

2008 APS March Meeting

New Orleans, Louisiana

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Wednesday, March 12, 2008 11:15AM - 2:15PM –

Session Q5 AIP APS: Panel Discussion: How Can Industry Best Support the Innovative Research That It Needs? Morial Convention Center R01

11:15AM Q5.00001 Leveraging R&D Resources via the Joint LLC Model MATTHEW W. GANZ, President and CEO, HRL Laboratories, LLC — Industrial scientific research labs have become increasingly stressed in recent years by a variety of external forces. Both corporations and government funding agencies have shifted their priorities from long-term fundamental research toward projects that have a high probability of shorter-term payoff. Industrial funding has been further stressed by an increasing demand for quarterly results and fierce global competition. Industry leaders are now asking their R&D labs for “home runs and not just a solid base in the physical sciences. The end of the Cold War has also left the US without a declared enemy whose overt intention was to defeat us through a mastery of large-scale weaponry based upon exploitation of fundamental physics. This, when combined with a bona-fide need for technology gap fillers to respond to on-the-ground threats in the current Middle East conflicts, has led to diminished government emphasis on long-term research in the physical sciences. Simultaneously, the global sources of R&D spending are expanding. The dramatic growth of private equity in the technology development arena has both drawn talent from industry and changed the expectations on researchers. R&D spending in China, India and many other countries is growing significantly. Thus, in order to become relevant, industry must now keep its finger on the pulse of the hundreds of billions of dollars being invested privately and publicly around the world. HRL Laboratories, LLC in Malibu, California represents a unique and successful new business model for industrial R&D. HRL was founded by Howard Hughes in 1948 as the Hughes Research Laboratory and for more than four decades was the internal R&D lab for the Hughes Aircraft Company. After a series of mergers, acquisitions and divestitures over the past 15 years, HRL is now a stand-alone LLC that is owned jointly by General Motors and the Boeing Company. HRL, with a staff of about 300, performs R&D services for GM and Boeing as well as for government and commercial entities. The central themes to HRLs business model are innovation, value and leverage. Leverage is key to the companys success. HRLs business model has been carefully honed to allow its parent companies to perform proprietary R&D in certain areas and joint, collaborative R&D among the LLC members in others. The intellectual property arrangements are skillfully organized so that the LLC Members receive a greater than 4:1 leverage of their research dollars in terms of the IP rights gained. This briefing will describe an overview of the current industrial research environment, HRLs business model, and challenges to future success.

11:51AM Q5.00002 The Value of Long Range R&D in the Information Technology Industry , PAUL M. HORN, Distinguished Scientist in Residence, NYU and Senior VP and Dir. of Research (retired), IBM — Examples from IBM and other IT companies will illustrate how long range physics research can be financially beneficial.

12:27PM Q5.00003 Creating Value with Long Term R&D: The life science industry , DARLENE J. S. SOLOMAN, CTO and Vice President, Agilent Technologies — Agilent Laboratories looks to the future to identify, invest and enable technologies and applications that will nurture the worlds people, environment and economies, and help ensure Agilents continuing leadership. Following a brief introduction to Agilent Technologies and Agilent Laboratories, Solomon will discuss how innovation and long-term R&D are transcending traditional boundaries. Focusing on the life sciences industry, she will discuss current trends in R&D and the importance of measurement in advancing the industry. She will describe some of the challenges that are disrupting the pharmaceutical industry where significant and sustained investment in R&D has not translated into large numbers of block-buster therapeutics. Much of this gap results from the profound complexity of biological systems. New discoveries quickly generate new questions, which in turn drive more research and necessitate new business models. Solomon will highlight examples of Agilents long-range R&D in life sciences, emphasizing the importance of physics. Shell conclude with the importance of creating sustainable value with R&D.

1:03PM Q5.00004 TBD , MARK R. PINTO, CTO and Senior VP & General Manager, Energy and Environmental Solutions, Applied Materials, Inc. — TBD

1:39PM Q5.00005 Panel Discussion: How can industry best support the innovative research that it needs? , ABSTRACT APS — Four industrial physics leaders will discuss the future and value of innovative research in an industrial setting, and will share perspectives on how their companies address the challenge of supporting research operations. The speakers come from varied research settings and represent a cross-section of and scientific fields including bio-physics/life sciences, materials processing equipment, information technologies and electronics. This session includes an interactive panel discussion on overcoming the challenges and the circumstances confronting industrial R&D operations.