

Insights on the second phase of the multidisciplinary study of the Viceroy's portrait gallery at Goa, India



Teresa Reis^(1,2,3), Sara Valadas^(1,2), Ana Machado^(1,2,4), Luís Piorro⁽⁴⁾, Fernando António Baptista Pereira⁽³⁾, Ana Teresa Caldeira^(1,2), Peter Vandenabeele^(5,6), António Candeias^(1,2), David Teves Reis, Ian de Noronha⁽⁸⁾, H. A. Naik⁽⁷⁾, Kishore Raghubans⁽⁷⁾

(1) HERCULES Laboratory and IN2PAST Associate Laboratory, Institute for Advanced Studies and Research, University of Évora, Palácio do Vimioso, Largo Marquês de Marialva, 7000-809 Évora (Portugal); (2) City University of Macau Chair in Sustainable Heritage, University of Évora, Casa Cordovil, Rua 7000-671 Évora (Portugal); (3) Art Studies Research Centre, University of Lisbon, Faculty of Fine Arts, Largo da Academia Nacional de Belas-Artes 4, 1249-058 Lisboa (Portugal); (4) José de Figueiredo Laboratory, Portuguese Directorate of Cultural Heritage, Rua das Janelas Verdes (s/n), 1249-018 Lisboa (Portugal); (5) Raman Spectroscopy Research Group, Department of Analytical Chemistry, Ghent University, Krijgslaan 281, B-9000 Ghent (Belgium); (6) Archaeometry Research Group, Department of Archaeology, Ghent University, Sint-Pietersnieuwstraat 35, B-9000 Ghent (Belgium); (7) Archaeological Survey of India, Goa Circle, Church Complex, Old Goa, Goa-403402 (India); (8) Lemon Tart Media, 502, A Block, Zarina Towers, St Inez Rd, Panaji, Goa 40300 (India)

PROJECT OLD GOA REVELATIONS 2019-2023

“Old Goa Revelations” is an international collaborative project dedicated to the research and interpretation of a shared heritage collection associated to the Portuguese Presence in India - the Vice-Roy's portrait gallery. Our team was the first to have permission to conduct this study since the integration of Goa in the Indian Union (1961).

In the upper halls of the Archaeological Survey of India (ASI) Museum in Old Goa, one can find the portraits of all who administrated the territories of Estado da Índia, and commissioned their depictions before leaving their post. During the 400 years span of this gallery (1547-1961) several interventions took place, leaving up to 3 full overpaints over the original compositions of the 16th and 17th centuries.

Since 2019, the creation of a collaborative project [1,2] between the custodian and the Portuguese research units enabled a comprehensive and multidisciplinary scientific study of the collection on wooden panels, supported by a mobile campaign, encompassing imaging techniques such as photography (visible and raking light), Infrared Reflectography (IRR) and X-ray Radiography (XRR), complemented with non-destructive analytical approaches such as XRF spectrometry (point analysis), a Mobile macro-XRF mapping and mobile Raman spectrometry.

A first mission, in 2019, allowed the in-situ analysis of a set of sixteen portraits. More recently, during the follow-up of 2023, it was possible to complement previous data and introduce new results by combining 2D XRF mapping (CRONO system) with micro-Raman analysis. Imaging techniques allowed to select representative areas for chemical analysis and the first results of the analysis conducted in 30 portraits are being revealed at this international conference.

The aims of this multidisciplinary research are the identification, characterization and contextualization of the existing layers, to assist to the interpretation of the collection, as well as to support decision-making towards long term preservation. Moreover, another important goal is the organization of a new exhibition narrative, where the public will have visual access to the information in each of these layers, allowing a different experience of the collection and the possibility for new lines of research.



The researchers from Archaeological Survey of India interact with our team in the interpretation of results from the 2019 campaign and the joint effort to prepare the upcoming exhibition with the updated results from 2023.

Towards a new interpretation and exhibition of results: 2 case-studies

By correlating the results from surface examination and elemental analysis with reproductions from the collection, we realised that each technique provided specific data which helped identify the features and period of each overlapped layer.



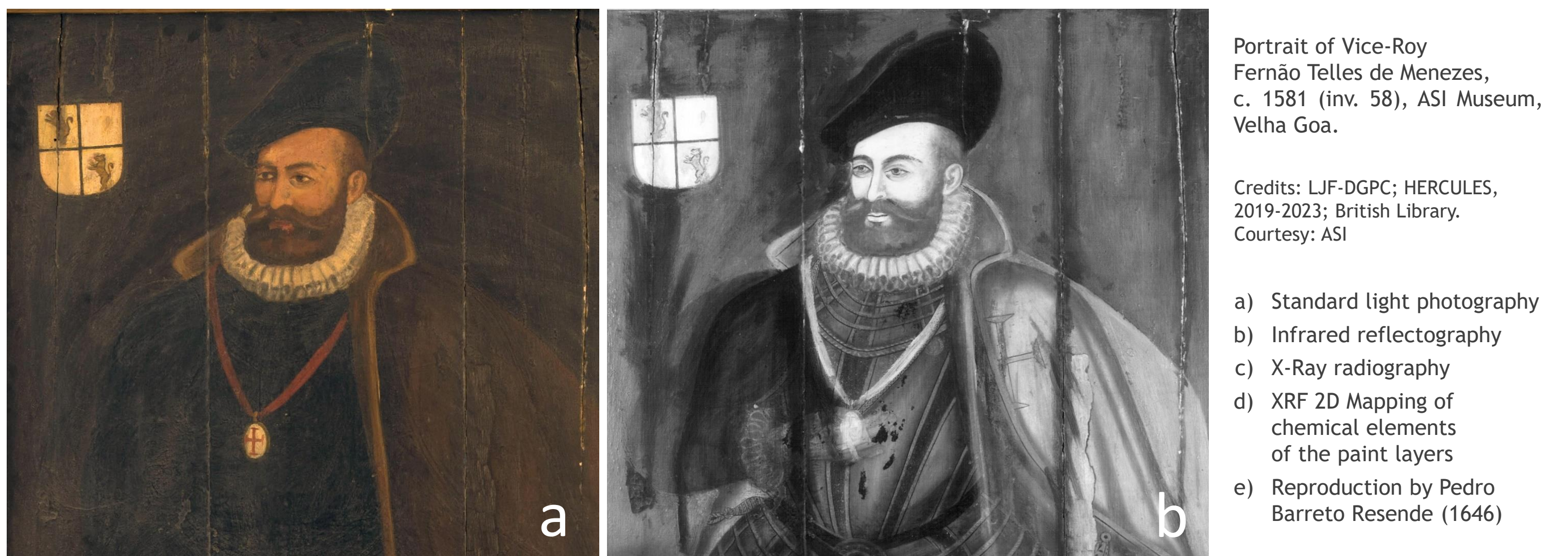
The international team conducts the integrated study of the portrait collection in ASI Museum, Velha Goa. Technical and scientific data was collected by direct observation and the support of the mobile unit encompassing equipment for imaging and analytical techniques, as well as other instruments for the assessment of conservation conditions.

References:

- [1] Reis, T., Pereira, F., Candeias, A., Valadas, S., Machado, A., Caldeira, A., Piirro, L., e Reis, M. (2021) Old Goa Revelations: A Collaborative project on the shared heritage between India and Portugal. In Bridgland, J. (ed) (2021) *Transcending boundaries: Integrated approaches to conservation. ICOM-CC 19th triennial Conference preprints, Beijing, 17-21 May*. ICOM
- [2] Reis, T. (2023) *A Galeria de retratos dos Vice-reis e Governadores do Estado da Índia. Percurso para a sua reinterpretação e salvaguarda*. PhD theses in Sciences for Arts and Heritage. University of Lisbon, Faculty of Fine-Arts.

Acknowledgements:

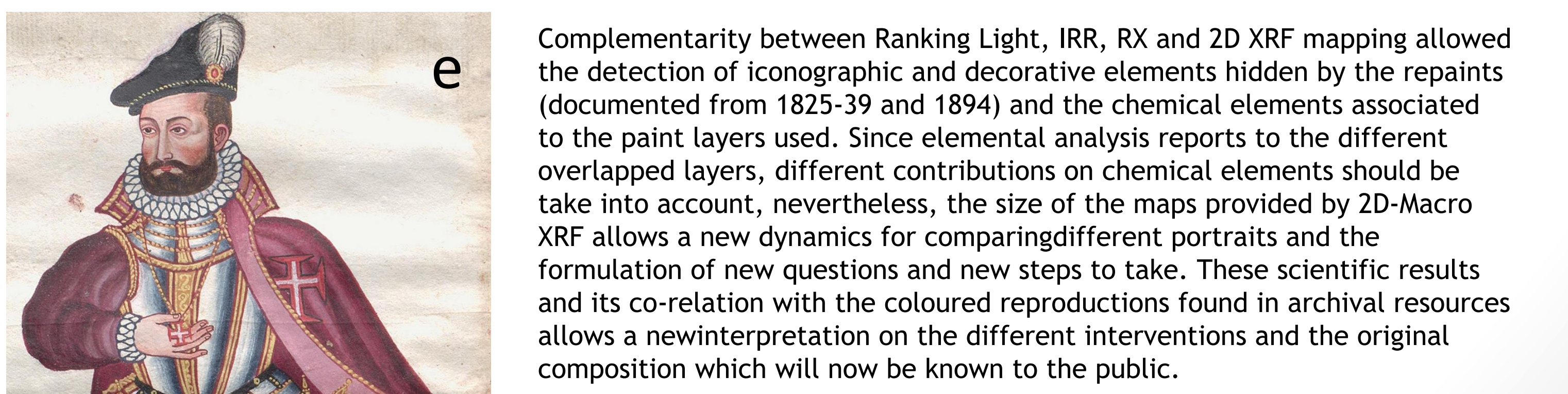
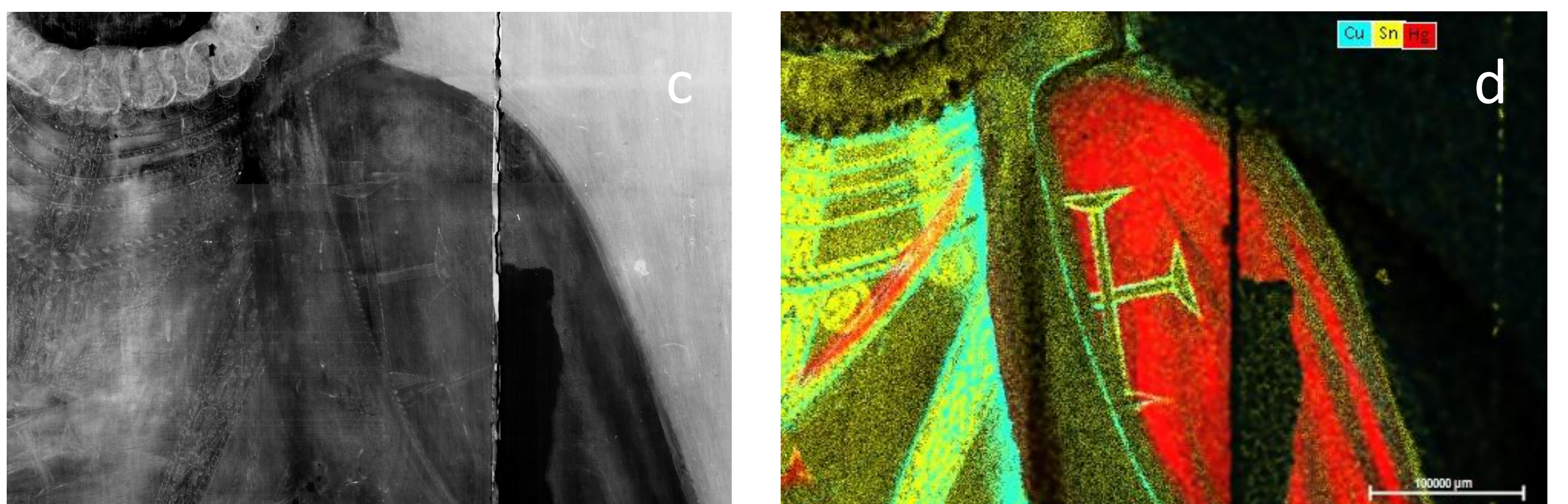
Ministry of Culture, Government of India; Ministério dos Negócios Estrangeiros, Embaixada de Portugal na Índia; ASI Museum, Velha Goa; ASI Science Branch, Mumbai Circle; Fundação para a Ciência e Tecnologia, Projeto Exploratório 2022. 10305.PTDC; Fundação Oriente; China-Portugal Joint Laboratory of Cultural Heritage Conservation Science supported by the Belt and Road Initiative;



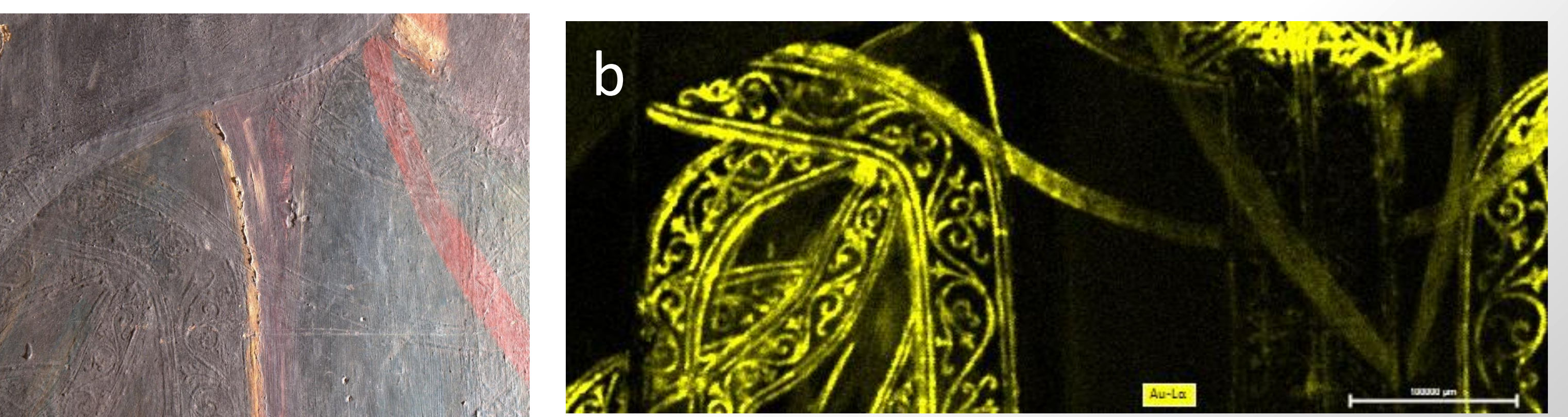
Portrait of Vice-Roy Fernão Telles de Menezes, c. 1581 (inv. 58), ASI Museum, Velha Goa.

Credits: LJF-DGPC; HERCULES, 2019-2023; British Library. Courtesy: ASI

- Standard light photography
- Infrared reflectography
- X-Ray radiography
- XRF 2D Mapping of chemical elements of the paint layers
- Reproduction by Pedro Barreto Resende (1646)



Complementarity between Ranking Light, IRR, RX and 2D XRF mapping allowed the detection of iconographic and decorative elements hidden by the repaints (documented from 1825-39 and 1894) and the chemical elements associated to the paint layers used. Since elemental analysis reports to the different overlapped layers, different contributions on chemical elements should be taken into account, nevertheless, the size of the maps provided by 2D-Macro XRF allows a new dynamics for comparing different portraits and the formulation of new questions and new steps to take. These scientific results and its co-relation with the coloured reproductions found in archival resources allows a new interpretation on the different interventions and the original composition which will now be known to the public.



Portrait of Vice-Roy D. Afonso de Noronha, c. 1554 (inv. 121), ASI Museum, Velha Goa.

- Ranking light photography
- Element Au on the underlayers
- Detail of reproduction by Pedro Barreto Resende (1646)
- Detail of reproduction by José Deloerme Colaço (1840)

Credits: Ian de Noronha/David Reis; HERCULES, 2023; British Library, Biblioteca Nacional. Courtesy: ASI