

Dr Amanda Lloyd

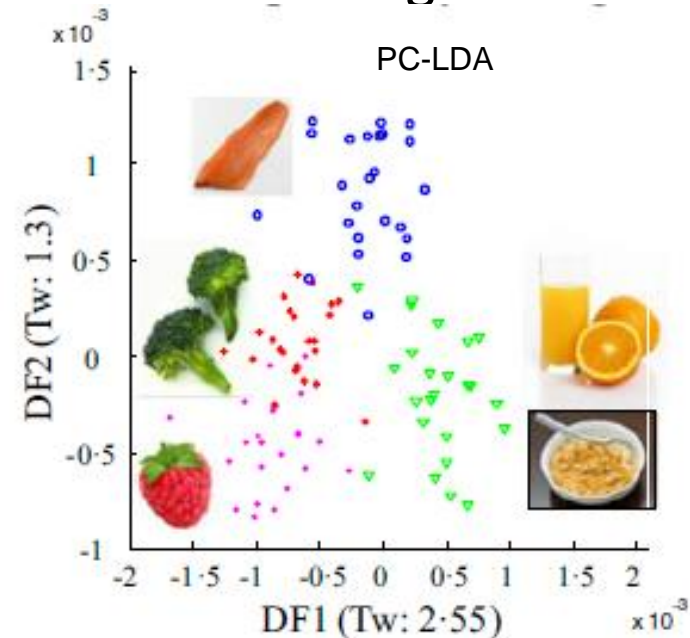
Aberystwyth University, IBERS

Diet & Health Group

High Resolution Metabolomics Laboratory (HRML)

We have pioneered biomarker discovery using metabolomics (chemical fingerprinting) and machine learning to identify and validate urine biomarkers of dietary exposure.

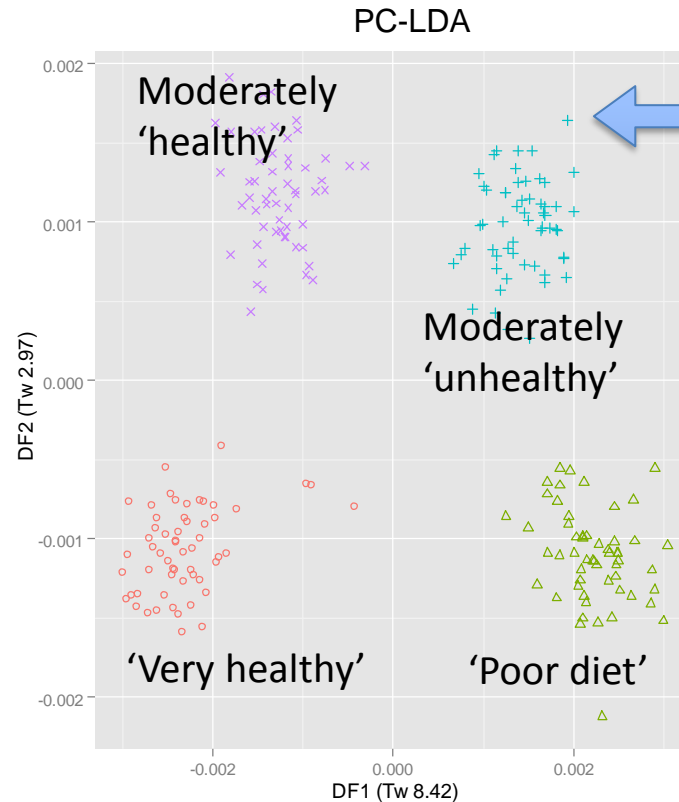
- Fruit and veg biomarkers (unique and broad-range markers)
- Meat (white, red), Wholegrain
- Wine, coffee, tea, fizzy drinks
- Biomarkers of unhealthy foods: such as processed meats



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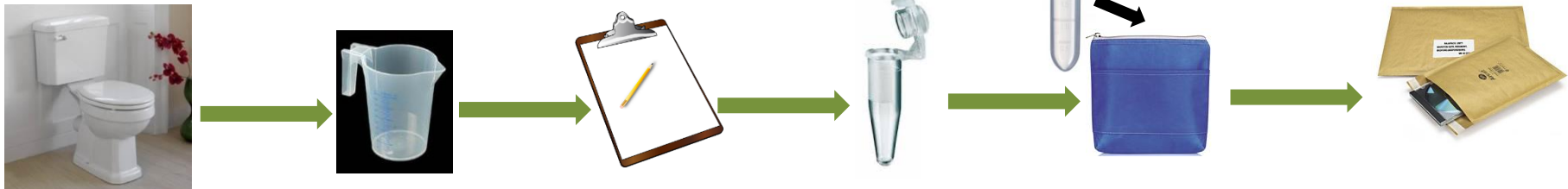
Athrofa y Gwyddorau Biolegol, Amgylcheddol a Gwledig
Institute of Biological, Environmental and Rural Sciences

Now we are using these markers and **chemical signatures** to predict **healthiness/unhealthiness** of individuals diet



Project urine fingerprints from uncategorised individuals to determine habitual diet by natural clustering

Sampling strategy acceptable in a community sampling regime ?



We are looking for help to translate this research into cheap and robust community-based test kits to assess nutritional status and habitual dietary exposure (both point of care or home-used test).

- **Manufacturing urine sampling kits** which are acceptable in a community setting and are suitable for routine use to cheaply and objectively monitor diet.
- Development of **'dip stick' tests** to detect a specific panel of urine biomarkers
- Validate biomarker methodologies in suitable **study populations** (e.g. to assess frailty risk, sarcopenia, malnutrition, pre-diabetes etc.).

Long term collaborators:



National Diet and Nutrition Survey



International Agency for Research on Cancer



MRC Human Nutrition Research