

# **EPoS: Elucidating Pathways of Steatohepatitis**

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## *The European NAFLD Registry*

**Dr Quentin M. Anstee** PhD, MRCP  
Senior Lecturer & Honorary Consultant Hepatologist,  
Institute of Cellular Medicine,  
Newcastle University, UK.





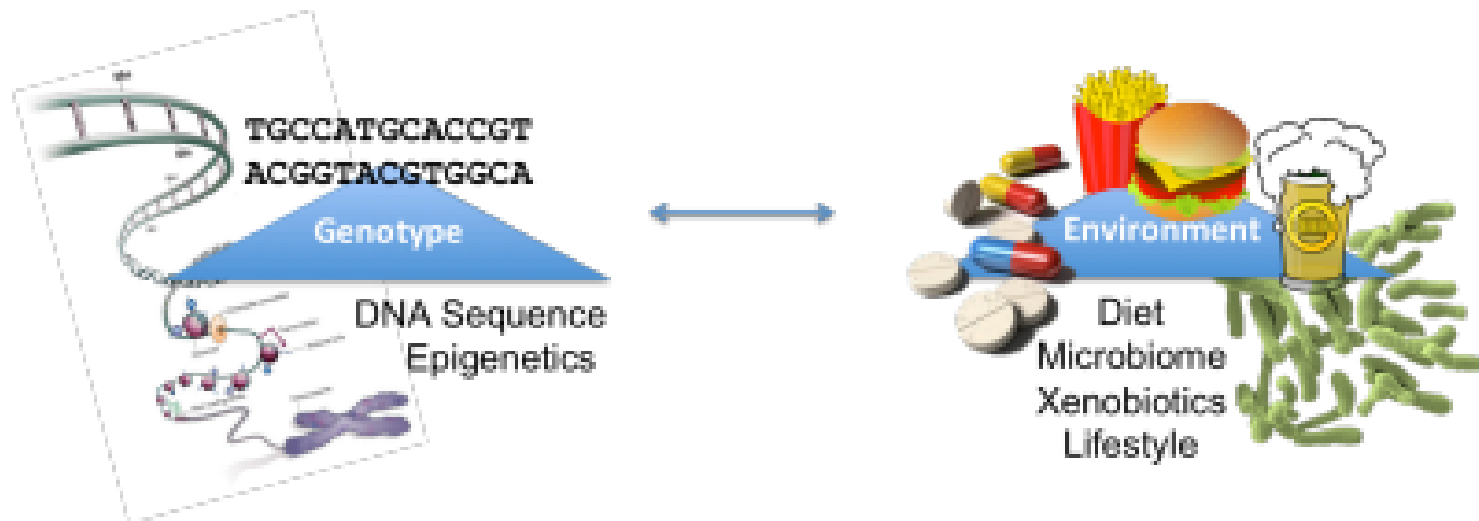
**Horizon 2020 Research & Innovation Action (Grant No: 634413-EPoS-RIA)**  
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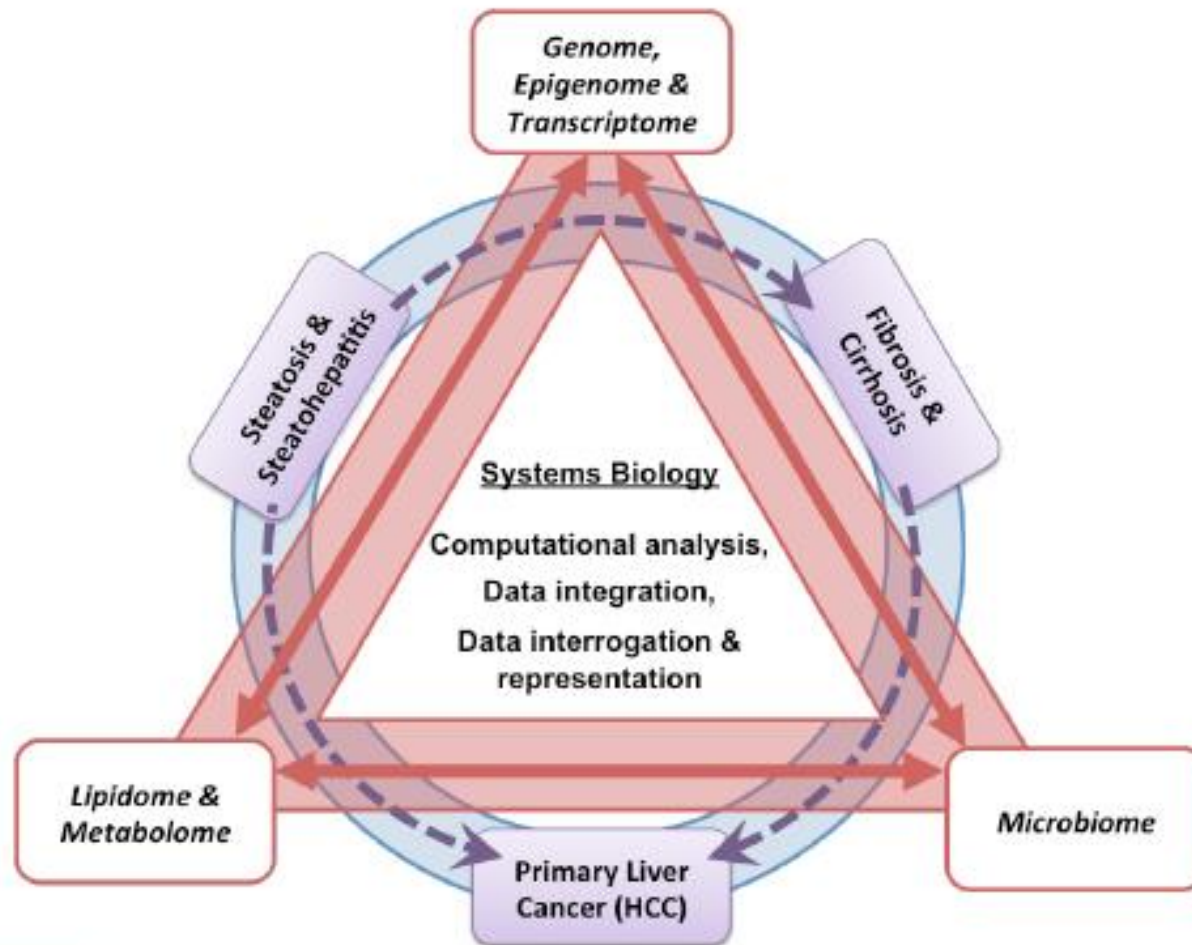
# The EPoS Consortium



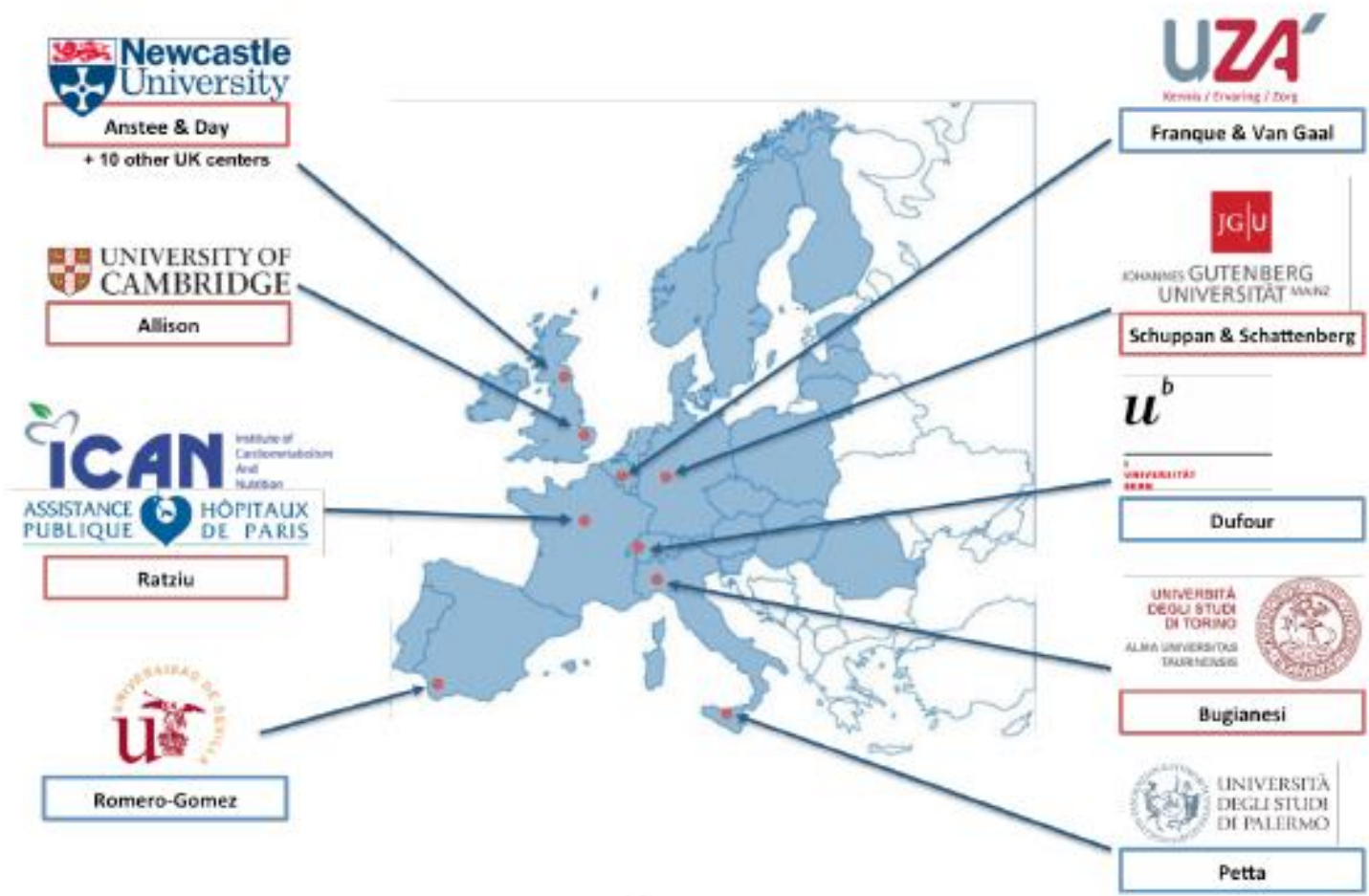
# Addressing the Multi-Factorial Model of Inter-Individual Variation



# Addressing the Multi-Factorial Model of Inter-Individual Variation



# EPoS WP1: The European NAFLD Registry



## Clinical Data

Anthropometrics  
Medical History  
Medication  
Hematology & Biochemistry  
Diet/Lifestyle

## Histopathology

Digital Imagery of Histology Slides  
NIDDK NAS Score  
FLIP SAF Score

**NAFLD**

**REGISTRY**

## Longitudinal Follow-up Annual Reviews

'Hard Endpoints'  
Death/OLT  
HCC

## Biobank Resource

Serum & Plasma  
Frozen Liver Tissue  
FFPE Liver Tissue  
Urine  
Faeces

## Integrated 'Omics' Dataset

SNP variation  
DNA methylation  
Transcriptomics  
Metabolomics/Lipidomics

# EPoS WP9: Biomarker Development

**UMC Mainz:** D. Schuppan, R. Surabattula, Y.O. Kim

**Nordic Bioscience:** Morten Karsdal, M. Juul-Nielsen, D. Leeming





## Current noninvasive methods to assess fibrosis

- **Current serum fibrosis markers have been validated for clinical decision making, sparing 20-50% of patients liver biopsy**

*Parkes J, J Hepatol 2006; Schuppan & Afdhal, Lancet 2008; Mehta SH, J Hepatol 2009; Castera L et al, Hepatology 2010; Martinez SM, Hepatology 2011; Schuppan & Pinzani, J Hepatol 2012*

- **Combination of serum markers with elastography improves staging and decision making**

*Castera L et al, Hepatology 2010; Castera L, Gastroenterology 2012*

- **The direct markers (ELF, Nordic panel.....) may rather reflect the dynamics of matrix turnover - more prospective studies are needed**

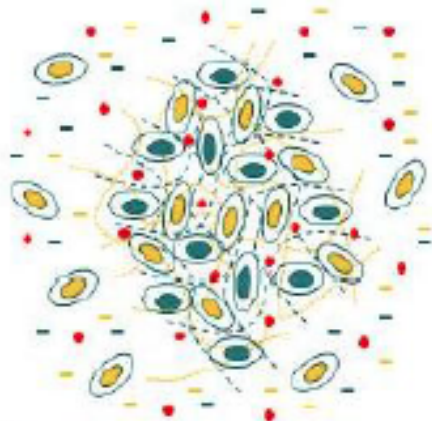
*Mayo ML, Hepatology 2008; Parkes J et al, Gut 2010; Schuppan and Kim, J Clin Invest 2013*

*We need more sensitive and specific surrogates for fibrosis and especially fibrogenesis (proof-of-concept studies, personalized medicine)*

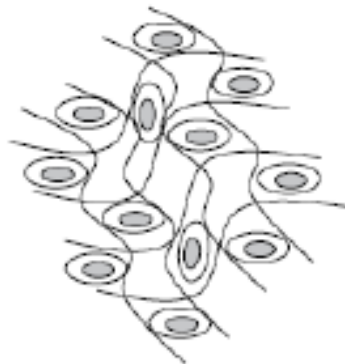
# The balance of ECM turnover

## Separation of fibrogenesis and fibrolysis

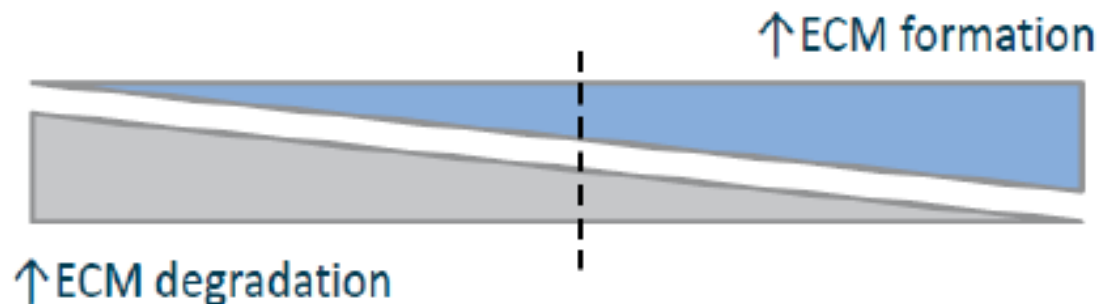
Fibrolysis



Normal



Fibrogenesis





[quentin.anstee@newcastle.ac.uk](mailto:quentin.anstee@newcastle.ac.uk)

