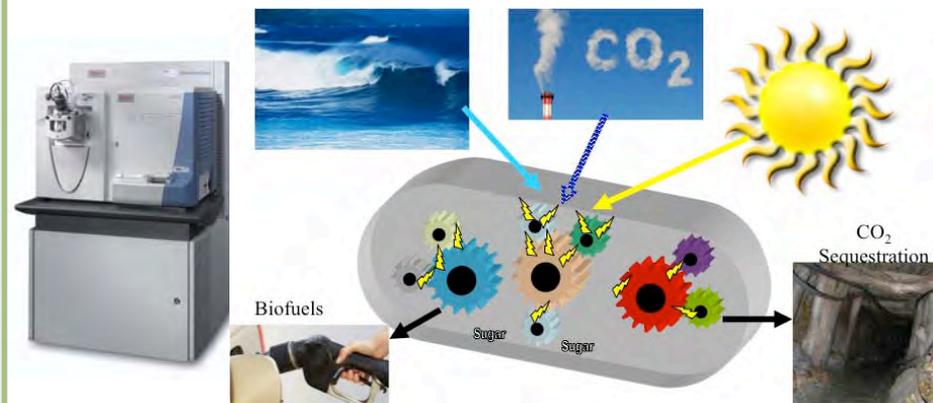


Capability/Need

- A key new technology for increased capacity/more effective proteomics
 - LTQ Orbitrap Velos ETD/H-ESI
- The **newest** Orbitrap technology combines three different and complementary fragmentation techniques
- **Most comprehensive** solution for analysis of post-translationally modified peptides and metabolites and for quantitative proteomics measurements



Applications with environmental metaproteomes

Science/Users

- **Quantitative proteomics to define the dynamics of cell protein composition**
- **Quantitative phosphoproteomics to characterize cell regulatory networks.**
- **Reconstruction and linking of inter- and intra-cellular regulatory networks, especially the response of cells to their environment (e.g., defining the relationship among soil, plants and microbes)**
- **Users will be scientists trying to build predictive models of cell functions**

EMSL Strategy Alignment; Specifics

- Science themes: Biological Interactions and Dynamics; Geochemistry/Biogeochemistry and Subsurface Science
- Cross-cutting challenges: Static-Dynamics; Unprecedented Resolution; Design/Synthesis of Complex Materials; Predict Biological Function
- EMSL capability area: Mass Spectrometry
- Anticipated availability: July 2010
- Technical POC: Ljiljana Paša-Tolić