

## Karen R. Jonscher, Ph.D.

### ABRF functions:

- › Education Committee Chair – Led the effort to establish five new Satellite Educational Workshops for ABRF2009 based on a survey of the membership to determine essential core competencies of interest.
- › Executive Board Member 2009-2012

### CORE Facility Experience:

At the University of Colorado

- › Developed large scale proteomics methods in the Resing Lab at CU Boulder (2000-2005)
- › Director of the Center for Nutrition Research Unit Proteomics Core Facility at the University of Colorado Denver since 2006
- › Director of the Tissue and Technology Center Proteomics Core established in 2008 to serve the NIDDK MAPP Network of researchers studying chronic pelvic pain.
- › Director of Proteomics for the Mucosal Inflammation Program at the University of Colorado Denver, established in 2008.



Basic Research: Department of Anesthesiology, Division of Clinical Research and Development/Mucosal Inflammation Program.

- › Instrument development  
Designed first generation MALDI and nanospray sources for 3D ion trap.  
Constructed a hybrid quadrupole/ion trap that exhibited improved transmission sensitivity
- › Post-translational modifications  
Discovered a novel phosphorylation site on the P protein of Sendai virus
- › Targeted proteomics  
Observed hyperacetylation of important metabolic proteins in the livers of obese mice, potentially these modifications impair function and lead to co-morbidities of obesity.  
  
Identified oxidized mitochondrial proteins from the kidneys of NOD mice that spontaneously develop Type I diabetes.

- ▶ Chronic inflammation Found proteins involved in a novel immune synapse signaling pathway in chronic plaque psoriasis
- ▶ Pre-term birth Found potential biomarkers in vaginal fluid

I believe that a core must produce more than just data. It should become an essential tool within a research institution's arsenal. When we are able to educate other investigators within our institution we can work together to design experiments to more effectively utilize our technologies, to decipher data, to validate findings and to generate the next hypotheses. As partners with our institution we can leverage our technologies to drive science forward.

My core facilities work with investigators to define the question, set the goals, specify the methods, refine the approaches, generate the data, assess results quality, and obtain information. We work with basic researchers and clinicians and utilize our mutual expertise, plus that of instrument vendors and ABRF members, to begin to elucidate elements of the complex web of life science.

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