Academic cooperation between the University of Costa Rica and the University of Hohenheim – more than 20 years of successful collaboration

Prof. Dr. Víctor M. Jiménez
CIGRAS/IIA
Escuela de Agronomía
Universidad de Costa Rica

University of Hohenheim

Relatively small university, with emphasis in three main large areas

- **Natural sciences**
- **Agricultural sciences**
- **Business, economics and social sciences**

Strong emphasis on research and very international (with more than 180 cooperation agreements).

www.uni-hohenheim.de

A BRIEF ACCOUNT ON ACADEMIC COOPERATION BETWEEN THE UNIVERSITIES OF HOHENHEIM AND COSTA RICA

Beginning

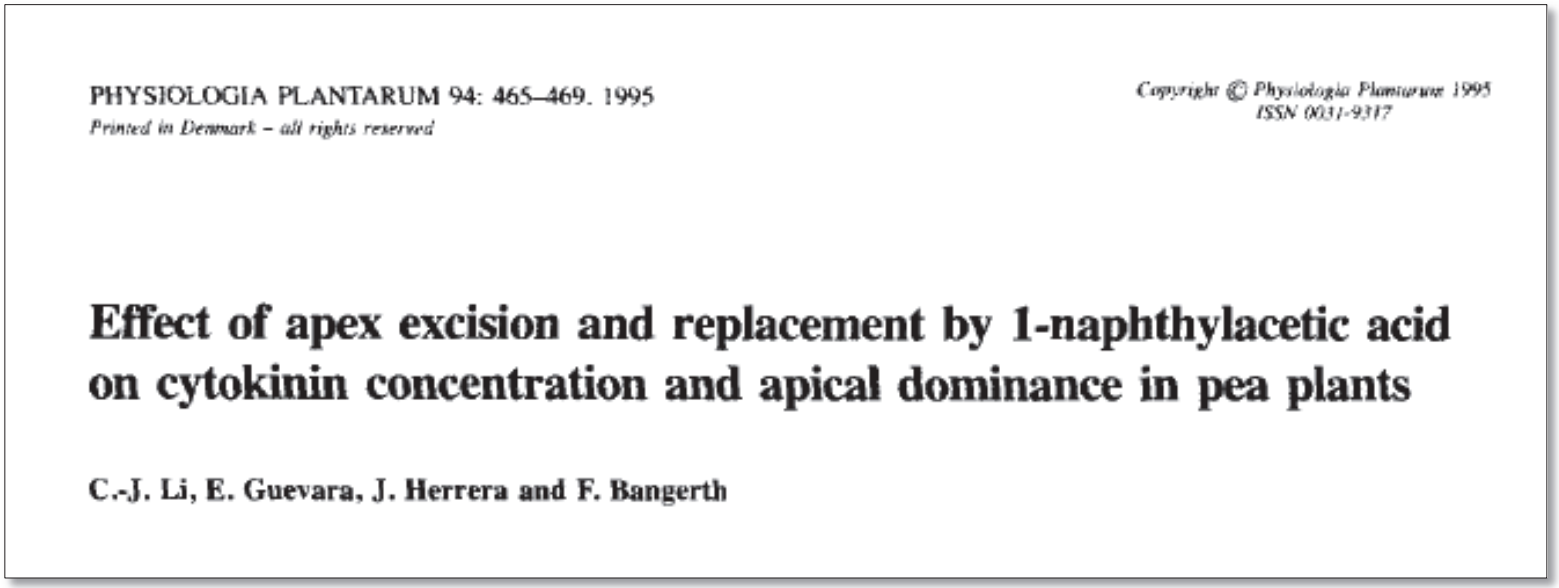
<1991 Three Ph.D. students from the UCR at UHOH

1991 First visit to UHOH (few hours) (J. Herrera and E. Guevara)

1992 First visit to UCR (4 days) (F. Bangerth)

1993 First research stay at UHOH (3 months) (J. Herrera and E. Guevara) – funded by CONARE/DAAD

First results



PHYSIOLOGIA PLANTARUM 94: 465–469. 1995
Printed in Denmark – all rights reserved

Copyright © Physiologia Plantarum 1995
ISSN 0031-9317

Effect of apex excision and replacement by 1-naphthylacetic acid on cytokinin concentration and apical dominance in pea plants

C.-J. Li, E. Guevara, J. Herrera and F. Bangerth

Consolidation phase

1995 Annual scholarships (V. Jiménez and P. Esquivel) DAAD

1996 Second research stay (3 months) (J. Herrera and E. Guevara) DAAD-CONARE

Student exchange (UHOH to UCR)

Name	Host	Dates (duration)	Funding
Birgit Gutberlett (Diploma)	Profs. Guevara & Herrera (UCR)	1996 (2 months)	Own and UCR
Amani Yousef (Ph.D. student)	Profs. Guevara & Herrera (UCR)	1997 (2 weeks)	DAAD – UHOH and UCR

1999 Third research stay (3 months) (J. Herrera and E. Guevara) DAAD-CONARE

2000 V. Jiménez and P. Esquivel) returned to the UCR

2000-2001 **Publications**

Journal of Applied Botany - Angewandte Botanik 75, 1 - 7 (2001), © 2001, Vereinigung für Angewandte Botanik, Göttingen

Institut für Obst-, Gemüse- und Weinbau der Universität Hohenheim, Stuttgart

In Vitro Culture and Endogenous Hormone Levels in Immature Zygotic Embryos, Endosperm and Callus Cultures of Normal and High-lysine Barley

Víctor M. Jiménez and Fritz Bangerth

(Received March 9, 2000)

ELSEVIER

Plant Science 160 (2001) 247–257

PLANT SCIENCE

www.elsevier.com/locate/plantsci

Hormonal status of maize initial explants and of the embryogenic and non-embryogenic callus cultures derived from them as related to morphogenesis in vitro

Víctor M. Jiménez [1], Fritz Bangerth *

Vitis 39 (4), 151–157 (2000)

Relationship between endogenous hormone levels of grapevine callus cultures and their morphogenetic behaviour

V. M. JIMÉNEZ[1)] and F. BANGERTH[2)]

[1)] CIGRAS, Universidad de Costa Rica, San Pedro, Costa Rica
[2)] Institut für Obst-, Gemüse- und Weinbau (370), Universität Hohenheim, Stutt

Plant Cell, Tissue and Organ Culture **67:** 37–46, 2001.

Endogenous hormone concentrations and embryogenic callus development in wheat

Víctor M. Jiménez[1] & Fritz Bangerth*

*Institut für Obst-, Gemüse- und Weinbau (370), Universität Hohenheim, D-70593 Stuttgart, Germany; ([1]present address: CIGRAS, Universidad de Costa Rica, 2060 San Pedro, Costa Rica); (*requests for offprints; Fax: +49-711-459-2351; E-mail: fkbang@uni-hohenheim.de)*

PHYSIOLOGIA PLANTARUM 111: 389–395. 2001

Endogenous hormone levels in explants and in embryogenic and non-embryogenic cultures of carrot

Víctor M. Jiménez[1] and Fritz Bangerth*

Institut für Obst-, Gemüse- und Weinbau (370), Universität Hohenheim, D-705
Universidad de Costa Rica, 2060 San Pedro, Costa Rica
**Corresponding author, e-mail: fkbang@uni-hohenheim.de*

Plant Cell Reports (2001) 20:92–100

PHYSIOLOGY AND BIOCHEMISTRY

V.M. Jiménez · E. Guevara · J. Herrera
F. Bangerth

Endogenous hormone levels in habituated nucellar *Citrus* callus during the initial stages of regeneration

Visiting scientists (UHOH to UCR)

Year (duration)	Name	Host	Funding	Motivo
2001 (6 weeks)	Gerd Weber	Profs. Jiménez and Guevara	CONARE-DAAD	Visiting professor
2004 (5 weeks)	Fritz Bangerth	Profs. Jiménez and Guevara	CONARE-DAAD	Visiting professor
2004 (1 week)	Florian Stintzing	P. Esquivel	UHOH	Visiting lecturer
2005 (6 weeks)	Axel Schwekendiek	Profs. Jiménez, Guevara and Herrera	CONARE-DAAD	Visiting lecturer
2005 (1 week)	Gerd Weber	DAAD Workshop	DAAD	Board member
2006 (1 week)	Gerd Weber	DAAD Workshop	DAAD	Board member
2007 (1 week)	Gerd Weber	CIGRAS	UCR	External evaluator
2008 (6 weeks)	Evelyn Möller	Prof. Jiménez	CONARE-DAAD	Visiting lecturer

2002 Research stay (3 months) (J. Herrera and E. Guevara) DAAD-UCR

2003 Research stay (3 months) (V. Jiménez and P. Esquivel) DAAD-UCR

2005 Research stay (3 months) (E. Guevara) DAAD-UCR

Plant Cell Rep (2005) 23:567–572
DOI 10.1007/s00299-004-0869-9

PHYSIOLOGY AND BIOCHEMISTRY

V. M. Jiménez · E. Guevara · J. Herrera · F. Bangerth

Evolution of endogenous hormone concentration in embryogenic cultures of carrot during early expression of somatic embryogenesis

Jimenez, V.M., Guevara, E., Herrera, J., Alizaga, R. and Bangerth, F. (2008), *Seed Sci. & Technol.*, **36**, 575-587

Changes in hormone concentrations during dormancy release of oil palm (*Elaeis guineensis*) seeds

V.M. JIMÉNEZ[1], E. GUEVARA[1], J. HERRERA[1], R. ALIZAGA[1] AND F. BANGERTH[2]

BRAZILIAN JOURNAL OF PLANT PHYSIOLOGY
The official journal of the Brazilian Society of Plant Physiology

SHORT COMMUNICATION

Effect of hydrogen cyanamide on the endogenous hormonal content of pea seedlings (*Pisum sativum* L.)

Eric Guevara[1], Víctor M. Jiménez[1]*, Jorge Herrera[1] and Fritz Bangerth[2]

2002	Research stay (3 months) (J. Herrera and E. Guevara) DAAD-UCR
2003	Research stay (3 months) (P. Esquivel and V. Jiménez) DAAD-UCR
2005	Research stay (3 months) (E. Guevara) DAAD-UCR
2006-2007	Research stay (1 year) (P. Esquivel and V. Jiménez) AvH Foundation and UCR-DAAD
2009-2010	Research stay (3 months) (P. Esquivel and V. Jiménez) DAAD-UCR
2012-2013	Visiting professorship (V. Jiménez) and Post-doc (P. Esquivel) FSC-DAAD-UCR

Available online at www.sciencedirect.com
ScienceDirect
Innovative Food Science and Emerging Technologies 8 (2007) 451–457
Innovative Food Science & Emerging Technologies
www.elsevier.com/locate/ifset

Pigment pattern and expression of colour in fruits from different *Hylocereus* sp. genotypes

Patricia Esquivel [a,b], Florian C. Stintzing [a,*], Reinhold Carle [a]

2003 Re ...s) (J. Herrera and E. Guevar

UC

2005 Re ...UCR

2006-2007 Re ...énez) A

Fc

2009-2010 Re ...AAD-

UC

2012-2013 Vis ...vel) FSC-

Lebensmitteltechnologie

Bananen –
Vom Anbau bis zum Verbrauch

Patricia Esquivel
Institut für Lebensmittelwissenschaft und Biotechnologie
Abteilung Lebensmitteltechnologie,
Universität Costa Rica
2060 San Pedro, Costa Rica

Florian C. Stintzing
Reinhold Carle
Institut für Lebensmittelwissenschaft und Biotechnologie
Fachgebiet Lebensmittel pflanzlicher Herkunft,
Universität Hohenheim
...-von-Hartmann-Straße 3
Stuttgart

ernährung im fokus 7-07/07

Phenolic Compound Profiles and their Corresponding Antioxidant Capacity of Purple Pitaya (*Hylocereus* sp.) Genotypes

Patricia Esquivel[a,b], Florian C. Stintzing[a,c,*], and Reinhold Carle[a]

[a] Institute of Food Science and Biotechnology, Section Plant Foodstuff Technology, Hohenheim University, August-von-Hartmann-Straße 3, D-70599 Stuttgart, Germany
[b] Escuela de Tecnología de Alimentos, Universidad de Costa Rica, 2060 San Pedro, Costa Rica
[c] Present address: WALA Heilmittel GmbH, Dorfstraße 3, D-73087 Bad Boll/Eckwälden, Germany. E-mail: florian.stintzing@wala.de

Identification of Phenolic and Carotenoid Compounds in Coffee (*Coffea Arabica*) Pulp, Peels and Mucilage by HPLC Electrospray Ionization Mass Spectrometry

M. VIÑAS[1], M. GRUSCHWITZ[2], R. M. SCHWEIGGERT[2], E. GUEVARA[1], R. CARLE[2], P. ESQUIVEL[3], V. M. JIMÉNEZ[1,4]

[1]CIGRAS, Universidad de Costa Rica, 2060 San Pedro, Costa Rica
[2]Institute of Food Science and Biotechnology, Hohenheim University, 70599 Stuttgart, Germany
[3]Escuela de Tecnología de Alimentos, Universidad de Costa Rica, 2060 San Pedro, Costa Rica
[4]Food Security Center, University of Hohenheim, 70599 Stuttgart, Germany

Europ.J.Hort.Sci., **72** (5). S. 231–238, 2007, ISSN 1611-4426.

Fruit Characteristics during G... *cereus* Genotypes

P. Esquivel[1,2], F. C. Stintzing[1] and R. Carle[1]
([1])Institute of Food Technology, Section Plant Foodstuff Technology, Hohenheim University, Stuttgart, Germany and [2])Escuela de Tecnología de Alimentos, Universidad de Costa Rica, San Pedro, Costa Rica)

... Technology, Hohenheim University, Stuttgart, Germany
[2] Escuela de Tecnología de Alimentos, Universidad de Costa Rica, 2060, San Pedro, Costa Rica

Comparison of morphological and chemical fruit traits from different pitaya genotypes (*Hylocereus* sp.) grown in Costa Rica

Patricia Esquivel[1,2], Florian C. Stintzing[1]*, Reinhold Carle[1]

(Received October 27, 2006)

Tropical Plant Biol. (2012) 5:253–260
DOI 10.1007/s12042-012-9107-8

Response of Endogenous Hormone Concentrations to Two Floral Inductive Treatments, viz. KNO_3 and PBZ, in Mango cv. 'Tommy Atkins' Growing Under Tropical Conditions

Eric Guevara · Victor M. Jiménez · Fritz K. Bangerth

Field trips

Dates (duration)	Number of students	Guest(s)	Support
1997 (2 weeks) Tropenexkursion	20 (UHOH)	Prof. Rodríguez-Montero	DAAD, UHOH
2004 (3 weeks) Tropenexkursion	20 (UHOH)	Profs. Herrera, Alizaga, Jiménez and Guevara	DAAD, Eiselen Stiftung, Universitätsbund und Tropenzentrum der UHOH, Stuttgarter Hofbräu
2007 (10 days)	12 (UCR)	Profs. Weber, and Wünsche	DAAD, Eiselen Stiftung, Universitätsbund und Tropenzentrum der UHOH, UCR
2008 (2 weeks)	8 (UHOH), 8 (UTalca), 8 (UCR)	Profs. Herrera, Alizaga, Jiménez and Guevara	DAAD, Eiselen Stiftung, Universitätsbund und Tropenzentrum der UHOH, UCR
2012 (2 weeks) Tropenexkursion	20 (UHOH)	Profs. Jiménez and Guevara	DAAD, Eiselen Stiftung, Universitätsbund und Tropenzentrum der UHOH, UCR

Student exchange (both directions – until 2010)

Name	Host(s)	Year (length)	Funding
Birgit Gutberlett (Diploma student UHOH)	Profs. Guevara & Herrera (UCR)	1996 (2 months)	Own and UCR
Amani Yousef (Ph.D. student UHOH)	Profs. Guevara & Herrera (UCR)	1997 (2 weeks)	DAAD – UHOH and UCR
Neiva Sánchez-Chiang (M.Sc. student UCR)	Prof. Weber (UHOH)	2006-2007 (10 months)	Landesstiftung Baden-Württemberg and UCR
Melania Muñoz (M.Sc. student UCR)	Prof. Weber (UHOH)	2007-2008 (10 months)	Landesstiftung Baden-Württemberg and UCR
Sebastian Munz (Diploma student UHOH)		2008 (5 months)	Landesstiftung Baden-Württemberg
Carolina Ramirez (Lic. Student UCR)	Prof. Carle (UHOH)	2008-2009 (5 months)	DAAD (trilateral partnership)
Gabriela Villalobos (M.Sc. student UCR)	Prof. Carle (UHOH)	2009 (5 months)	Landesstiftung Baden-Württemberg and UCR
Javier Gómez (M.Sc. student UCR)	Prof. Weber (UHOH)	2009 (5 months)	Landesstiftung Bande-Württemberg and UCR
Susanne Rossmann (Diploma student UHOH)	Prof. Jiménez	2009 (2 months)	
Ralf Schweiggert (Diploma student UHOH)	Prof. Esquivel	2009	
Isabel Mora (M.Sc. student UCR)	Prof. Weber and Prof. Carle (UHOH)	2009-2010 (5 months)	DAAD (trilateral partnership)
Alexander Montoya (Lic. Student UCR)	Prof. Carle	2010 (5 months)	Baden-Württemberg Stiftung and UCR
Elisabeth Lipka (Diploma student UHOH)	Prof. Jiménez	2010 (5 months)	
Ralf Schweiggert (Ph.D. student UHOH)	Prof. Esquivel	2010	

Student exchange (both directions – 2011-2013)

Name	Host(s)	Year (length)	Funding
Maria Viñas (M.Sc. student UCR)	Prof. Carle	2011 (5 months)	Baden-Württemberg Stiftung and UCR
Yvonne Huber	Prof. Esquivel (UCR)	2011 (4 months)	Dr. Hermann Eiselen Stipendien-Programm/ Stiftung fiat panis
Andrea Holst (M.Sc. student UCR)	Prof. Carle	2011-2012 (5 months)	Baden-Württemberg Stiftung and UCR
Ariela Padilla (Lic. Student UCR)	Prof. Carle	2011-2012 (5 months)	Baden-Württemberg Stiftung and UCR
Dessireé Zerpa (M.Sc. student UCR)	Prof. Carle	2012-2013 (5 months)	Baden-Württemberg Stiftung and UCR
Judith Hempel (M.Sc. student UHOH)	Prof. Esquivel (UCR)	2012 (3 months)	Dr. Hermann Eiselen Stipendien-Programm/ Stiftung fiat panis
Tania Chacón (M.Sc. student UCR)	Prof. Carle (UHOH)	2012-2013 (6 months)	Baden-Württemberg Stiftung and UCR

Student exchange (both directions – 2014-2016)

Name	Host(s)	Year (length)	Funding
Maureen Hernández (Lic. Student)	Prof. Carle (UHOH)	2014 (5 months)	Baden-Württemberg Stiftung and UCR
Margarete Kerfers (M.Sc. student UHOH)	Prof. Esquivel (UCR)	2014 (3 months)	Herzog-Carl-Stipendium
Ester Vargas (M.Sc. student UCR)	Prof. Carle (UHOH)	2014 (5 months)	Baden-Württemberg Stiftung and UCR
Paul Solorzano (M.Sc. student UCR)	Prof. Spring (UHOH)	2014 (5 months)	Baden-Württemberg Stiftung and UCR
Athena Birkenberg (Ph.D. student UHOH)	Prof. Quirós (UCR)	2014-2015 (7 months)	DAAD, Stiftung fiat panis
Catalina Acuña (M.Sc. student UCR)	Prof. Spring (UHOH)	2015 (5 months)	Baden-Württemberg Stiftung and UCR
Veronika Lieb (M.Sc. student UHOH)	Prof. Esquivel	2015 (3 months)	DAAD
Ariela Piedra (Lic. student UCR)	Prof. Carle	2015 (3 months)	Alexander von Humboldt Foundation
Pilar Rosales (Lic. student UCR)	Fraunhofer Institut Stuttgart	2015 (5 months)	Baden-Württemberg Stiftung
Crisbel Retana (Lic. student UCR)	Fraunhofer Institut Stuttgart	2015 (5 months)	Baden-Württemberg Stiftung
Ann-Christine Schmalenberg (M.Sc. student UHOH)	Prof. Quirós (UCR)	2016 (3 months)	FSC

Publications resulting from student exchange

Carbohydrate Polymers 83 (2011) 1134–1138

Contents lists available at ScienceDirect

Carbohydrate Polymers

journal homepage: www.elsevier.com/locate/carbpol

Neutral sugar profile of cell wall polysaccharides of pitaya (*Hylocereus* sp.) fruits

Carolina Ramírez-Truque[a], Patricia Esquivel[a,*], Reinhold Carle[b]

[a] Escuela de Tecnología de Alimentos, Universidad de Costa Rica, 2060 San Pedro, Costa Rica
[b] Institute of Food Science and Biotechnology, Chair Plant Foodstuff Technology, Hohenheim University, Garbenstrasse 25, D-70599 Stuttgart, Germany

CyTA – Journal of Food
Vol. 10, No. 1, February 2012, 78–83

Chemical characterization of Central American pitaya (*Hylocereus* sp.) seeds and seed oil

Caracterización química de las semillas y el aceite extraído de las semillas de frutas de pitaya (*Hylocereus* sp.) cultivadas en Centroamérica

M.G. Villalobos-Gutiérrez[a], R.M. Schweiggert[b], R. Carle[b] and P. Esquivel[a]*

[a] *School of Food Technology, University of Costa Rica, 2060 San Pedro, Costa Rica;* [b] *I… Hohenheim University, D-70599 Stuttgart, Germany*

Contents lists available at ScienceDirect

Food Hydrocolloids

journal homepage: www.elsevier.com/locate/foodhyd

Characterization of cell wall polysaccharides of purple pitaya (*Hylocereus* sp.) pericarp

Alexander Montoya-Arroyo[a,1], Ralf M. Schweiggert[b], María-Lourdes Pineda-Castro[a], Martin Sramek[c], Reinhard Kohlus[c], Reinhold Carle[b], Patricia Esquivel[a,*]

[a] Escuela de Tecnología de Alimentos, Universidad de Costa Rica, 2060 San Pedro, Costa Rica
[b] Institute of Food Science and Biotechnology, Plant Foodstuff Technology, Hohenheim University, Garbenstrasse 25, D-70599 Stuttgart, Germany
[c] Institute of Food Science and Biotechnology, Food Process Engineering, Hohenheim University, Garbenstrasse 25, D-70599 Stuttgart, Germany

Thesis partially or totally conducted at the UCR

Year	Student	Home university	Host
2009	Susanne Rossmann (Dipl.)	UHOH	V. Jiménez (UCR)
2009	Ralf Schweiggert (Dipl.)	UHOH	P. Esquivel (UCR)
2010	Elisabeth Lipka (Dipl.)	UHOH	V. Jiménez (UCR)
2010	Ralf Schweiggert (Ph.D.)	UHOH	P. Esquivel (UCR)
2010	Katrin Müller (Dipl.)	TU Braunschweig	V. Jiménez (UCR)
2013	Laura von Spiess (M.Sc.)	U Bonn	P. Esquivel (UCR)

Publications resulting from theses

British Journal of Nutrition, page 1 of 9
© The Authors 2013
doi:10.1017/S0007114513002596

Carotenoids are more bioavailable from papaya than from tomato and carrot in humans: a randomised cross-over study

Ralf M. Schweiggert[1,2*], Rachel E. Kopec[2,3], Maria G. Villalobos-Gutierrez[4], Josef Högel[5], Silvia Quesada[6], Patricia Esquivel[4], Steven J. Schwartz[2,3] and Reinhold Carle[1]

Eur Food Res Technol (2009) 23
DOI 10.1007/s00217-009-1167-0

ORIGINAL PAPER

Development and optimization of low temperature enzyme-assiste foodstuff from Britton & Ros

Ralf M. Schweiggert ·
Patricia Esquivel · Rei

Food Research International 44 (2011) 1373–1380

Contents lists available at ScienceDirect

Food Research International

journal homepage: www.elsevier.com/locate/foodres

Planta (2011) 234:1031–1044
DOI 10.1007/s00425-011-1457-1

ORIGINAL ARTICLE

JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY

Article

pubs.acs.org/JAFC

Characterization of c of red- and yellow-fle

Ralf M. Schweiggert · Christof B.
Annerose Heller · Patricia Esquiv

Chemical and Morphological Characterization of Costa Rican Papaya (*Carica papaya* L.) Hybrids and Lines with Particular Focus on Their Genuine Carotenoid Profiles

Ralf M. Schweiggert,*[,†] Christof B. Steingass,[†] Patricia Esquivel,[§] and Reinhold Carle[†]

[†]Institute of Food Science and Biotechnology, Hohenheim University, D-70599 Stuttgart, Germany

[§]School of Food Technology, University of Costa Rica, 2060 San José, Costa Rica

New Ph.D. students – new collaborations

Año	Nombre	Supervisión	Institución
2010	Luis Barboza	Prof. Maarten Koornneef	MPI-Köln
2011	Isabel Mora	Dr. Winfriede Weschke	IPK Gatersleben
2011	Javier Gómez	Prof. Otmar Spring	UHOH
2013	Carolina Rojas	Prof. Andreas Schieber	Uni Bonn
2015	Tania Chacón	Prof. Reinhold Carle	UHOH
2015	Andrea Irías	Prof. Jan Frank	UHOH

Food Research International 46 (2012) 557–562

Contents lists available at ScienceDirect

Food Research International

journal homepage: www.elsevier.com/locate/foodres

Characterization of phenolic compounds in jocote (*Spondias purpurea* L.) peels by ultra high-performance liquid chromatography/electrospray ionization mass spectrometry

Christina Engels [a], Diana Gräter [a], Patricia Esquivel [b], Víctor M. Jiménez [c], Michael G. Gänzle [a], Andreas Schieber [a,*]

[a] Department of Agricultural, Food and Nutritional Science, University of Alberta, 410 Ag/For Centre, Edmonton, Alberta T6G2P5, Canada
[b] Escuela de Tecnología de Alimentos, Universidad de Costa Rica, 2060 San Pedro, Costa Rica
[c] CIGRAS, Universidad de Costa Rica, 2060 San Pedro, Costa Rica

Other projects

2008-2009 A “Subject-related Partnerships with Institutions of Higher Education”-program with funding from DAAD was conducted between UHOH, UCR and the University of Talca (Chile).

DAAD Deutscher Akademischer Austauschdienst
German Academic Exchange Service

2009-2019 UCR is founding international partner and the Regional Coordinator for Latin America of the Food Security Center at the UHOH (Exceed project).

FSC Food Security Center

2014-2016 Establishment of a Research Group Linkage between the Department of Plant Foodstuff Technology at the University of Hohenheim (Prof. Carle) and CIGRAS and the Department of Food Science (Profs. Jiménez and Esquivel) to conduct research on new sources of health-relevant carotenoids (funded by the Alexander von Humboldt Stiftung).

Alexander von Humboldt
Stiftung/Foundation

Food Security Center

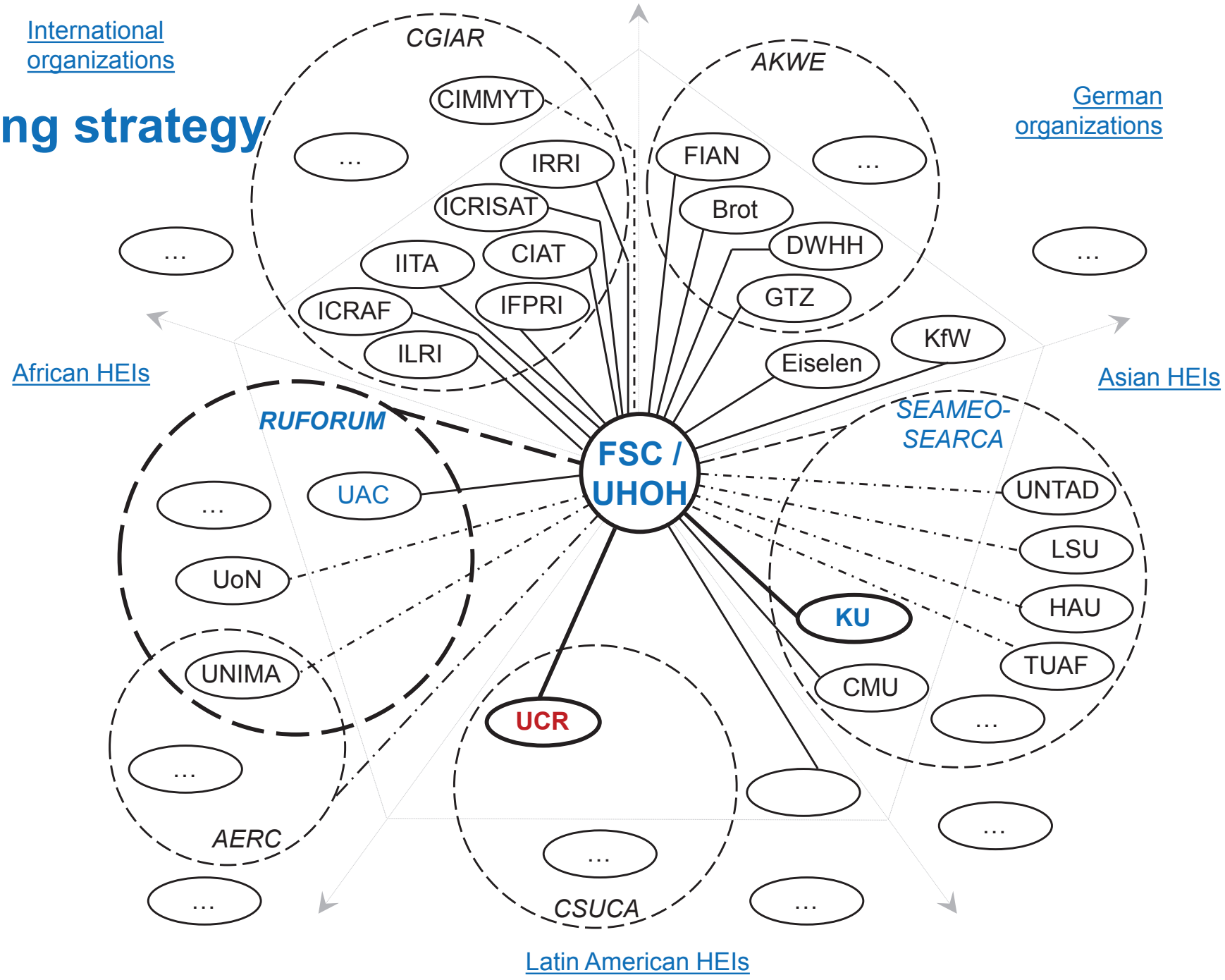
UNIVERSITÄT HOHENHEIM

www.foodsecurity.de
fsc@uni-hohenheim.de

Director, Food Security Center
Prof. Dr. Hans-Konrad Biesalski

German Academic Exchange Service (DAAD) Program:
"Higher Education Excellence in Development Cooperation "

Linking strategy



Official arrangements between UCR and UHOH

2006	Declaration of intent
2007	Working agreement
2009	Renewal of declaration of intent and working agreement (for 5 years)
2009	Food Security Center (initial phase)
2014	Renewal of declaration of intent and working agreement (for 5 years)
2015	Food Security Center (second phase)

Main activities conducted between 1991 and 2015

Joint publications :	35
Ph.D. from UCR in UHOH:	
Finished:	6
Currently:	3
Student exchange:	
From UCR to UHOH:	19
From UHOH to UCR:	14
Field trips:	
From UHOH to UCR :	4
From UCR to UHOH :	1
Theses of German students in our department:	6

Scientific publications resulting from collaborative work (1)

- Li, C. J.; Guevara, E.; Herrera, J.; Bangerth, F., Effect of apex excision and replacement by 1-naphthylacetic acid on cytokinin concentration and apical dominance in pea plants. *Physiologia Plantarum* **1995,** *94*, 465-469.
- Rodríguez-Montero, W.; Leihner, D. E., Wirkung von Pflanzgutrate und Bestandesdichte auf Blattentwicklung und Ertrag des großen Yam (*Dioscorea alata* L.). *Mitteilungen der Gesellschaft für Pflanzenbauwissenschaften* **1995,** *8*, 79-82.
- Rodríguez-Montero, W.; Leihner, D. E., Trockenmassebildung und Verteilung beim großen Yam (*Dioscorea alata* L.). *Mitteilungen der Gesellschaft für Pflanzenbauwissenschaften* **1995,** *8*, 235.
- Pfenning, J.; Ebert, A. W.; Jiménez, V. M.; Bangerth, F., Endogenous hormonal status of embryogenic callus in cocos (*Cocos nucifera* L.) explants. *Acta Horticulturae* **1997,** *463*, 127-134.
- Jimenez, V. M.; Bangerth, F., Relationship between endogenous hormone levels of grapevine callus cultures and their morphogenetic behaviour. *Vitis* **2000,** *39*, 151-157.
- Jimenez, V. M.; Guevara, E.; Herrera, J.; Bangerth, F., Endogenous hormone levels in habituated nucellar *Citrus* callus during the initial stages of regeneration. *Plant Cell Rep* **2001,** *20*, 92-100.
- Jimenez, V. M.; Bangerth, F., Hormonal status of maize initial explants and of the embryogenic and non-embryogenic callus cultures derived from them as related to morphogenesis in vitro. *Plant Sci* **2001,** *160*, 247-257.
- Jimenez, V. M.; Bangerth, F., Endogenous hormone levels in explants and in embryogenic and non-embryogenic cultures of carrot. *Physiologia Plantarum* **2001,** *111*, 389-395.

Scientific publications resulting from collaborative work (2)

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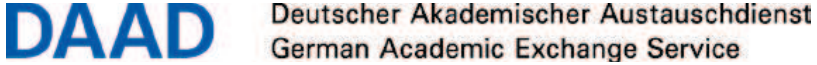
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