

ANNUAL REVIEW

2016/17



MUSEUM *of the*
HISTORY *of*
SCIENCE

Museum of the History of Science Broad Street, Oxford

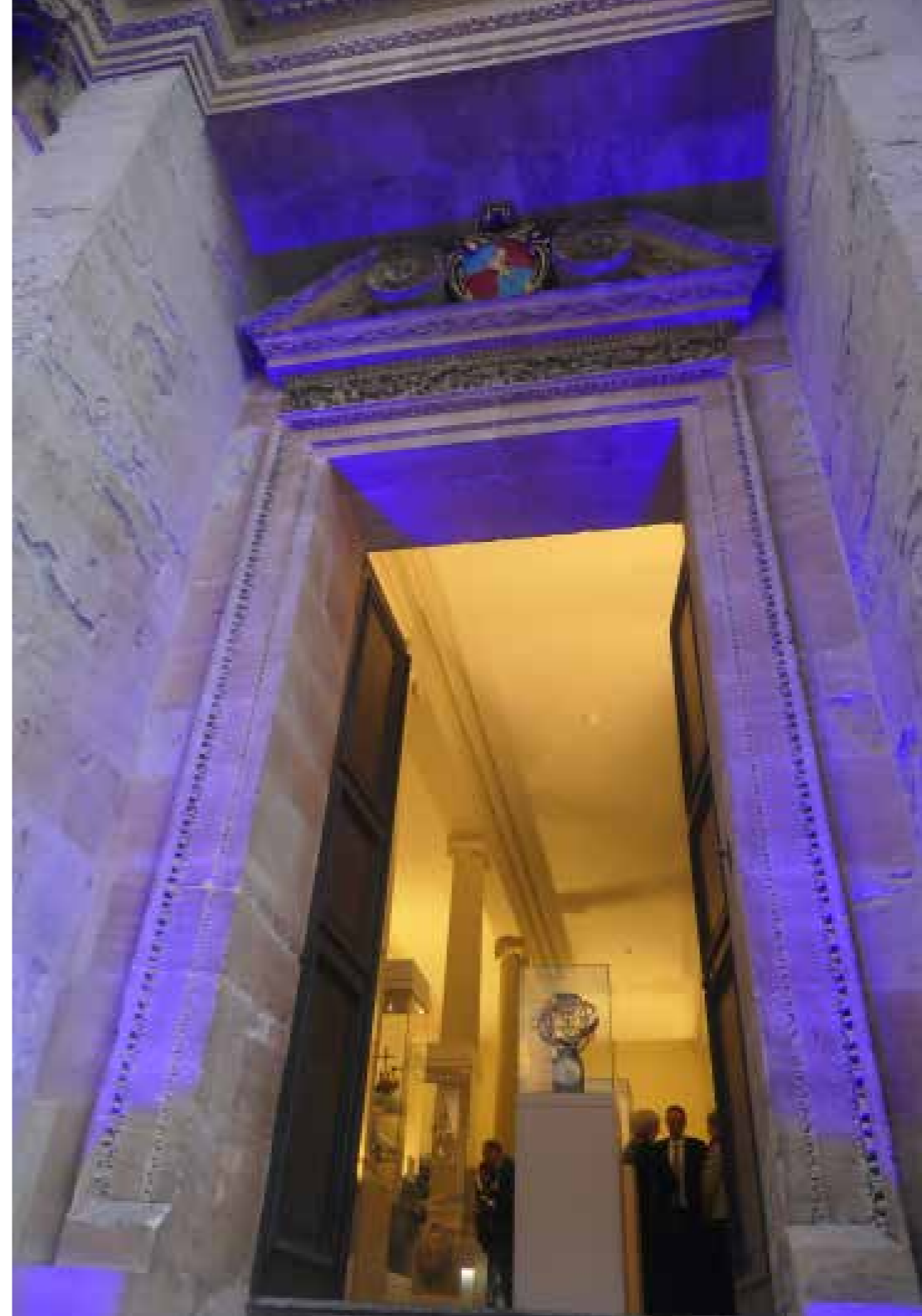
The Museum of the History of Science (MHS) occupies the Old Ashmolean Building, which was erected by the University between 1679 and 1683 to house the Ashmolean Museum, including the School of Natural History and a chemical laboratory. In 1924, the upper floor was assigned to the Lewis Evans Collection of Scientific Instruments, presented by Dr Lewis Evans and established with the assistance of the Goldsmiths', the Fishmongers' and other City Companies. This donation formed the nucleus of the Museum of the History of Science, which was established by statute in 1935 and now occupies the whole building. In 2001 the Museum completed a programme of extension and refurbishment supported by the Heritage Lottery Fund, representing the most significant development on the site since 1683. For its first centenary in 2024 the Museum is developing an ambitious strategy for a complete redisplay and refurbishment of these spaces.

The holdings of the Museum include an unrivalled collection of early astronomical and mathematical instruments from Europe and the Islamic World (especially astrolabes and sundials) and objects of special interest for the history of science in Oxford. The collections also include manuscripts and early printed works on scientific instruments and related subjects, early photographs, portraits of scientists and scientific prints. Among the notable collections incorporated in the Museum are those of Lewis Evans (1924), J A Billmeir (1957), C F C Beeson (1966), the Royal Microscopical Society (1968) and the Marconi Corporation (2004).

This Annual Review provides a snapshot of our activities and achievements during the period from August 2016 to July 2017. More information can be found on our website: www.mhs.ox.ac.uk



@MHSOXFORD



from the **DIRECTOR**

When we look back at the past twelve months it feels as if we have never stopped running, but equally that we have achieved an extraordinary amount that we can reflect on with pride.

Back from the Dead: Demystifying Antibiotics – a celebration of the 75th anniversary of the first clinical trials of penicillin in Oxford in 1941, co-curated with colleagues from the Oxford Martin School, has proven to be an extraordinary success and we were thrilled to receive the Vice-Chancellor's Prize for Public Engagement with Research. But this was just one of the highlights of a programme jam-packed with events for visitors of all ages that throughout the year drew in people from all backgrounds, with Christmas Light Festival once again an utterly stunning visual show-stopper with true magic created inside and outside the Museum.

Less visible, but equally mind-boggling, is the fantastic work going on at the Osney Power Station where our off-site store is being packed up, ready to move into its new location in the Radcliffe Science Library basement as part of the development of a new GLAM Collections' Research & Teaching Centre.

Learning at MHS is taken to ever greater heights with the galleries filled with young people of all ages, be it excitable reception classes or very cool sixth-formers shifting between laughter, amazement and awe. I can tell first hand as there appears to be nothing as exciting for young explorers as a closed door (aka my office ...).

So it's time again to say a big THANK YOU - to the fantastic team that I am privileged to work with, to our supporters in Oxford and all around the globe, and to our visitors, without whom the Museum would just not be the same.

Silke Ackermann



from the **CHAIR**

As Chair of the Board of Visitors, the group of university colleagues and external experts charged with overseeing the Museum's work and direction, it is a pleasure to look back over an outstanding year.

It is especially rewarding for me to review the Museum's achievements in public engagement. Much of the Museum's work is for the public, broadly defined. However, as a scientist I am heartened by the progress made in the area of public engagement with research. This is where university museums have both a special opportunity and a responsibility, building relationships across the university and interpreting research for a wider public. For example, the exhibition *Back from the Dead* itself became a vehicle and venue for new research work. I look forward to the Museum extending and deepening this vital strand of its activity in the future.

Professor Alex Halliday



HIGHLIGHTS

Back from the Dead

The exhibition which charted the story of penicillin, attracted 47,800 visitors from November 2016 to May 2017. In collaboration with the Oxford Martin School, it generated new research data through surveys of public understanding of and attitudes to antibiotics and antimicrobial resistance, and Study Days delivered by the MHS Education team. The project won a Vice Chancellor's Award for Public Engagement with Research.



Medieval Medicine in Islam

An experimental public engagement project, in collaboration with an academic research project at the Oriental Institute, created novel board and card games to enable learning about medieval medicine. These games were tested in public events and embedded in sessions with schools.

The Museum Shop

The shop was relaunched in April 2016 with an ever-expanding range of merchandise, some of which is exclusive to MHS. A very successful bay in the Ashmolean shop was added to the MHS retail offer.



Multaka Oxford

A grant of £120,000 was awarded by the Esmée Fairbairn Collections Fund for our joint project with the Pitt Rivers Museum to deliver, over the next 3 years, a programme enabling those affected by forced migration to work with relevant collections at MHS and PRM through curation and public engagement, creating social and organisational impact.



Portrait of Marconi

A portrait of Guglielmo Marconi was presented to the Museum on 24 March 2017. This was in honour of the visit of Principessa Elettra Marconi to the Museum, and in celebration of her election as Honorary President of the Gilbert Society on the occasion of the 120th anniversary of the founding of the Marconi Wireless Telegraph & Signal Company.

The painting by Sharman Altshuler was donated by Roger L. Michel Jr on behalf of the American Friends of Guglielmo Marconi. It joins the collection of Marconi equipment on display in the Basement Gallery.

OxTalent IT Innovation Awards

The *Interactive Sketchbook* project, enabled by Innovation Award funding, worked across all the University Museums, providing ways for non-art specialists to deliver the art and design curriculum. The software is owned by the museums and has potential to be used and developed in different ways.

www.museumsketchbooks.com



Cabinet: Digital Transformation of Teaching through Objects, which enables interactive digital access to objects to support teaching, won the OxTalent IT Innovation Award in summer 2017.

www.oii.ox.ac.uk/research/projects/digital-transformation-of-teaching-through-objects/

188,716

VISITORS

11pence

AVERAGE DONATION PER VISITOR
(INCL. GIFT AID)

870,458

ONLINE VISITORS
(DISTINCT HOSTS)

2,473

PRIMARY AND
SECONDARY SCHOOL
PUPILS IN FACILITATED
SESSIONS

212

CHILDREN & ADULTS
INVOLVED IN OFFSITE
OUTREACH ACTIVITIES

3,499

CHILDREN AND ADULTS
TOOK PART IN FAMILY
ACTIVITIES & EVENTS

461

HIGHER EDUCATION
STUDENTS IN
FACILITATED
SESSIONS WITH
THE EDUCATION
TEAM

88

RESEARCH VISITS

186

RESEARCH ENQUIRIES

234

STUDENT TEACHERS
IN FACILITATED
SESSIONS

COLLECTIONS

CONSERVATION

The focus of conservation work has been on objects for the special exhibition on penicillin, and loans out to a number of venues, including Yale University, The Institute for the Study of the Ancient World (New York), Kensington Palace, Christ Church and the Bodleian Library.

A collaboration with the horological conservation training course at West Dean College was initiated and the course tutor, Matthew Read, and a selected student, came to collect the Vulliamy Clock from a Heliostat (Inv. No. 62173) as an appropriate student project under Matthew's supervision.

Our Conservator oversaw the research visit by Rory McEvoy (Curator of Horology, Royal Observatory Greenwich) to take apart the Tompion and Graham Orrery (Inv. No. 97810) to see the internal mechanism.

Two new display cases were acquired for the redisplay of material from the exhibitions *Dear Harry... Henry Moseley: A Scientist Lost to War* and *Back from Dead; Demystifying Antibiotics*, thanks to funding from the Heritage Lottery Fund and EPA Cephalosporin Fund respectively. Work was carried out in relation to the specifications and installation of the cases, and preparation of objects for display.

This entailed the systematic condition assessment, cleaning and audit check on all the drug jars, ensuring high resolution images were taken by our photographer before packing for transit to the reserve collection. Work on the microscope collection continued. The drug jars and microscopes had been on display in mesh-fronted bookcases, which were then dismantled and removed to make way for the new display cases.

Training for our Conservator included a course on "Preserving Historic Photographs" held at the British Library.



ACQUISITIONS

The following objects were acquired by the Museum:

Replicas of Three Historical Monochords and a Mesolabe
by Carlos Calderón Urreiztieta, Barcelona, c. 2010 [2016-2]
Inventory No. 15178, 15179, 15180, 15181

Oxford University Alembic Club tie
by KC, English, 1970s [2016-3]
Inventory No. 15182

Britannic Calculating Machine
by Guy's Calculating Machines, London, 1930 [2017-1]
Inventory No. 15248

Set of Gastroenterological Surgical Instruments (Proctoscope and Sigmoidoscope) in Two Cases
by Vann Bros, London, Mid-20th Century [2017-2]
Inventory No. 15331

Print (Mezzotint) of Thomas Tompion in Frame
engraved by I Smith after Sir Godfrey Kneller, London, Late 17th Century [2017-3]
Inventory No. 15325

Poster for Concert by Keaton Henson at the Museum
Oxford, 2013 [2017-4]
Inventory No. 15312

Clockwork Mechanical Fly Trap
by Owari Clock Manufacturing Company, Nagoya, c. 1920 [2017-5]
Inventory No. 15314

Alembic Club Magazine, Oxford, Michaelmas 1976
[2017-6]
Inventory No. 15315

Model of Metmyoglobin
by Helen Scouloudi, Oxford, c. 1968 [2017-7]
Inventory No. 15318



Clockwork Mechanical Fly Trap
Inventory No. 15314



Model of Metmyoglobin
Inventory No. 15318



OPS MOVE PROJECT

Overview

The Museum, along with the other University museums, embarked on a huge project to move the reserve collections from the Old Power Station (OPS) in Osney to a new storage location, planned to be in the basement of the Radcliffe Science Library. This was necessitated by the acquisition of the OPS site for development by the Saïd Business School.

In May 2016, MHS commenced the project to clean, audit, pack and move upwards of 35,000 items. The move provides a fantastic opportunity for the Museum to improve documentation and stored conditions in line with current standards. It will be the first time in many years that some items are handled.

By December 2016 the Move Team had completed cleaning, auditing and packing all the objects stored in one of the Museum's three storerooms. In January 2017 the Move Team commenced work on the objects in the second store, and by July they started working on the third storage space. This work resulted in approximately 900 boxes ready to move.

A temporary occupation of part of the OPS site by the Oxford Open House homeless group in March meant that the Move Team had to work offsite at the Museum for three weeks.

2,124
TOTAL OBJECTS AUDITED AND PACKED

5,529
TOTAL PARTS AUDITED AND PACKED

11,617
TOTAL ITEMS AUDITED AND PACKED

10,069
TOTAL PHOTOGRAPHS TAKEN

The Team

The Move Team grew from a Team Leader and 2 Project Assistants in May 2016, to a Team Leader with 4 Project Assistants in October 2016. A further 2 Project Assistants joined in March 2017. The evolving nature of the project has necessitated further Project Assistants.

The work was supported by the Museum's Collections Manager and Conservator, who provided input with specific issues, including new racking and space requirements, environmental requirements, hazard assessment and barcoding training.

Throughout the project, the Move Team has supported the recruitment and training of volunteers, developing skills in digital photography and museum documentation. The hours donated by the volunteers have been essential in achieving progress.



OPS on Social Media

In January 2017 the Move Team commenced posting content on existing MHS social media platforms: Instagram and Twitter. The aims were to document the progress of the move and to enhance online accessibility of the collection. The posts are collections focussed and have included a mix of photos, videos, information and links to other media.



The MHS Move Team's work can be followed through the Museum's Instagram and Twitter feeds with #mhsstores and #mhsmove team.





EXHIBITION

BACK FROM THE DEAD

Demystifying Antibiotics

4 November 2016 to 21 May 2017

FUNDED BY

EPA Cephalosporin Fund

PARTNERS

The Oxford Martin School Department of Chemistry
 Nuffield Department of Medicine
 The Wellcome Trust Unit for the History of Medicine
 Sir William Dunn School of Pathology
 The Radcliffe Guild of Nurses
 HTW, Dresden

LOANS FROM

Science Museum
 Imperial War Museum
 Wellcome Library
 Bodleian Library

Exhibition Concept

Back from the Dead opened in 2016, which marked the 75th anniversary of the first human trials of penicillin in Oxford. Rather than taking a straightforward chronological approach, the exhibition created a 1940s feel to display cases of historic artefacts along the right hand side of the gallery, contrasting with a more modern layout of the achievements and challenges of subsequent medical research and scientific discovery on antibiotics and anti-microbial resistance up to the present. The focus on the personal stories of the Oxford scientists involved in creating the “miraculous” penicillin drug allowed visitors to engage with the more complicated scientific information on a deeper, more personal level.

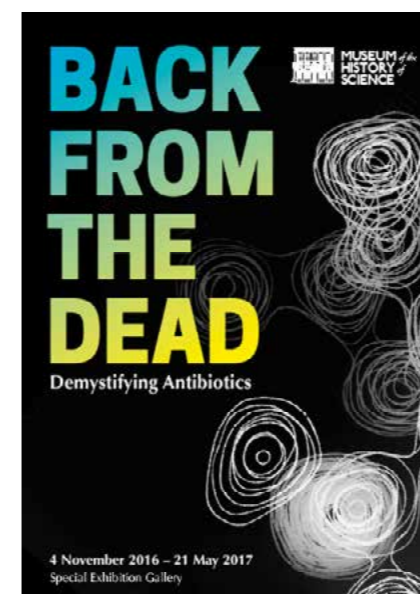
Public Programme

MHS offered an extensive programme of public events to support the exhibition, ranging from evening talks and artist workshops to curator-led tours, family days and a public discussion with current female scientists to engage young students to study in the STEM field. 568 school and college students took part in penicillin workshops and study days. Education activities linked with *Back from the Dead* involved over 1000 children and over 1000 adults, with 56 public engagement opportunities.



Touch Tours

Touch Tours were also offered for the first time during *Back from the Dead*, which allowed blind and partially sighted visitors to fully engage in the exhibition, history and objects. The Museum plans to offer these accessible tours in future special exhibitions.



Exhibition Website

A website mounted in November 2016, received 4,430 page views between February and July.

www.mhs.ox.ac.uk/backfromthedeath

47,796 VISITORS



Awards

The Museum, together with researchers from the Oxford Martin School (Dr Andreas Kappes and Dr Claas Kirchhelle, above), won a Vice-Chancellor’s Public Engagement with Research Award, in the Communication section, for this exhibition, which generated new research data by surveying public understanding of antibiotics and anti-microbial resistance. The survey data collected through the exhibition will feed into a future Oxford policy paper, and there will be a physical legacy in the form of a permanent display in our Basement Gallery.

Artist in Residence

The *Ex-Voto* art work created by artist-in-residence Anna Dumitriu in response to the exhibition was expanded by students, families, scientists and members of the public who made votives in participatory art workshops. Due to the popularity of this installation, the planned artist’s takeover of the space in June 2017 was extended and developed into a new full-scale exhibition, *Anna Dumitriu: BioArt and Bacteria*, opening on 28 September 2017.



“Wonderful exhibition – plenty of technical detail with the human aspects at the forefront. Obviously well-designed to engage adults and children without hampering each group’s experience.”



PUBLIC PROGRAMME

Four quarterly programmes were produced, featuring images of the collections on the front and listing the full range of family-friendly events, talks and gallery tours, including monthly curator-led tours of the special exhibition *Back from the Dead*.

We continued our successful theatre collaboration with the *Constructing Scientific Communities* project (hosted by Oxford's Faculty of English Language & Literature and St Anne's College), hosting *Don't Panic* with Pegasus Theatre for the *Being Human* festival in November and *The Contagion Cabaret* with Chipping Norton Theatre for the Oxfordshire Science Festival in June. These late-night performances in the Museum explored relationships with science, medicine and technology through extracts from texts, music and film.

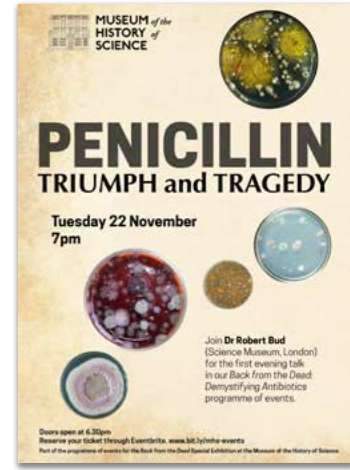
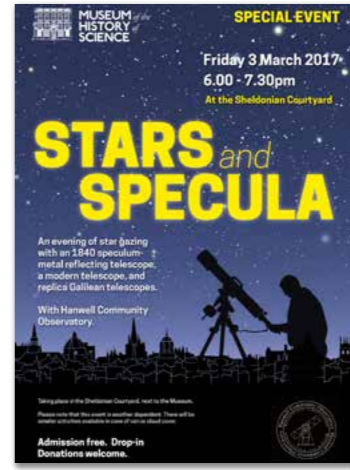
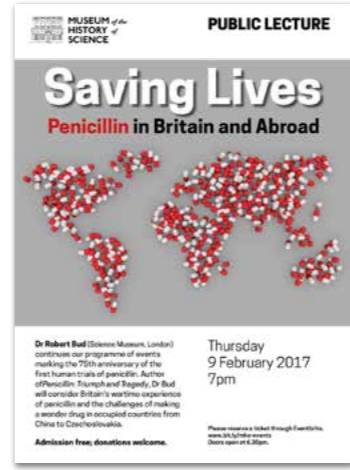
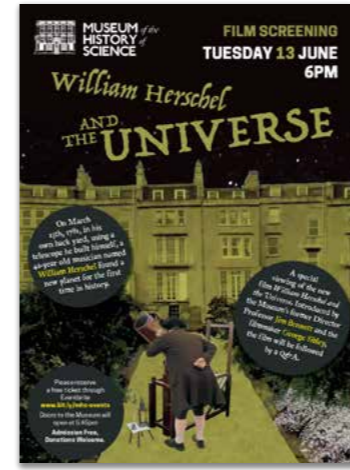
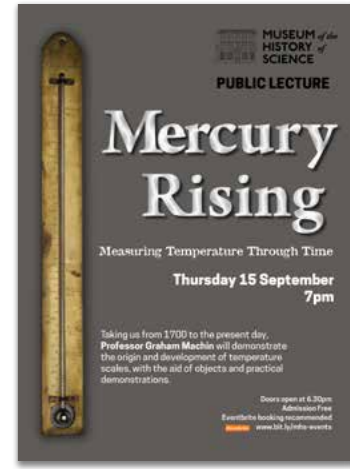
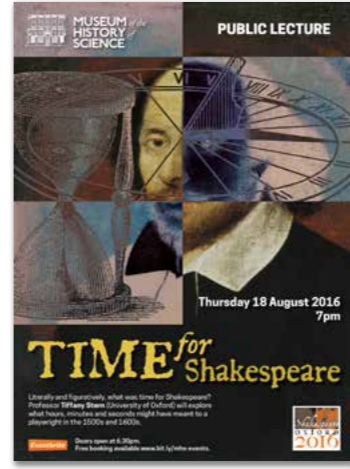
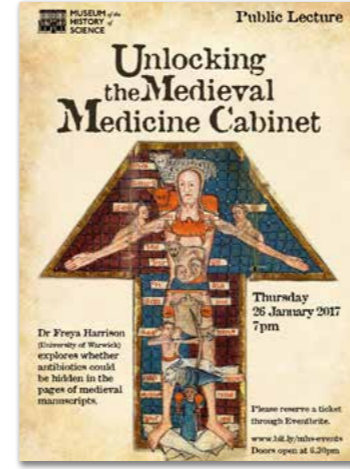
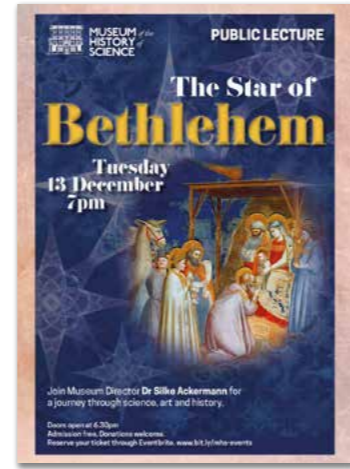
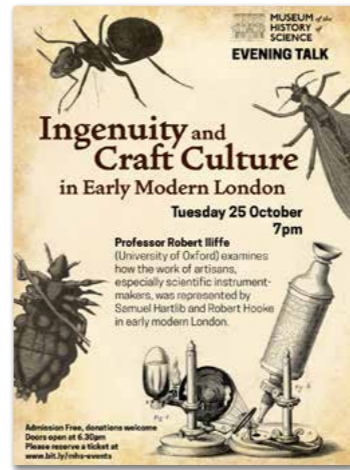
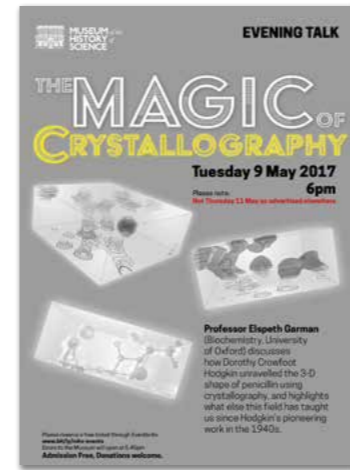
In June we held a special viewing of *William Herschel and the Universe*, a film by Florida film maker George Sibley, featuring the former Museum Director Professor Jim Bennett. The film tells the story of how William Herschel, a previously unknown amateur astronomer, took the scientific world by storm.

Regular features of the annual programme continued, including activities and talks with Oxford Neuroscience (part of the University's Medical Sciences

Division) for *Brain Awareness Week* in March, and *Marconi Day* in April when the Oxford & District Amateur Radio Society joined us to celebrate the birth of Guglielmo Marconi with live radio connections, talks and displays.

In August we launched the gallery intervention and trail *Shakespeare's World View: Stars, Globes and Magic* to celebrate the 400th anniversary of Shakespeare's death. The intervention used the collections to explore Shakespeare's knowledge of the natural world and how Elizabethan thinkers influenced his work. It was complemented by curator-led tours on the subject, and *Time for Shakespeare*, an evening talk in August by Professor Tiffany Stern from the Oxford University English Faculty.

To mark LGBT History Month in February the University's gardens, libraries and museums (GLAM) jointly launched a specially commissioned trail, called *Out in Oxford*, which celebrated diversity and LGBTQ+ experiences. LGBTQ+ community members and allies worked with teams across the museums to queer the collections and offer alternative insights into some of the fascinating objects they contain. The trail's booklet included an introduction by Stephen Fry and is available online at www.glam.ox.ac.uk/outinxford-booklet





RESEARCH, TEACHING & DIGITAL

Teaching

Dr Stephen Johnston contributed to undergraduate teaching through the History Faculty Prelims paper on 'Nature and Art in the Renaissance', with lectures given in the Museum. He also taught on the MSc in History of Science, Technology and Medicine.

Staff Research

Dr Johnston gave invited lectures in Amsterdam, Barcelona and St Andrews and presented papers in Istanbul, London and Oxford.

Dr Lee Macdonald presented a paper on the history of Greenwich Observatory at the Annual Conference of the British Society for the History of Science at York in July 2017.

Farewell to Tony Simcock

After 36 years' service as both librarian and archivist, Tony Simcock retired from the Museum in September 2016. We will miss Tony's unrivalled knowledge not only of the Museum's collection of manuscripts and historic photographs but also of the history of the institution.



Library and Archive

Following Tony Simcock's retirement in September 2016, Dr Lee Macdonald took over the Library and Archives as Research Facilitator. During the year 1 August 2016 to 31 July 2017, the Library and Archives processed 186 research enquiries and hosted 88 research visits. The enquirers were scholars of all kinds, from undergraduate to Emeritus Professor, as well as independent scholars.



Sarah Angelina Acland

In April 2017, the Library and Archives hosted two visits by academics attending a major international conference at Christ Church on the history of photography. Dr Macdonald, in conjunction with Dr Kelley Wilder of Leicester De Montfort University, spoke to the scholars about our valuable photographic collection, illustrating their talks with displays of items taken from the collection, which includes work by photographic pioneers such as Sir John Herschel, William Henry Fox Talbot and Sarah Angelina Acland.

The largest project undertaken during the 2016-2017 year was the removal of more than 2,000 modern (i.e. post-1900) books and pamphlets to the Bodleian Library. Due to budget restraints, MHS no longer has a librarian and so is not able to offer routine library access to students and researchers. Transferring the modern material to the Bodleian makes it more accessible: orders can be placed 24 hours a day, seven days a week, and items can be delivered to any of the Bodleian reading rooms. The entire collection of pre-1900 material remains at MHS.

Appointments to see remaining items in the MHS Library and Archive can be made by sending an email to research@mhs.ox.ac.uk

Digital Developments

Improvements continued to be made to the Museum websites. Multimedia enhancements include the conversion of videos in the legacy Flash format to formats that display properly under the current HTML5 standard and the multilingual redevelopment of the museum's audio guide, now available in Arabic, French, German, Italian, Mandarin and Spanish, <http://www.mhs.ox.ac.uk/visit/audio-guide/>. There have been numerous general content revisions including education pages, events, fundraising and publicity (particularly for the Pocket Curator app). The Museum has continued to maintain its various databases to ensure their smooth running, including the online collections, library catalogue, and Epact. As described elsewhere, a dedicated website was created for the special exhibition, *Back from the Dead*.

In terms of collections, a scoping study was carried out regarding our digital assets, focusing mainly on the lifecycle around images, covering their creation, cataloguing and propagation through EMu, network shares and the Web. The Axiell EMu database, which is used for collections management, was migrated to a new server in July 2017, with increased capacity to support the Move project; all updates to public records of catalogue objects are immediately reflected on the online database.

The Museum has also supported the broader development of online content including the cross-museums Museum Sketchbooks project, <http://museums-ketchbooks.com/>, an interactive art resource; and the Dyson Perrins Lab site, celebrating 100 years of organic chemistry at Oxford, <https://www.mhs.ox.ac.uk/dysonperrins100/>, both projects hosted on the Museum's servers.

The Museum has been participating fully in the implementation of the GLAM Digital Strategy, developing projects which will bring benefits in succeeding years. For example, the Museum participated in an exploratory Collections Visualisation project, which provided a glimpse into how collections data across GLAM might be pooled and visualised to support resource discovery.



EDUCATION

Overview

This year has seen the realisation of an extraordinarily wide range of activity within the education programme, building on established relationships with schools as well as creating new audiences through the *Young Producers* programme and through working with art and design students from the 'forgotten sector' of further education.



Study Days for Secondary & post 16

The Museum has established something of a reputation for its flagship Study Day programme for the secondary and post-16 sectors, which was given extra impetus by funding for additional education staff time within the special exhibition project, *Back from the Dead*. As a result, no fewer than six study days and other associated events aimed at GCSE and A-level students were delivered during the course of the exhibition, engaging nearly 400 students from 16 different schools from Oxfordshire to Birmingham. These events provided a fantastic opportunity to collaborate with colleagues from academic departments including Chemistry, Biochemistry, and the Nuffield Department of Medicine, and for students to meet researchers and engage in discussion of topical issues related to antibiotics and the story of penicillin.

An added dimension was the involvement of artist-in-residence Anna Dumitriu in highlighting the developing field of science-art collaboration in contemporary art. Establishing a new relationship with the City of Oxford College, the Museum delivered a bespoke event for Level 2 and 3 Creative Arts students addressing the college's new curriculum initiative aimed at encouraging students to explore links across Maths, Art, Religion and Science - MARS. The event included practical workshops inspired by the exhibition and students were able to interview Anna, visiting a research facility in Israel at the time, via Skype.

Primary Schools

An exciting area of development in the Museum's education programme has been the revision of sessions to primary schools starting with *Space Explorers* for foundation students and the curriculum-linked *Earth and Space* aimed at Key Stage 2. The latter provided the basis for the Museum's participation in the Oxford University Museums' partnership project *Curious Curators*, in which MHS took on a coordinating role. Targeting primary schools in deprived and underserved areas of Oxford, this project took the form of a combination of outreach and museum-based sessions focussing on the art of the curator and developing literacy skills. Students enjoyed the opportunity to see behind the scenes and cross-examine a real live curator!



Further & Higher Education

The Museum has been active in supporting further and higher education, particularly in the field of art and design. In late 2016 and early 2017 students of Creative Arts and Design Practice from Banbury College of Art and Design and postgraduate jewellery students from the Royal College of Art participated in a project to research, design and create a range of merchandise for the Museum shop. As well as developing creative skills, the delivery also included retail and business advice from the Ashmolean Museum's Commercial Director and the retail manager of the shop at *The Old Fire Station*. Students presented their work for feedback at a *Dragons' Den* style finale and several products were selected for development and sale in the Ashmolean and MHS shops.

Medieval Medicine in Islam

A fruitful overlap with the history of medicine was provided by a special project focussing on *Medieval Medicine in Islam*. This project, run in collaboration with a Wellcome-funded academic project led by Professor Emilie Savage-Smith at the Institute of Oriental Studies, provided an opportunity to experiment with novel approaches to learning through the development of board and card games. The games were trialled in Sunday play testing sessions at the Museum and at a number of family events, and outreach sessions with schools and community groups including the Sudanese Supplementary School in Oxford and the Barakat Summer School. The project also supported the development of teaching resources relating to the Museum's unrivalled collection of scientific instruments from the Islamic world, a series of public events aimed at family audiences, such as the *House of Wisdom* series, and facilitated sessions for schools.





Teacher Training

The Museum's education service has continued its contribution to initial teacher training in partnership with Oxford Brookes University, Oxford University's Department of Education, and the Schools Direct programme for in-service training coordinated by Cherwell School. A total of 234 trainee teachers have been introduced to the principles and practice of Museum learning as part of a coordinated programme across the University's museums and collections.

In November 2016 the Museum hosted an evening of CPD for the OAT (Oxford Art Teach) network. Around 30 secondary teachers and tutors from further education colleges visited the *Back from the Dead* exhibition and participated in a

workshop led by the artist Anna Dumitriu. Art teachers have also been introduced to new teaching resources in the form of interactive 'digital sketchbooks' aimed at art and design students from GCSE upwards developed through an Oxford University Museums' innovation award project.

Art & Design students

Other students in higher education who have also benefitted from facilitated visits include students of Art and Design from foundation to Masters levels from Oxford Brookes, Camberwell College for the Arts, and Central St. Martin's.

Young Producers

A particularly rewarding aspect of this year's work has been the continuation of the *Young Producers* programme (formerly called the *Youth Forum*). This began as an experimental project in 2016 developing new ways of working with a small group of young people (18-30). Since then, a loyal group has been involved in critiquing the display of instruments from the Islamic world, developing new interventions and angles of interpretation, and supporting the delivery of family events. The Museum is now on the lookout for funding to support and develop this initiative which provides opportunities for young people to develop work-based skills, as well as enabling the Museum to build dialogue with its younger audiences



Families

Families from the local community have again enjoyed a diverse and exciting programme of events, including the Museums' annual October drawing event, *Lego Robot*, a memorable occasion in which the top gallery was overrun with excited children building motorised Lego drawing machines which generated a huge collaborative drawing of overlapping patterns.

Science Week

Yellow Magic was the Museum's contribution to the national Science Week celebration. Over 900 visitors participated in a range of hands-on activities supported by University researchers, art activities including the creation of votive offerings for an art installation in the special exhibition, and encounters with Live'n History's costumed Medieval Medicine Man.

Community Education and Outreach

The Museum continues to benefit from the work of the University Museums' Joint Museums Service, who facilitate and support the involvement of a huge number of community volunteers. A particularly heart-warming aspect of the Joint Museums' Community Education and Outreach programme has been the continuation of the *Touch Tours* series for groups of blind and partially sighted people. MHS has attracted a loyal following who have enjoyed 3 dedicated 'touch tour' workshops this year. These events have also provided valuable opportunities for members of staff to develop new skills in audio description.

NATIONAL & INTERNATIONAL IMPACT

Loans

The Museum regularly supports exhibitions in the UK and abroad, including the following objects which went out on loan during this year:



Two Islamic astrolabes and a celestial globe (inv. 37148, 42649 and 44790) for *Power & Protection: Islamic Art and the Supernatural*, 20 October 2016 – 12 February 2017 at the Ashmolean Museum.

An architect's protractor (inv. 23312) for *Enlightened Princesses: Caroline, Augusta, Charlotte and the Shaping of the Modern World*, 3 February – 30 April 2017 at the Yale Centre for British Art and 22 June – 12 November 2017 at Kensington Palace.

A Roman sundial (inv. 51358) for *Time and the Cosmos in Greco-Roman Antiquity*, 19 October 2016 – 23 April 2017 at the Institute for the Study of the Ancient World, New York University.

A pyrometer, a mountain barometer and a jar of lava fragments from Vesuvius (inv. 19870, 21761 and 27147) for *Volcanoes*, 10 February – 21 May 2017 at the Bodleian Library.

Rete

The Museum continued to administer *Rete*, the international mailing list on the history of scientific instruments, connecting the new generation of young scholars to senior members of the academic community. With some 500 subscribers in 27 countries *Rete* demonstrates the global centrality of the Museum to its field.

Advisory Boards

The Director served as President of the Scientific Instrument Commission of the International Union of History and Philosophy of Science.

The Director is a member of the Research Advisory Boards of Deutsches Museum Munich, Staatliche Kunstsammlungen Dresden, the Centre for History of Science at the Royal Swedish Academy of Sciences Stockholm, and UNIVERSEUM The European Academic Heritage Network.

Stephen Johnston served on the committee of the Thomas Harriot Seminar.

Publications

A paper by Research Facilitator Lee Macdonald, titled: 'The Origins and Early Years of the Magnetic and Meteorological Department at Greenwich Observatory, 1834-1848', was awarded the US\$1,000 prize for early-career scholars offered by *Annals of Science*, a leading scholarly journal in the history of science.

In autumn 2016 the Folio Society used plates from our first-edition (1665) copy of Robert Hooke's *Micrographia* to produce a new edition of this scientific classic. They also used plates from an edition held in the Bodleian, making this a GLAM team effort.

FINANCE

The Museum received most of its income from the University of Oxford (59%), followed by support from the Arts Council (13%), HEFCE (9%) and restricted donations and grants (8%).

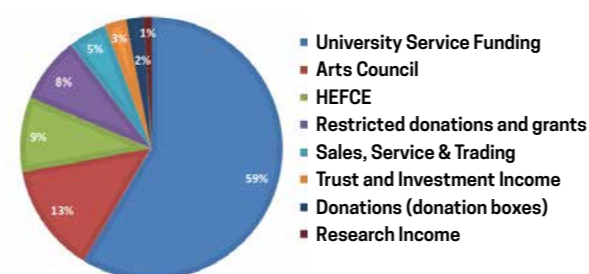
The main expenditures were staff costs (63%) and university charges (28%). The Museum ended the year with a small deficit, masked by drawing down on trust funds.

The Museum attracted 188,716 visitors with an average donation of 11p per visitor, 6p higher than in 2015-16. A short-term goal of the Museum is to increase visitors' average donations, aiming to reach 15p per visitor. Ambitious targets are also being set to increase visitor spend in the shop.

The medium- and long-term development goal is to endow key positions at the Museum such as that of the Director.

Income	£000's
University Service Funding	645.8
Arts Council*	148.2
HEFCE	101.9
Restricted donations and grants	90.2
Sales, Service & Trading	52.1
Trust Funds	29.5
Donations	24.0
Research Income	10.2
Total Income	1,101.5

* Excludes apportionment of Arts Council funding for shared costs across all Museums



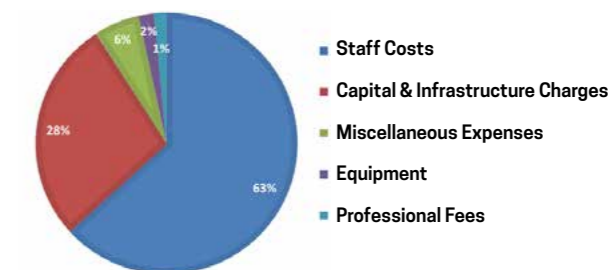
The museum will face significant challenges in 2017/18 and beyond due to a number of reasons:

- Payroll costs continue to increase due to taxes and cost of living.
- Arts Council funding will be 10% lower than the current amount. University funding will remain flat.
- Uncertainty surrounding the impact of Brexit.

The Museum of the History of Science is part of the University of Oxford, and can receive charitable donations through the University of Oxford Development Trust, an exempt charity for the purpose of charity legislation.

Expenditure	£000's
Staff Costs	686.3
Capital & Infrastructure Charges	303.0
Miscellaneous Expenses	28.3
Library & Museum Expenses	25.5
Equipment	21.0
Professional Fees	16.6
Premises	14.8
Supplies	12.2
Publicity & Presentations	7.2
Staff Related Costs	5.8
University Support*	(26.2)
Total Expenditure	1,094.5

* VC-Registrar funding of MHS Modern Curator Post (August 2016 to January 2017) £18k & support from GLAM £8.2k



PEOPLE



BOARD OF VISITORS

The Vice-Chancellor
University of Oxford

Professor Alex Halliday
Chair of Visitors, Head of Mathematical, Physical and Life Sciences

Professor Anne Trefethen
Pro-Vice-Chancellor with responsibility for Gardens, Libraries and Museums

Proctor and Assessor

Professor Robert Iliffe
Professor of the History of Science

Professor Mark Harrison
Professor of the History of Medicine

Dr Laura van Broekhoven
Director, Pitt Rivers Museum

Professor Sally Shuttleworth
Professor of English Literature (Humanities Division)

Professor Zoltán Molnár
Professor of Developmental Neurobiology (Medicine Division)

Professor Roger Davies
Philip Wetton Professor of Astrophysics
(Mathematical, Physical and Life Sciences Division)

Professor Mark Pollard
Edward Hall Professor of Archaeological Science (Social Sciences Division)

Dr Tony Spence
Head of Collection Services, British Museum

Professor Marcus du Sautoy
The Simonyi Professor for the Public Understanding of Science

Dr Asma Mustafa
Research Fellow in the Study of Muslims in Britain, Oxford Centre for Islamic Studies

Secretary: **Dr Silke Ackermann**, Museum Director

MUSEUM STAFF

DIRECTORATE

Dr Silke Ackermann
Museum Director
Danielle Battigelli
Executive Assistant
(from January 2017)

ADMINISTRATION

Christina Hammond
Administrator
(until July 2017)

PROGRAMMES AND PUBLIC ENGAGEMENT

Keiko Ikeuchi
Photographer and Designer
Robyn Haggard
Public Engagement Officer

EDUCATION

Chris Parkin
Lead Education Officer
Helen Pooley
Primary Education Officer
Sukie Trowles
Education Officer, Medieval Islamic Medicine Project

TECHNICAL SERVICES

Owen Shaw
Technician
Nick Wicker
Cleaner

COLLECTIONS

Dr Stephen Johnston
Assistant Keeper and Deputy Director

Lucy Blaxland
Collections Manager

Janine Fox
OPS Move Project Assistant

Lucy Hadley
OPS Move Project Team Leader

Rowena Hartley
OPS Move Project Assistant
(from March 2017)

Thomas Hopkins
Collections Management Assistant
(from September 2016)

Marie-Louise Kerr
Penicillin Exhibition Curator

Dr Lee Macdonald
Research Facilitator

Annie McCulloch
OPS Move Project Assistant

Jack Ord
OPS Move Project Assistant
(from March 2017)

Tony Simcock
Archivist
(until September 2016)

Dr Sophie Waring
Modern Collections Curator
(until February 2017)

Cheryl Wolfe
Conservator

FRONT OF HOUSE

Eleanor Glennon
Gallery Supervisor
(from November 2016)

Iva Nedyalkova
Gallery Supervisor
(until February 2017)

Jeri Bapasola
Manfred Driver
Bob Ellis
Peter Ellis
James Harrison

Anthony Lummis
Cai Marshall
Silvia Pinna
Zhaoyuan Wan
John Whitehead
Gallery Assistants (part-time)

GLAM SHARED SERVICES
(Gardens, Libraries and Museums)

Irene Gandara Jones
Bev Judd
Finance

Fiona Gourley
Catherine House
Dr Heidi Kurtz
Development

Dr Paul Trafford
Web Officer
Spiro Vranjes
IT Officer

OXFORD UNIVERSITY MUSEUMS PARTNERSHIP SHARED SERVICES

Joy Todd
Caroline Moreau
Volunteering

Nicola Bird
Susan Griffiths
Outreach

Miranda Millward
Arts Coordinator

HONORARY RESEARCH FELLOW

Dr Elizabeth Bruton

VOLUNTEERS

97 volunteers gave 1180 hours, supporting 178 different public engagement activities, including tours, gallery activities for families and other visitors, fundraising events and private views. Volunteers also gave vital support to the OPS Move Team. Our grateful thanks go to them all.



THE FUTURE

We are working hard on an ambitious strategy for our centenary: **Vision 2024** will outline our plans for a complete refurbishment of the building and radically new displays and interpretation of the collections, underpinned by groundbreaking research and teaching.

We aim to be a welcoming and inspiring place, passionate about the co-production of knowledge, to inform the understanding of the human story and the diverse ways in which individuals and groups endeavour to find their place in time and space.

We are striving to create world-class facilities that enable research and teaching with objects, as well as storage, conservation and documentation that will safeguard the collection for future generations.

We wish to provide innovative physical and virtual spaces for audiences of all ages and backgrounds to engage with highly sophisticated and artistically rich – but frequently unfamiliar – objects and ideas past and present.

We are proactively looking to create opportunities to build creative

and interdisciplinary partnerships for research, teaching and public engagement with our collection and sustainable open engagement with our local and global communities.

And we are working hard to build and maintain a diverse, highly skilled, motivated and flexible work-force with rich opportunities for continued professional development. Through all this we will be a responsible, resilient and financially sustainable organisation that supports the University's strategic vision and aims.

THANK YOU

For Your Support

The generosity of individuals, trusts and public sector bodies has enabled our work over the past year and made our planning for the future possible. We are extremely grateful to all who have supported the museum over the year, including:

- Our talented and knowledgeable volunteers who lead free tours for the public twice a week and who regularly assist with our education, family and outreach events
- Our many colleagues and partners across GLAM (Gardens, Libraries and Museums) and the wider University of Oxford, as well as other museums, universities, schools and collections
- HEFCE (Higher Education Funding Council for England), ACE (Arts Council England), Evans Collection Fund, AE Gunther Fund and Millburn Bequest, and EPA Cephalosporin Fund without whose funding we could not operate, engage with the public or put on our special exhibitions
- Public donations, enhanced by Gift Aid, in our donation boxes

And all those who wish to remain anonymous, but whose support is vital for new acquisitions and our public programmes.

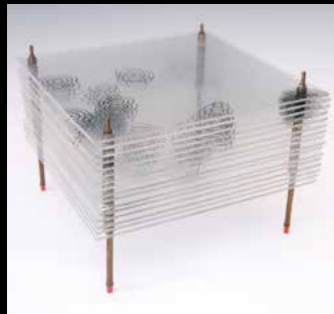
If you would like to find out more about how you can become involved and support the Museum of the History of Science, please visit www.mhs.ox.ac.uk/support-us/





MUSEUM *of the*
HISTORY *of*
SCIENCE

ANNUAL REVIEW 2016/17



Model of the Structure of Penicillin,
by Dorothy Crowfoot Hodgkin, Oxford,
c.1945, Inv.17631



MUSEUM *of the*
HISTORY *of*
SCIENCE