

The Syriac Galen Palimpsest: Galen's On Simple Drugs and the Recovery of Lost Texts through Sophisticated Imaging Techniques (AHRC, AH/M005704/1, £1m)

Project description

The Syriac Galen Palimpsest Project is a unique large-scale project focusing on the study of one particular medieval manuscript containing a Syriac translation of Galen's main pharmacological treatise, 'On Simple Drugs', as a lower erased layer (an undertext) of approximately the ninth century. It is overwritten by another Syriac text of a different nature, Melkite liturgical hymns called canons, presumably of the eleventh century. The manuscript is of utmost importance as a substantial evidence to the role that the Syriac translations played in the process of universal transmission of the Classical knowledge in general and Galen's medical and pharmacological legacy in particular.

The manuscript is kept in a private collection in the USA and has been fully digitised using the multispectral technology. The resulting images have been made freely available online on the [dedicated website](#) currently hosted by the University of Pennsylvania Libraries. Within the framework of the current project, Dr Bill Sellers (University of Manchester) is applying further computational methods as a part of the post-processing of the existing multispectral images, in order to enhance the readability of the undertext. The research associates Dr Naima Afif and Dr Natalia Smelova, supervised by Professor Peter E. Pormann and Professor Siam Bhayro (University of Exeter), are working towards the identification and transcription of the undertext on each of 231 folios of SGP. The project aims at studying of the palimpsest as an object and the edition of the text based on SGP taking into consideration the British Library manuscript Add. 14,661 (containing partially the Syriac text of the treatise, i.e. Books 6-8), the existing edition of the Greek text (ed. K.G. Kühn, 1826) as well as selected Greek manuscripts.

In order to facilitate the identification, we are creating a bilingual Graeco-Syriac corpus for Books VI-VIII of the Galenic 'On Simple Drugs' using [Sketch Engine](#) a query system that enables word searches of parallel texts and the assembling of concordances. The initial results are promising, and it is hoped that this tool will greatly facilitate both our future research on SGP and the study of translation techniques.

Impact

The project has a considerable scholarly value as it gradually brings to light the largest piece of Galen's work in Syriac opening a new perspective on the reception and appropriation of the Greek medicine in the Semitic cultural traditions.

The tools and software developed as a part of the project under a Creative Commons license will be made available for individuals and institutions dealing with multi-layered texts. We hope to work out the methodology of codicological analysis in application specifically to palimpsests enabling scholars to reconstruct the structure of destroyed and reused original manuscripts. Also, our sophisticated philological research which includes deciphering and reconstruction of a translated text on the basis of an original work will create the model which could be employed in future projects of a similar nature.

Project team

Current members

[Professor Peter E. Pormann](#)

Professor Pormann is the principal investigator of the project. He is responsible for the idea of thorough systematic analysis of the Syriac Galen Palimpsest and revealing the lost Syriac translation of Galen's treatise in full by means of advanced imaging technology. As a recognised expert in the reception history of the Classical medicine in general and Graeco-Syro-Arabic tradition of Galenic heritage in particular, Peter designs the main direction of research within the framework of the project and provides supervision on the project implementation.

[Professor Siam Bhayro](#)

Professor Bhayro is Associate Professor in Early Jewish Studies at the University of Exeter and co-investigator on the project. His expertise includes a wider perspective on the Semitic languages, lexicography and epigraphics. He started the scholarly research on the Syriac Galen Palimpsest back in 2009 and has provided the specialist philological research on the authorship of the Syriac and Arabic versions of Galen's 'On Simple Drugs'.

[Dr William I. Sellers](#)

Dr Sellers is Reader in Integrative Vertebrate Biology at the School of Earth and Environmental Sciences at the University of Manchester and a co-investigator on the project. He has been applying advanced methods of computational post-processing, such as the Canonical Variate Analysis (CVA), to the multispectral images of the Syriac Galen Palimpsest in order to enhance the readability of the undertext, thus creating the technological basis of further in-depth research on SGP.

[Dr Naima Afif](#)

Dr Afif is a postdoctoral research associate responsible for identification and transcription of the undertext in the Syriac Galen Palimpsest. Her areas of expertise include the collation of the Greek and Syriac texts along with the creation of the bilingual corpus and lexical tools for Books VI-VIII as research aids for further textual study of the palimpsest. She has been liaising with SketchEngine team and the GREgORI Project at the Catholic University of Louvain.

[Dr Natalia Smelova](#)

Dr Smelova is a postdoctoral research associate responsible for identification and transcription of the undertext in the Syriac Galen Palimpsest. She has also researched the over text in the context of her broader study of the Melkite Syriac liturgical books supported by the John Rylands Research Institute in 2015, as well as the codicological description of both the original and the secondary manuscripts constituting the palimpsest.

Past members

Dr Corneliu C. T. Arsene

Dr Arsene is a postdoctoral research associate. As an IT specialist, he developed a software which enables relatively quick CVA processing of the multispectral images of SGP in order to aid further identifications and transcriptions of the undertext.

Publications

2016

Arsene, C. T. C., P. E. Pormann, N. Afif, S. Church, M. Dickinson 2016. 'High Performance Software in Multidimensional Reduction Methods for Image Processing with Application to Ancient Manuscripts', *Manuscript Cultures* [in press].

<[https://www.research.manchester.ac.uk/portal/en/publications/high-performance-software-in-multidimensional-reduction-methods-for-image-processing-with-application-to-ancient-manuscripts\(df25a08d-df11-4a08-b2df-1071b5398ac1\).html](https://www.research.manchester.ac.uk/portal/en/publications/high-performance-software-in-multidimensional-reduction-methods-for-image-processing-with-application-to-ancient-manuscripts(df25a08d-df11-4a08-b2df-1071b5398ac1).html)>

Afif, N., S. Bhayro, P. E. Pormann, W. I. Sellers, N. Smelova 2016. 'The Syriac Galen Palimpsest: Research Methods and Latest Discoveries', *Comparative Oriental Manuscript Studies Bulletin* 2, 5-16.

<[https://www.research.manchester.ac.uk/portal/en/publications/the-syriac-galen-palimpsest\(de23acd2-77f8-4c82-9c70-405e06112ca0\).html](https://www.research.manchester.ac.uk/portal/en/publications/the-syriac-galen-palimpsest(de23acd2-77f8-4c82-9c70-405e06112ca0).html)>

Afif, N., C. Arsene, S. Bhayro, I. Calà, J. Daccache, R. Hawley, G. Kessel, P. E. Pormann, W. I. Sellers, N. Smelova 2016. 'Continuing research on the Syriac Galen Palimpsest: Collaborative Implementation within the Framework of Two European Projects' *Semitica et Classica* 9, 261-268 [in press].

<[https://www.research.manchester.ac.uk/portal/en/publications/continuing-research-on-the-syriac-galen-palimpsest\(3cad4471-d671-4663-aebf-c1b8600c18d1\).html](https://www.research.manchester.ac.uk/portal/en/publications/continuing-research-on-the-syriac-galen-palimpsest(3cad4471-d671-4663-aebf-c1b8600c18d1).html)>

2015

Pormann, P. E. 2015. 'Inside Manchester's "Arts Lab"', *Nature* 525, 318-319.

<[https://www.research.manchester.ac.uk/portal/en/publications/inside-manchesters-arts-lab\(95290e81-1bee-4f86-b0b9-87995e36a036\).html](https://www.research.manchester.ac.uk/portal/en/publications/inside-manchesters-arts-lab(95290e81-1bee-4f86-b0b9-87995e36a036).html)>

2013

Bhayro, S., R. Hawley, G. Kessel, P. E. Pormann 2013. 'The Syriac Galen Palimpsest: progress, prospects and problems', *Journal of Semitic Studies*, 58(1), 131-148.

<[https://www.research.manchester.ac.uk/portal/en/publications/the-syriac-galen-palimpsest-progress-prospects-and-problems\(9a00107e-f395-4769-a6ce-a63168f958a5\).html](https://www.research.manchester.ac.uk/portal/en/publications/the-syriac-galen-palimpsest-progress-prospects-and-problems(9a00107e-f395-4769-a6ce-a63168f958a5).html)>

Pormann, P. E., S. Bhayro, W. I. Sellers 2013. 'Imaging the Syriac Galen Palimpsest: Preliminary Analysis and Future Prospects', *Semitica et Classica* 6, 297-300.

<[https://www.research.manchester.ac.uk/portal/en/publications/imaging-the-syriac-galen-palimpsest-preliminary-analysis-and-future-prospects\(c86f4308-7e72-42a2-90d8-d031aeced3c7\).html](https://www.research.manchester.ac.uk/portal/en/publications/imaging-the-syriac-galen-palimpsest-preliminary-analysis-and-future-prospects(c86f4308-7e72-42a2-90d8-d031aeced3c7).html)>

2012

Pormann, P. E., G. Kessel, S. Bhayro, R. Hawley 2012. 'Collaborative research on the digital Syriac Galen Palimpsest', *Semitica et Classica* 5, 261-265.

<[https://www.research.manchester.ac.uk/portal/en/publications/collaborative-research-on-the-digital-syriac-galen-palimpsest\(153e7e0b-d657-417e-af9d-891bd9e35cb5\).html](https://www.research.manchester.ac.uk/portal/en/publications/collaborative-research-on-the-digital-syriac-galen-palimpsest(153e7e0b-d657-417e-af9d-891bd9e35cb5).html)>

Conference and seminar presentations

2016

December, Naima Afif and Natalia Smelova, 'The Syriac Galen Palimpsest: uncovering the hidden text by means of technology, codicology and philology', John Rylands Research Forum, JRRI, University of Manchester

September, Naima Afif and Natalia Smelova, 'The Syriac Galen Palimpsest Project: research methods and latest discoveries', 'Comparative Oriental Manuscript Studies: Looking back - Looking ahead', Asien-Afrika-Institut, University of Hamburg

The proceedings of the conference have been published and are available to view online and download: <<https://www.aai.uni-hamburg.de/en/comst/publications/bulletin/bulletin2.html>>

The PP presentation is available to view online and download: <<https://www.aai.uni-hamburg.de/en/comst/conferences/comst2016/pdf/smelova-afif.pdf>>

August, Natalia Smelova, 'The Syriac Galen Palimpsest Project: scope, objectives and interim results', XII Symposium Syriacum, Pontificio Istituto Orientale, Rome

April, Naima Afif, Corneliu Arsene, Siam Bhayro, Peter E. Pormann, William Sellers and Natalia Smelova presented at 'Revealing Galen's Simples' symposium organised by the Schoenberg Institute for Manuscript Studies, University of Pennsylvania Libraries at the Kislak Centre for Special Collections, Rare Books and Manuscripts, Philadelphia

The presentations are available to view online:

<https://www.youtube.com/watch?v=Q91IIBNuYrU&index=1&list=PL8e3GREu0zuBSI-Zo0E3yiDy93x_Kv7jx>

<https://www.youtube.com/watch?v=B5_HPhTvZn8&list=PL8e3GREu0zuBSI-Zo0E3yiDy93x_Kv7jx&index=2>

<https://www.youtube.com/watch?v=FcJHMM0PKmU&list=PL8e3GREu0zuBSI-Zo0E3yiDy93x_Kv7jx&index=3>

<https://www.youtube.com/watch?v=6YwwDcUu3g0&list=PL8e3GREu0zuBSI-Zo0E3yiDy93x_Kv7jx&index=4>

February-March, Corneliu Arsene, Siam Bhayro, Peter E. Pormann, William Sellers, 'Computational techniques in multispectral image processing: application to the Syriac Galen Palimpsest', Second International Conference on Natural Sciences and Technology in Manuscript Analysis, Centre for the Study of Manuscript Cultures (CSMC), University of Hamburg

Abstract is available to view online and download: <<https://www.manuscript-cultures.uni-hamburg.de/cal-details/CSMC%20Natural%20Sciences%202016%20Book%20of%20Abstracts.pdf>>