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PIPRA, The Public Intellectual Property Resource for Agriculture, is an organization committed to the strategic management of intellectual property owned by universities and not-for-profit research institutions, encouraging the broadest applications of existing and emerging agricultural technologies for the development of subsistence crops for developing countries and specialty crops in developed countries.

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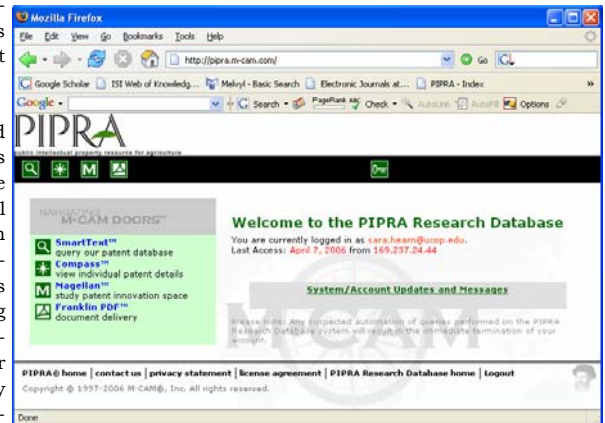
PIPRA database goes public

The beta version of the PIPRA database is now on-line for public access. Please visit <http://pipra.m-cam.com> or follow the link from the PIPRA website. Over 6600 patents and patent applications from 39 different countries are now searchable by many fields, including licensing status. The data represent the agricultural portfolios of 27 universities and non-profit research institutions.

Licensing information collected from PIPRA member institutions is crucial for understanding the availability of these agricultural technologies. While patents can be searched through many websites (including the USPTO), it is not clear from any existing source whether a patent is available for use. The patent may, for instance, already be exclusively licensed. Once a patent is selected, a user can access more information and assistance with licensing, through direct links to the patentee's technology transfer office and to PIPRA.

For a selected patent, the PIPRA interface also displays the family of related patent filings, the cited prior art, and citing subsequent art, giving a fuller picture of the patents surrounding a particular technology. A PDF of the patent can be downloaded for free. The legal status of the patent is provided (for instance,

whether a patent has been abandoned) as well as a clearly displayed expiration date. In addition to licensing information, these characteristics can be important in navigating the landscapes of intellectual property rights.



The PIPRA portfolio continues to expand as new technologies are invented and new institutions decide to participate. It represents an increasingly valuable resource for agricultural research. The searchable database of PIPRA members' technologies, combined with the scientific and IP expertise of PIPRA staff, have the potential to make a significant difference in overcoming the IPR hurdles that pose problems for agricultural R&D.

Two New Members

Agriculture and Agri-Food Canada and the World Vegetable Center

Agriculture and Agri-Food Canada is one of the ten largest public sector patent holders in agriculture. The agency's research arm manages 19 research centers, with over 600 scientists, and an annual research budget of over \$250 million. Agri-Food Canada scientist **Brian Miki** has been involved in the pPIPRA vector project, **Lisa James** in technology transfer worked to bring them into PIPRA, and **John Culley**, the director of technology transfer for Agri-Food Canada, attended the PIPRA Members' Meeting in Orlando in March.

The World Vegetable Center, long known as AVRDC (The Asian Vegetable Research and Development Center) has 35 year history in research "committed to developing and disseminating technologies that increase everyone's access to safe and affordable vegetables." AVRDC is headquartered in Taiwan, has branches in Thailand, India, and Tanzania, and a staff of over 200. Director-General **Thomas Lumpkin**, attended some of the early discussions that lead to the formation of PIPRA when he was at North Carolina State.

PIPRA Members have a “Magical” Meeting

Mickey Mouse did not, in the end, make a cameo at the PIPRA Members’ Meeting on March 1st 2006. Business was a bit more serious at the Walt Disney Yacht Club Resort in Orlando for the representatives gathered from twenty of PIPRA’s member institutions and several prospective institutions. In addition, representatives were on hand from seven affiliated organizations, including **Richard Boadi**, patent counsel for the **African Agricultural Technology Foundation** in Nairobi, Kenya, and **Steven Price**, president of the **Public Interest Intellectual Property Advisors (PIIPA)**.

Alan Bennett, Executive Director of PIPRA, characterized progress in 2005 as building PIPRA’s foundation, with membership growing from 23 to 35 members and many affiliated *pro-bono* law firms and IP organizations. Access to enabling technologies and support for developing countries will be built upon that foundation in the coming years.

Gerard Barry, of **IRRI**, detailed for everyone the role biotechnology can play in global food security. **Cecilia Chi-Ham**, of **PIPRA**, outlined PIPRA’s development of plant transformation vectors to be made available under a unified sublicense. **Marie Connett**, of **CAMBIA**, explained the open source BiOS license for TransBacter™ plant transformation methods. **Sara Boettiger**, of **PIPRA**, discussed issues that US universities will face with the BiOS license as well as uses of the PIPRA database for technology marketing. Other discussions focused on possible work-arounds to current standard methods in plant biotechnology, issues in “Humanitarian Use” licensing, and strategies for outreach in developing countries.

PIPRA’s Executive Committee, chaired by **Karel Schubert** also met in several separate sessions to discuss PIPRA incorporation and staff reviews. You can contact Karel at kschubert@danforthcenter.org for details.

A summary from the 2006 PIPRA Annual Membership Meeting, held March 1, 2006, in Orlando, Florida, is [online](#).

The Truth & Consequences of Bayh-Dole

In two new publications **Sara Boettiger** and **Alan Bennett** of **PIPRA** examine the impacts and implications of the Bayh-Dole Act, to which many attribute the growth of university technology transfer and the kind of high-tech economic development experienced in the U.S. over the last 25 years.

“Bayh-Dole at 25, if we knew then what we know now” (*Nature Biotechnology*, March 2006, pp. 320-3) is a retrospective that finds much to admire in the flexibility of the framework introduced by Bayh-Dole, while attributing many of its negative outcomes, such as the lack of an explicit research exemption, hindered access to research tools, the rise of patent thickets, and the demise of technology spillovers towards humanitarian efforts, to the institutional

policies of individual institutions. It concludes that systematic treatment of these shortcomings may require legislative amendments in the coming years.

In *“The Bayh-Dole Act: Implications for Developing Countries”* (*IDEA: The Intellectual Property Law Review*, 46:2) two questions are explored. How has Bayh-Dole in the U.S. affected developing countries, and what would Bayh-Dole-like reforms in developing countries do for their own economic development. The evidence is quite mixed on the first question, but the conclusions are fairly clear that policies modeled after Bayh-Dole are unlikely to deliver the much-vaunted results in developing countries given the lack of research infrastructure and research funding.

“If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea...”

-Thomas Jefferson

PIPRA Hosts Visiting Researchers



Andrea Gamberini is a visiting scholar from the University of Bologna, Italy. Currently in the last year of a PhD, his primary research is in peach breeding for fruit quality traits with particular attention to flesh softening. He came to PIPRA and the labs at UC Davis to learn techniques for utilizing molecular markers in peaches, which he will apply in further work at UC’s Kearney Agricultural Center, outside of Fresno, CA. You can contact Andrea at agamberini@ucdavis.edu.

Nelson Martinez has a Masters in History from the University of Chile and experience with non-profits in Chile. He is currently a visiting scholar at the Hemispheric Institute on the Americas at UC Davis, where he is pursuing interests in the history of indigenous peoples. At PIPRA he is developing and strengthening our collaborative network in Latin America and organizing a Latin America workshop to be held later this year or early next. He is applying to PhD programs in History. You can contact Nelson at nmmartinezberrios@ucdavis.edu.



Call for Executive Committee Nominations

The Executive Committee is the primary governing body of PIPRA. Committee Members are drawn from PIPRA member institutions and serve two year terms. Three of the seven members for 2005-06 have now served full two year terms—Lisa Lorenzen, Henry Lowendorf, and Karel Schubert. Those three positions are now open for nominations or re-nominations.

Please e-mail nominations to Cecilia Chi-Ham, clchiam@ucdavis.edu.



Karel Schubert, Chair of PIPRA's Executive Committee, visits with **Alan Bennett**, Executive Director of PIPRA, at a PIPRA display table at **BIO 2006** in Chicago.

New gene equips crops against salt, drought, and freezing

Researchers **Balasubrama Rathinasabapathi** and **Suresh Raman** at the **University of Florida** have identified and isolated a gene involved in production of an osmoprotectant compound, beta-alanine betaine, found in the highly stress-tolerant members of the plant family *Plumbaginaceae*, which thrive in dry areas with saline soils. When this gene is introduced into other species of plant, it produces stress-tolerant characteristics that can be of huge benefit for many agricultural crops. For more information visit the University of Florida [OTL website](#) or contact [Jane Muir](#).

New Applications and Patents by PIPRA Members

New patent applications published:

US20060080745, April 13, 2006, Cornell University, Gene reactivation by somatic hypermutation

US20060080749, April 13, 2006, University of Georgia, Nematode resistant transgenic plants

US20060080748, April 13, 2006, Wisconsin Alumni Research Foundation, Cross-incompatibility traits from teosinte and their use in corn

US20060070142, March 30, 2006, University of California, Methods of suppressing flowering in transgenic plants

US20060059586, March 16, 2006, The Samuel Roberts Noble Foundation, Plants with delayed flowering

US20060048245, March 2, 2006, University of California, Methods for improving seeds

US20060041953, February 23, 2006, University of California, Control of fruit dehiscence in *Arabidopsis* by indehiscent genes

US20060037105, February 16, 2006, The Samuel Roberts Noble Foundation, Agroinoculation method for virus induced gene silencing

US20060026707, February 2, 2006, Wisconsin Alumni Research Foundation, Polycomb genes from Maize — Mez1 and Mez2

New patents granted:

7,029,667, April 18, 2006, Cornell University, DNA encoding *Erwinia amylovora* hypersensitive response elicitor and its use

7,019,126, March 28, 2006, Rutgers University, Transgenic plants producing a PAP II protein

7,009,092, March 7, 2006, Iowa State University, Transgenic corn plants having seeds with modified cornstarch characteristics and method of making the transgenic corn plants

7,009,088, March 7, 2006, University of Arizona, Methods of modulating auxin production in plants

7,008,767, March 7, 2006, Wisconsin Alumni Research Foundation, Microorganism genomics, compositions and methods related thereto

7,005,561, February 28, 2006, University of Georgia, Arabitol or ribitol as positive selectable markers

6,998,515, February 14, 2006, Cornell University, Use of a nucleic acid encoding a hypersensitive response elicitor polypeptide to enhance growth in plants

6,995,300, February 7, 2006, Iowa State University, Isolation of SU1, a starch debranching enzyme, the product of the maize gene sugary1

6,995,016, February 7, 2006, Agri-Food Canada, Process for inducing direct somatic embryogenesis in immature scutella cells of *pooideae*, and rapidly regenerating fertile plants

6,995,015, February 7, 2006, University of Florida, Pathogen-resistant grape plants

Current PIPRA Member Institutions

1. Agriculture and Agri-Food Canada
2. Arizona State University, represented by Arizona Technology Enterprises LLC
3. AVRDC, The World Vegetable Center, Taiwan
4. Boyce Thompson Institute
5. CIMMYT, International Maize and Wheat Improvement Center, Mexico
6. CIP, International Potato Center, Peru
7. Cornell University
8. Donald Danforth Plant Science Center
9. Fundación Chile, Chile
10. Iowa State University
11. IRRI, International Rice Research Institute, Philippines
12. Kansas State University
13. Michigan State University
14. North Carolina State University
15. Ohio State University
16. Oregon State University
17. Parco Tecnologico Padano, Italy
18. Purdue University
19. Salk Institute
20. St. Augustine University of Tanzania
21. Samuel Roberts Noble Foundation
22. State University of New Jersey, Rutgers
23. University of Arizona
24. University of Arkansas, Division of Agriculture
25. University of California-Berkeley
26. University of California-Davis
27. University of California-Riverside
28. University of Florida
29. University of Georgia Research Foundation
30. University of Idaho
31. University of Kentucky
32. University of Missouri-Columbia
33. University of Saskatchewan, Canada
34. University of Tennessee
35. University of Wisconsin, represented by Wisconsin Alumni Research Foundation
36. Virginia Tech, College of Agriculture and Life Sciences
37. Washington State University

PIPRA's 2005-6 Executive Committee

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