of the electric battery.

Volta, like Scarpa, also had a lecture theatre built for his sole use. With its frescos depicting the physicist's instruments and experiments, it is another architectural masterpiece — and is still used for special lectures today. Volta, not being a direct rival, was someone Scarpa actually considered to be a friend.

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The University History Museum in Pavia, Italy is open to the public on Mondays, Wednesdays and Fridays, and by appointment. Visit <http://tinyurl.com/36dzqb>.