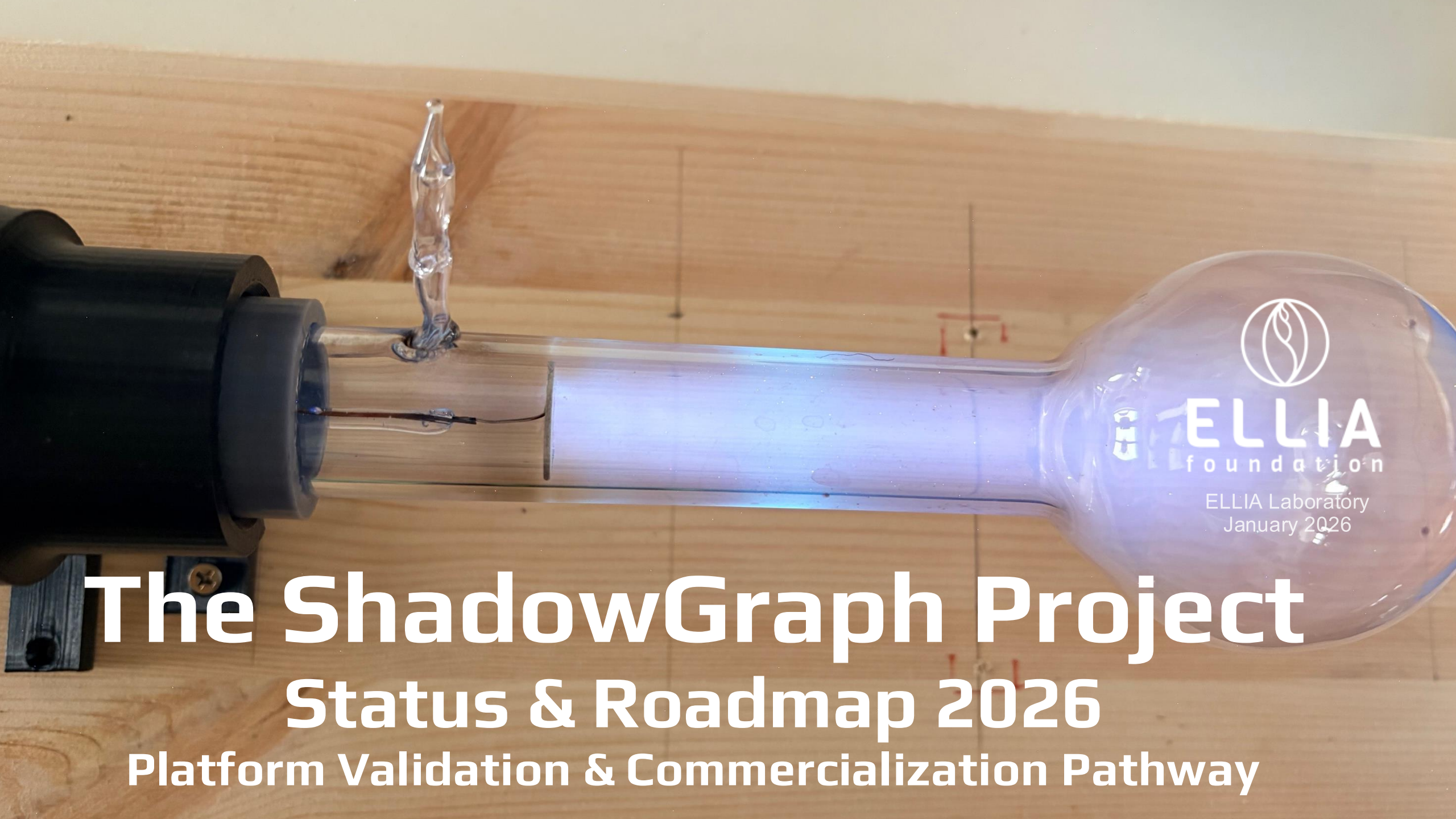


The ShadowGraph Project

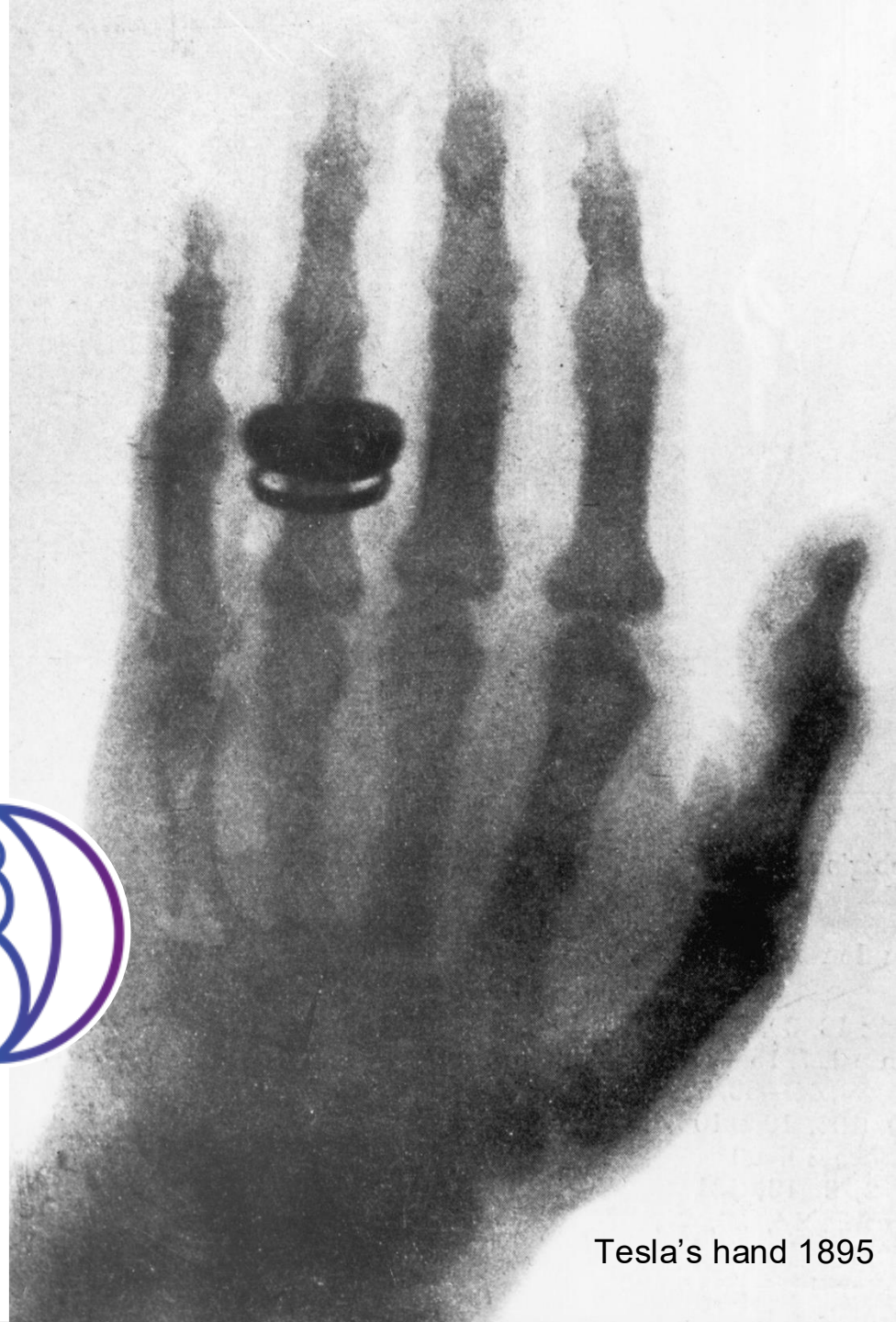
Status & Roadmap 2026

Platform Validation & Commercialization Pathway

ELLIA Laboratory
January 2026

Scientific Background

- In 1894, Nikola Tesla reported producing “shadowgraphs” prior to Röntgen’s discovery of X-rays (1895).
- We are reconstructing and characterizing a high-voltage emission regime not fully described by conventional X-ray models.



Tesla’s hand 1895

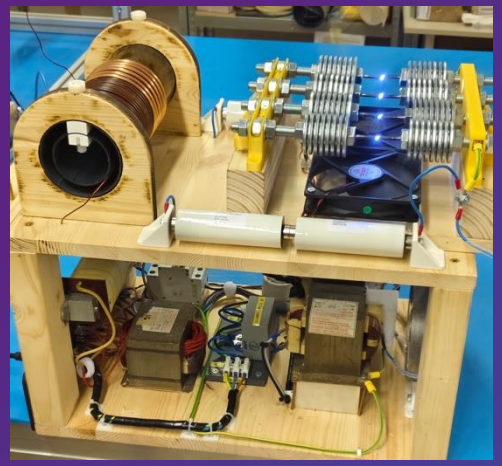
Strategic Collaboration

Developed in collaboration with:

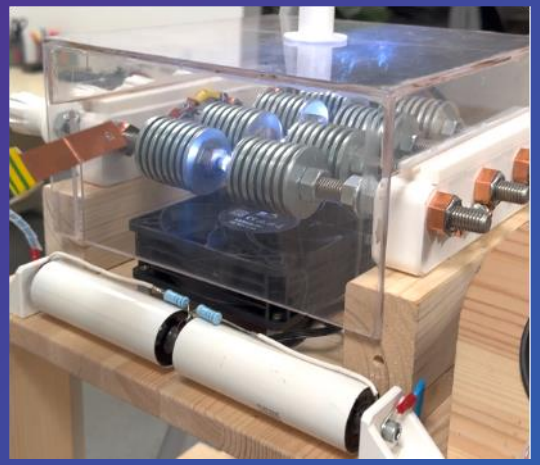
- Griffin G. Brock Laboratories – US
  Author of current tube design
- Robert Greenyer – UK
  Martin Fleischmann Memorial Project
- Paul Harris – Canada
  International research partners

We signed M&U in 2025

We have already achieved



Achieved reproducible imaging under controlled experimental conditions.

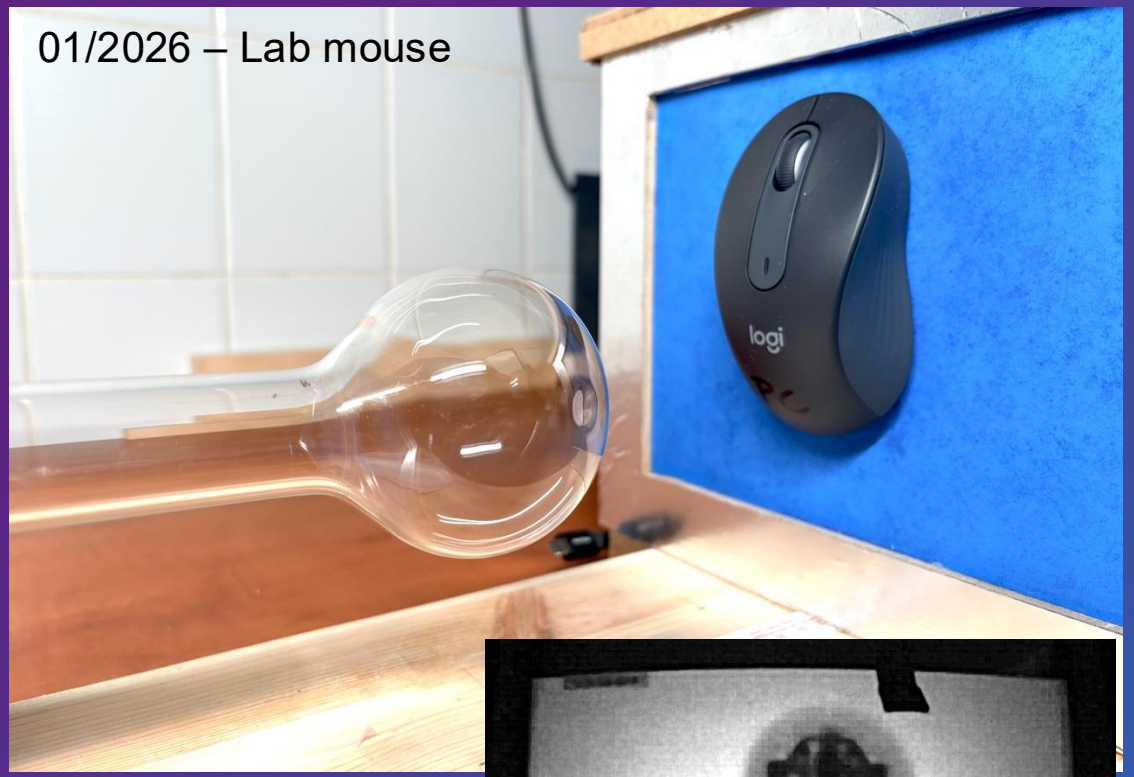


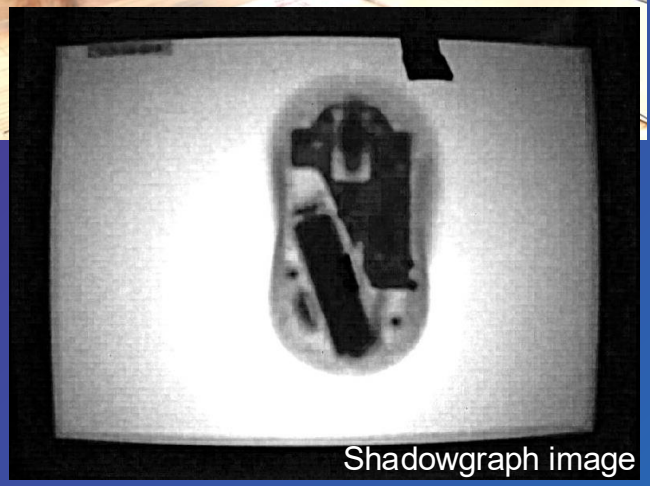
Designed and constructed an advanced Tesla transformer with controlled spark-gap system, generating significantly stronger imaging results.

Established proprietary in-house lamp manufacturing capability enabling rapid iteration and IP control.

Experiments

01/2026 – Lab mouse



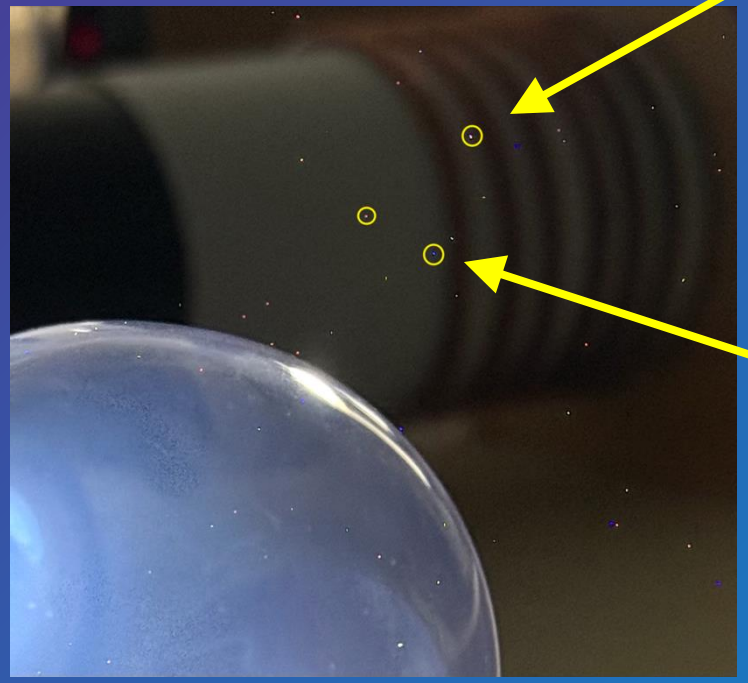


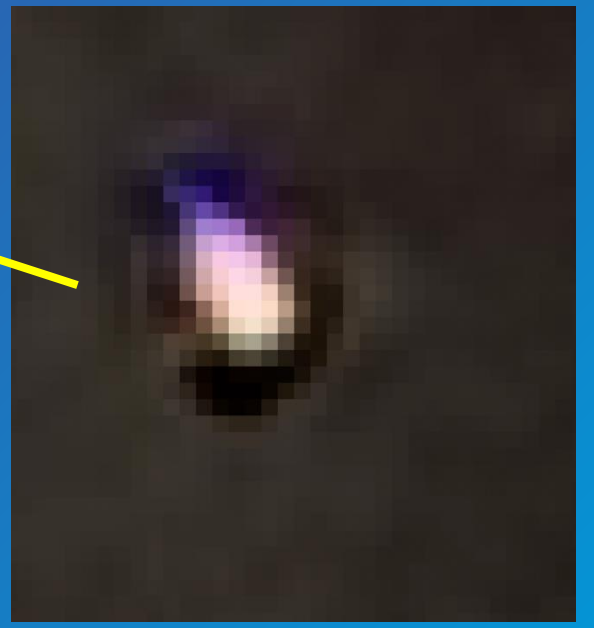
Shadowgraph image

02/2026 – Jan`s hand

Shadowgraph image

Ongoing emission characterization studies





Preliminary Biological Response Study

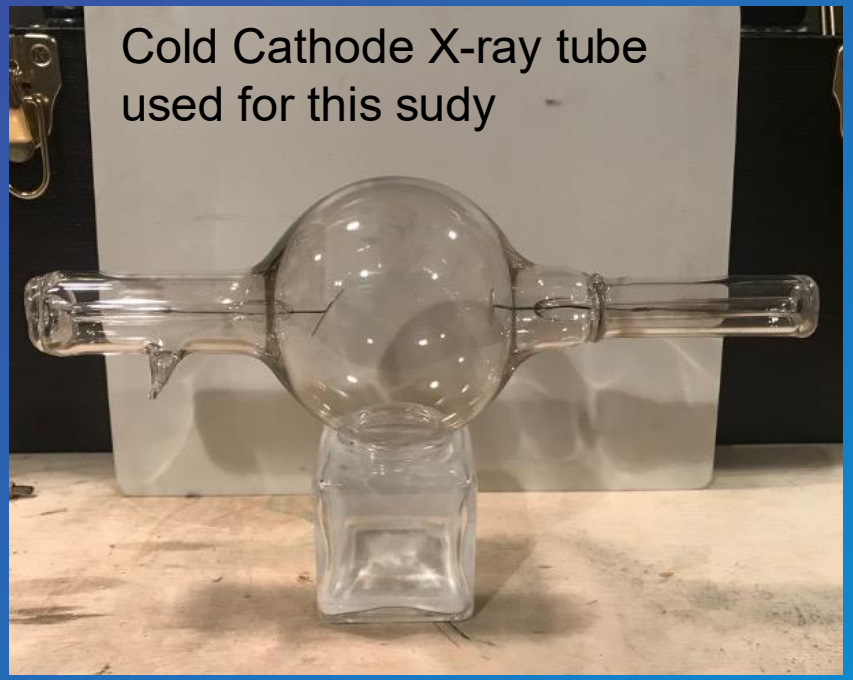
Shadowgraph Emission vs Conventional X-Ray Exposure
Study Conducted by Griffin G. Brock Laboratories (US)
G.G. Brock Lab.

Experimental Model

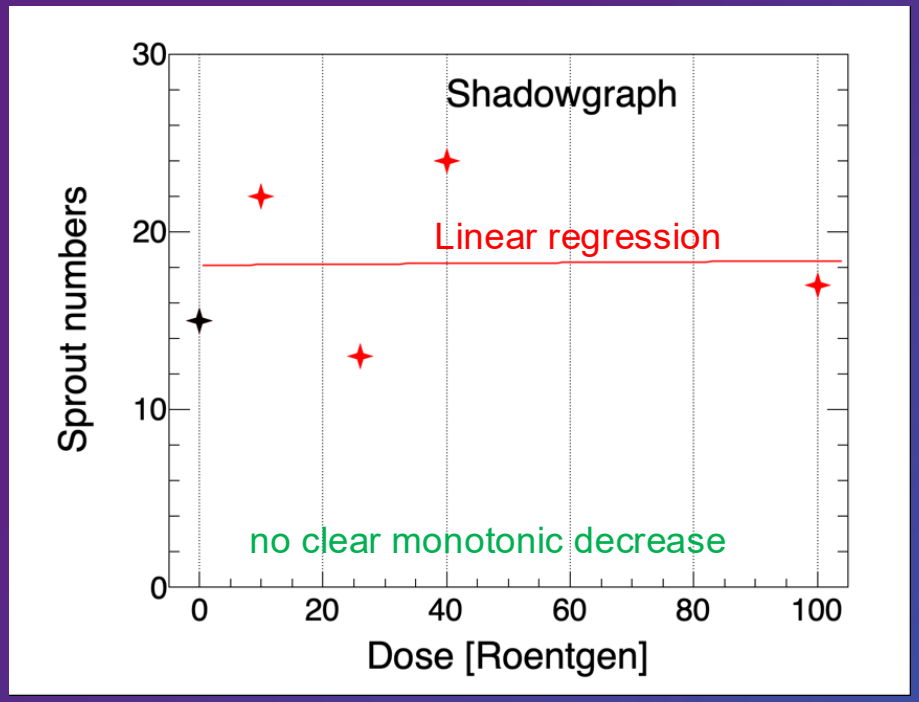
- Radish seeds (multiple trials)
- Exposed to 0 – 100 Roentgen (R)

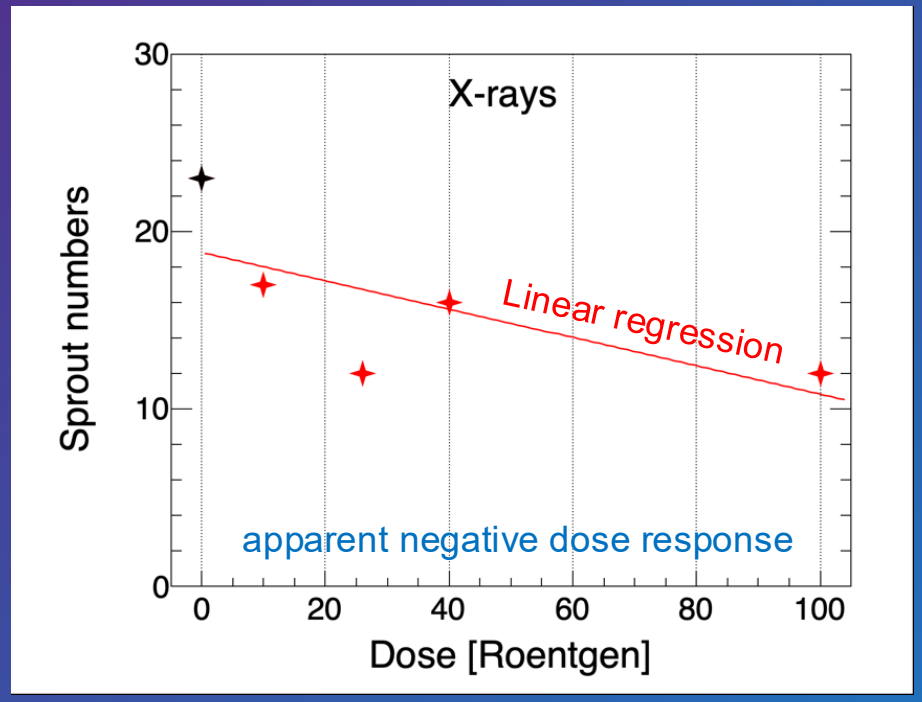
Endpoints evaluated:

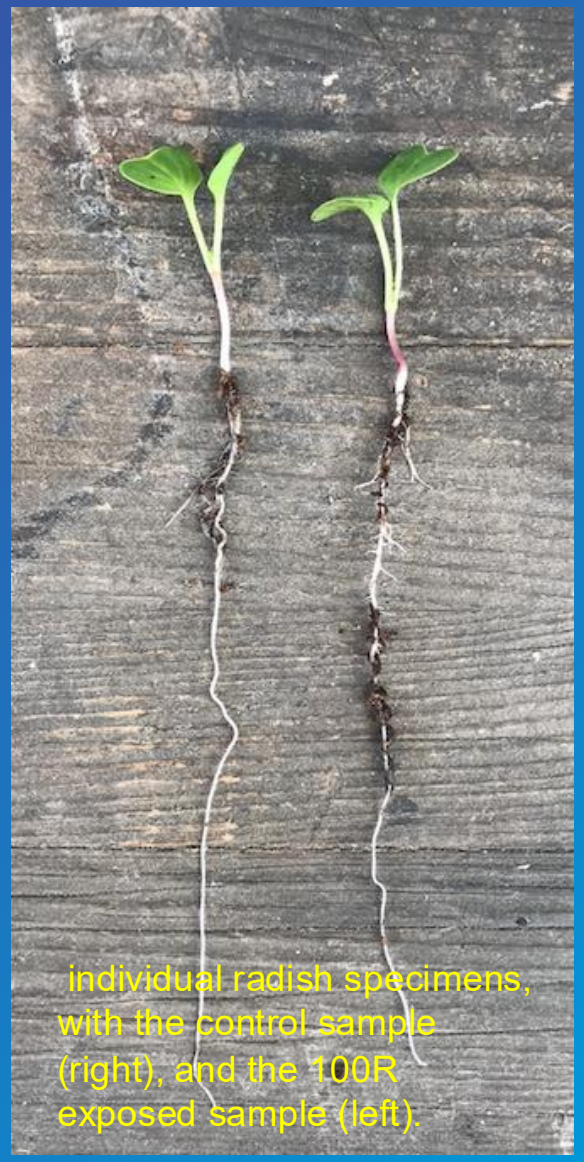
- Germination rate
- Sprout count (average of 3 trials)
- Growth height
- Microscopic cell morphology (500×)

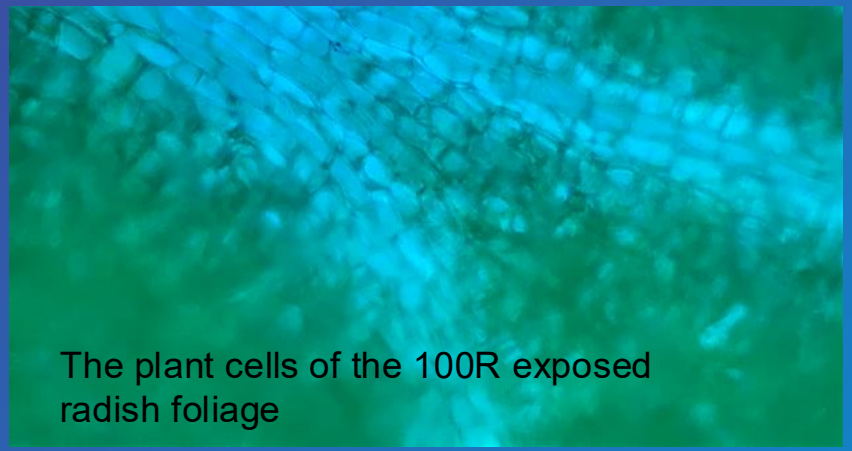


Preliminary Biological Response Study







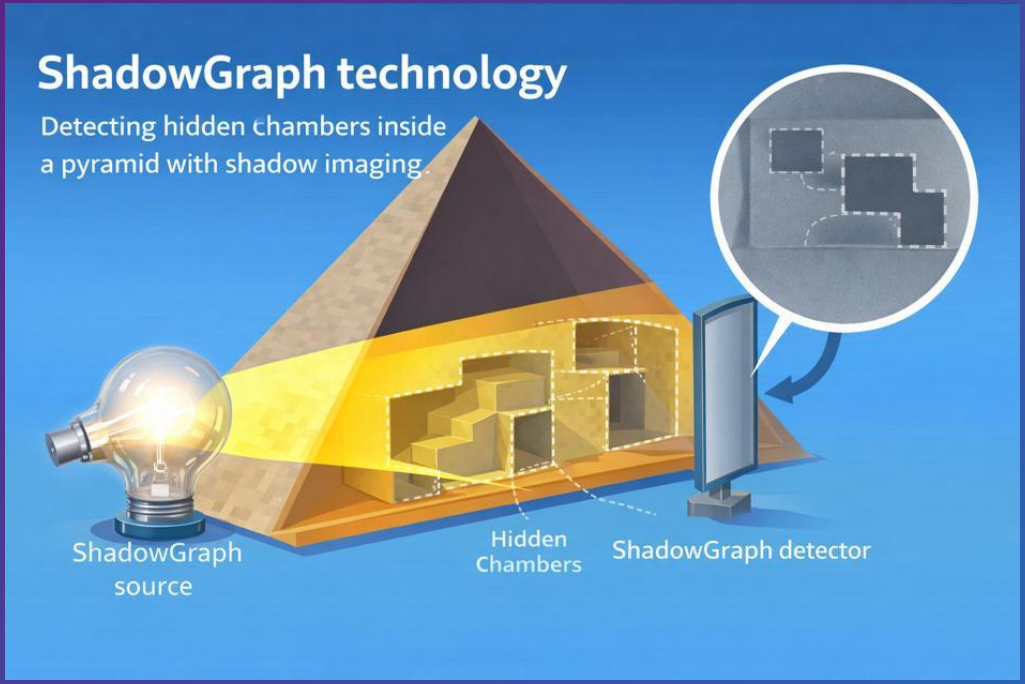


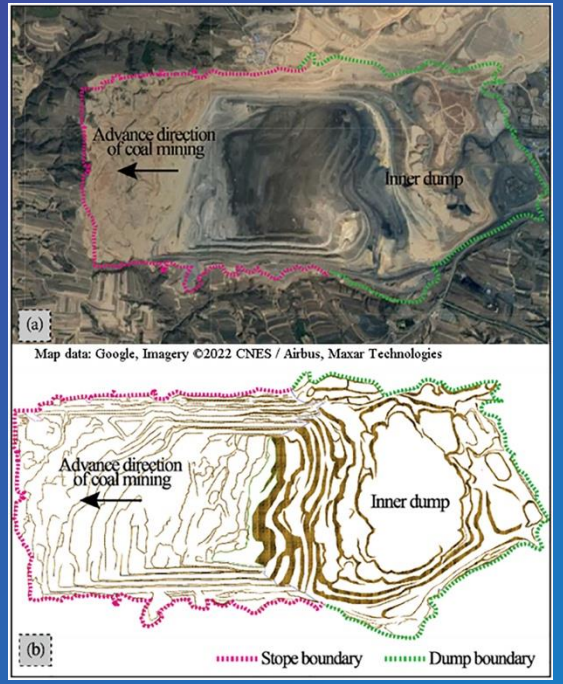
Primary Applications

- Medical Imaging
  - Collimation allows better tomography
  - No harm to DNA

Possible Applications

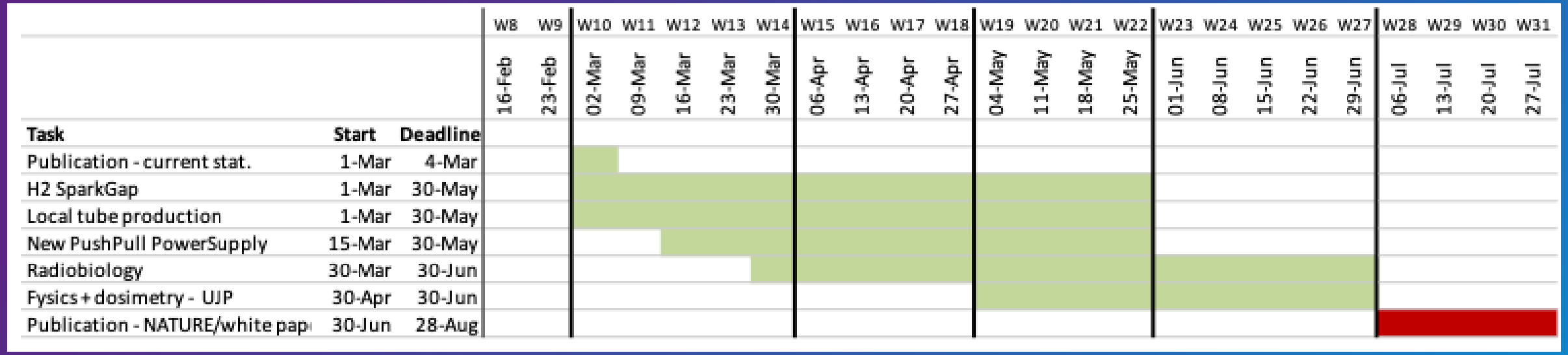
- Geophysics & Mining
- Airport security
- Non-destructive testing (defectoscopy)
- Nuclear waste remediation





Indication that Shadowgraph radiation may alter the lifetime of exposed radioactive material.

Roadmap

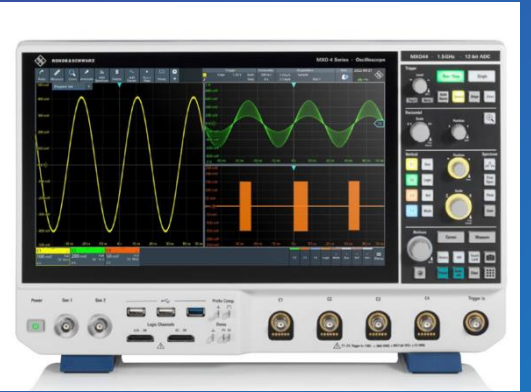


Task	Start	Deadline	W8 16-Feb	W9 23-Feb	W10 02-Mar	W11 09-Mar	W12 16-Mar	W13 23-Mar	W14 30-Mar	W15 06-Apr	W16 13-Apr	W17 20-Apr	W18 27-Apr	W19 04-May	W20 11-May	W21 18-May	W22 25-May	W23 01-Jun	W24 08-Jun	W25 15-Jun	W26 22-Jun	W27 29-Jun	W28 06-Jul	W29 13-Jul	W30 20-Jul	W31 27-Jul
Publication - current stat.	1-Mar	4-Mar																								
H2 SparkGap	1-Mar	30-May																								
Local tube production	1-Mar	30-May																								
New PushPull PowerSupply	15-Mar	30-May																								
Radiobiology	30-Mar	30-Jun																								
Fysics + dosimetry - UJP	30-Apr	30-Jun																								
Publication - NATURE/white pap	30-Jun	28-Aug																								

Q2 – Spectral validation → Determine emission class
Q3 – Stability testing → Confirm reproducibility
Q4 – IP strategy → Secure defensible position
Q4 – Spin-off → Commercialization vehicle

Capital Required:

Equipment	Purpose	Budget	
R&S MXO44 Oscilloscope	HF pulse diagnostics	CZK 679,539	$33,116
Ocean Insight UV-VIS-NIR Spectrometer	Spectral characterization	CZK 50,000	$2,437
RTG Camera	Imaging diagnostics	CZK 20,000	$975
turbomolecular pump	high vacuum	CZK 100,000	$4,873
Tube production	prototype	CZK 100,000	$4,873
		CZK 949,539	$46,274
Laboratory operation 6 months		CZK 3,000,000	$146,199
Total		**CZK 3,949,539**	**$192,473**



Milestones:

- Emission classification complete
- Basic radiology
- IP secured

2026 Validation Roadmap

- **Primary Risk:** Regulatory classification pending formal spectral characterization (Q2 2026).
- **Strategic Advantage:** In-house lamp manufacturing enables rapid iteration and IP control.
- **2026 Validation Inflection Point:** Successful characterization establishes ShadowGraph as a defensible deep-tech imaging platform with scalable cross-industry applications.

ELLIA
foundation

www.elliafoundation.com

“The day science begins to study the non-material level it will achieve in one decade more progress than in all the previous centuries of its existence.“
Nikola Tesla