



Baker IDI
HEART & DIABETES INSTITUTE

Overview of the Baker IDI Biobank

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The Baker IDI Biobank

Objective: *To develop a repository of well-characterised samples to support research.*

We collect

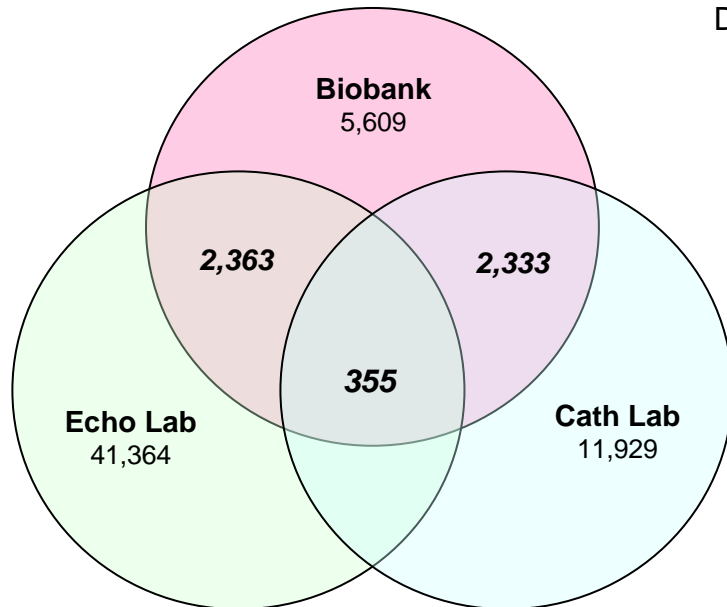
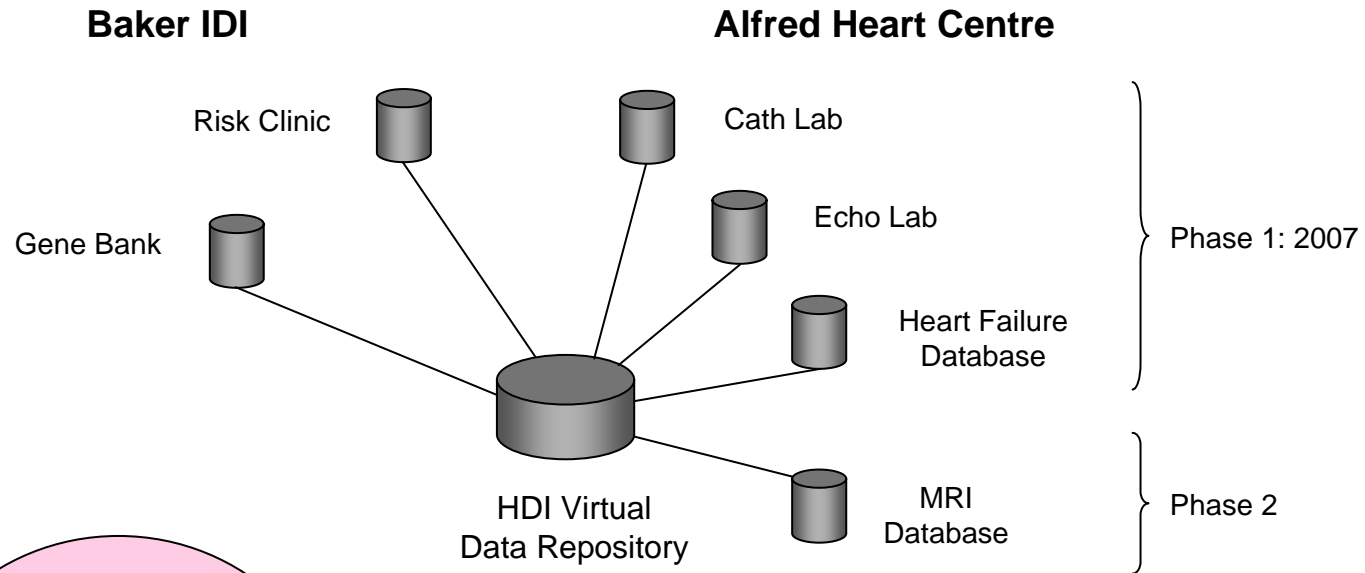
- demographic, medical history, lifestyle/risk factor data
- whole blood, plasma, serum, RNA and buffy coat (for DNA)

From people

- with any heart condition
- with risk factors (i.e. high blood pressure, diabetes, obesity)
- who are healthy

	Number in Biobank
Total	5,671
Cohorts within total:	
Heart Failure	598
Coronary Artery Disease	1235
Diabetes (Type I and Type II)	737
BMI > 30	1292
High blood pressure	2320
High lipids	2340

Health Database Integration



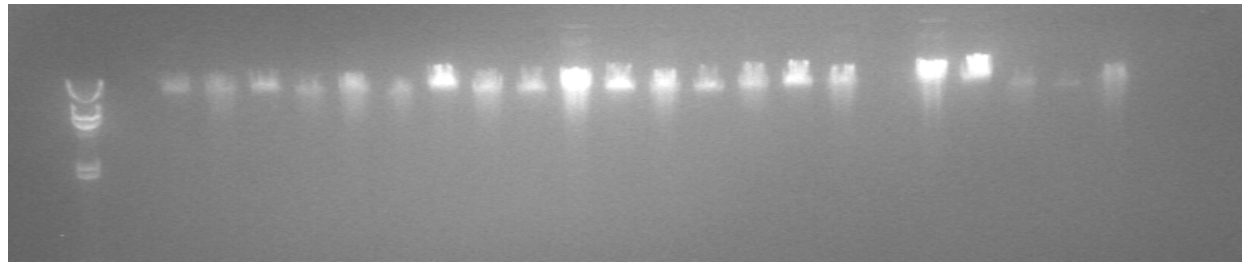
Biobank Quality Control

Aim: To investigate whether storage for up to 8 years has affected the quality of DNA and plasma samples stored in the Biobank.

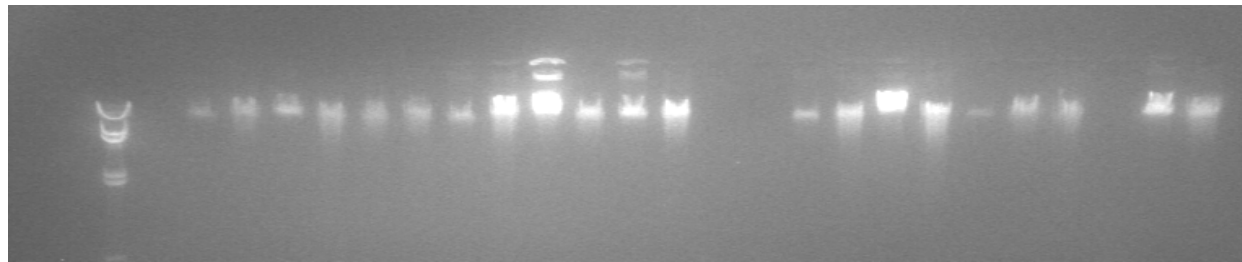
Post collection handling	N	DNA Yield (ug)
Extracted up to 8 years ago & stored since	26	20.8 ± 15.9
Buffy coat stored up to 8 years, DNA extracted in 2008*	29	22.8 ± 9.7
Samples collected and DNA extracted in 2008* from buffy coat	5	13.0 ± 8.7

There was no significant difference in the quantity of DNA detected despite differing extraction methods & storage times.

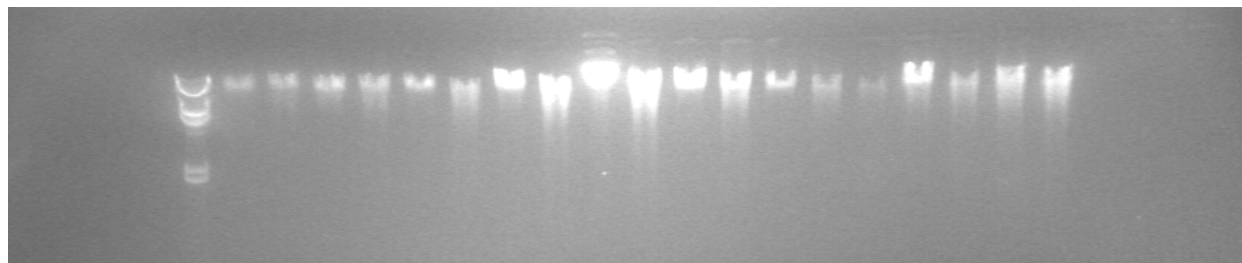
Biobank Quality Control



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L = DNA Ladder (23K bp)

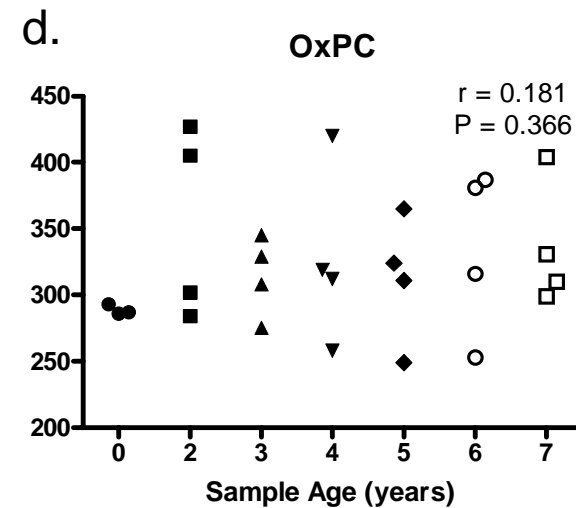
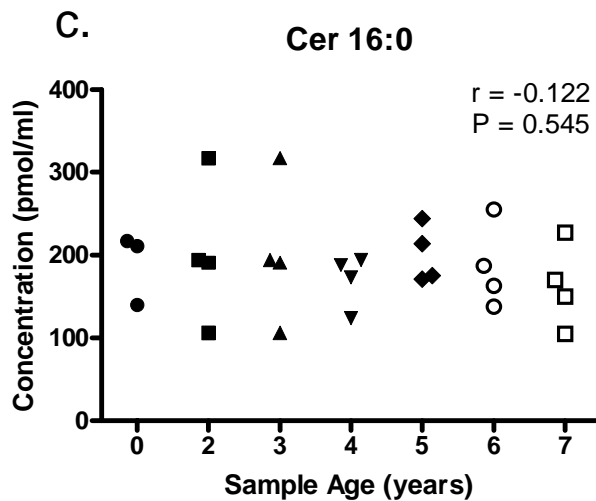
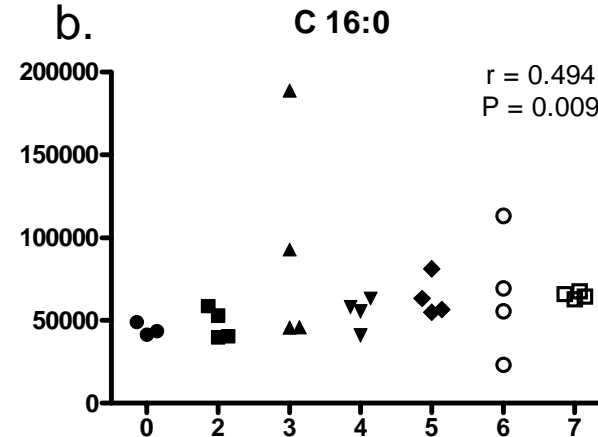
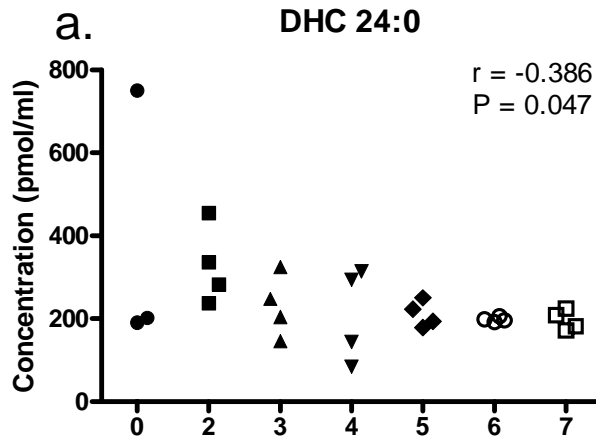
S = Stored DNA, extracted 0-8 years ago

F = 'Fresh' DNA extracted in 2008 from stored Buffy coat samples

N = DNA extracted from blood collected & extracted in 2008

All genomic DNA was of high quality despite differing extraction methods & sample storage times since Biobank began

Biobank Quality Control



There has been no systematic degradation of plasma lipids over the last 8 years of sample collection.

Conclusions

- DNA samples extracted up to 8 years ago have been stored appropriately.
- Buffy coat samples have also been stored appropriately so that we can extract sufficient high quality genomic DNA.
- The absence of systematic degradation/oxidation of lipids indicates plasma samples have been collected and stored appropriately for profiling of lipids.
- Current processes therefore produce samples of equivalent or better quality to those already in the Biobank collection (i.e. our 2008 samples are on par with samples stored long term).