

Horizon 2020 Grant agreement no: 732613

Glaucoma – Advanced, LAbel-free High resolution Automated OCT Diagnostics

GALAHAD

D9.5 Project outline promotional leaflet

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 Organisation: Gooch and Housego (Torquay)
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 Vivid Components**

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<i>Dissemination level</i>		
<i>PU</i>	<i>Public</i>	<i>X</i>
<i>PP</i>	<i>Restricted to other programme participants (including the Commission Services)</i>	
<i>RE</i>	<i>Restricted to a group specified by the consortium (including the Commission Services)</i>	
<i>CO</i>	<i>Confidential, only for members of the consortium (including the Commission Services)</i>	

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Change register

Version	Date	Author	Organisation	Changes
A	18-Jul-2017	Bruce Napier	Vivid Components	Initial. (Approved draft put into deliverable template.)

Reviewed by Liam Henwood

Gooch & Housego (Torquay)

1. Statement of independence

The work described in this document is genuinely a result of efforts pertaining to the GALAHAD project: any external source is properly referenced.

Confirmation by Authors: Bruce Napier
Andrea Napier

Vivid Components
Vivid Components

2. Abbreviations

OCT Optical Coherence Tomography

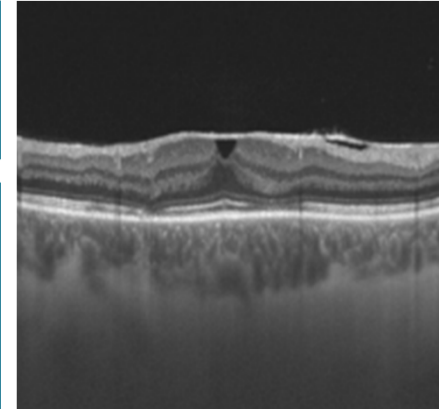
3. Executive summary

A draft project leaflet was prepared in early May-2017. This was updated and improved with comments and material from the consortium, and a final version circulated for approval 22-May-2017. 1000 copies (matt, double-sided A5) were ordered in Jul-2017 and circulated to the GALAHAD partners. Further copies will be purchased if necessary.

This initial leaflet provides an outline of the motivation behind GALAHAD and the key technological challenges. It will be handed out at public events, such as workshops and exhibitions throughout the project.

- **GALAHAD aims to improve screening and basic diagnostics for glaucoma**
 - Glaucoma is a major cause of blindness throughout the world
 - The early stages of the disease are very difficult to spot
 - Current screening approaches have high rates of false results

- **Optical coherence tomography (OCT) is a versatile retinal imaging technique**
 - High resolution
 - Non-contact
 - No need for anaesthetic
- **GALAHAD aims to extend the capabilities of OCT to allow glaucoma detection**
 - Improve resolution and polarisation sensitivity



GALAHAD key elements

- **Low cost supercontinuum source**
 - Development of a powerful high brightness and very broadband light source
- **Ultra-broadband photonic components**
 - To exploit this wide bandwidth source and hence improve the system resolution
- **Automated glaucoma screening algorithms**
 - Will lead the way to systems in which non-expert operators will perform glaucoma screening

For more information please have a look at the project website!



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 732613.

www.galahad-project.eu



Supercontinuum sources

GALAHAD will implement new designs for a state-of-the-art photonic source for OCT:

- Low cost
- Ultra-low noise
- Gaussian output
- Ultra-broadband
- Polarisation maintaining



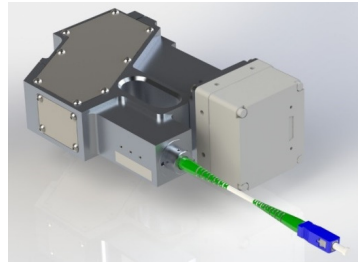
Ultra-broadband components

GALAHAD will develop world-beating broadband components:

Spectrometers: new techniques for low cost large area gratings

PM couplers: new wavelength-flat broadband designs

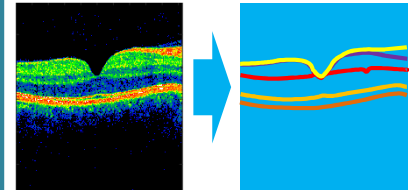
Delay lines: novel ultra-stable polarisation maintaining design



Automated algorithms

GALAHAD will devise algorithms to step towards automated glaucoma diagnosis based on large data sets.

The project will culminate in a demonstration system operating under representative clinical conditions.



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