

Wolfgang Schühly, *Curriculum vitae*

- 1977 – 1987 Besuch des Deutsch-Französischen Gymnasiums Freiburg (Lycée franco-allemand) mit Abitur in der mathematisch-naturwissenschaftlichen Sektion (série D)
- 1987 – 1988 Militärdienst in der Deutschen Bundeswehr (Luftwaffe)
- 1988 – 1994 Studium der Chemie und Biologie (insbesondere Botanik) an der Albert-Ludwigs-Universität in Freiburg i. Br.
Hilfswissenschaftliche Dienste und Leitung botanischer Exkursionen
- 1993 **Diplomprüfung** im Fach Chemie; Schwerpunkt Biochemie
- 1994 **Diplomarbeit** an der Klinik für Tumorbiologie, Freiburg (Okt. 1993 – Juli 1994).
Titel: "Synthesen 3-O-derivatisierter Sphingomyeline für das Studium der Interaktion von Sphingomyelinen mit Phospholipase A₂" unter Prof. Dr. Günther von Kiedrowski
- 1995 – 2000 **Doktorat** am Departement Pharmazie (Pharmakognosie) an der ETH Zürich (Nov. 1995 – Jan. 2000)
Titel: "Phytochemische und biologische Untersuchung der Rinde von *Zizyphus joazeiro* MART." in der Arbeitsgruppe Prof. Dr. Otto Sticher
- 2000 **Assistent** in Prof. Stichers Gruppe an der ETH Zürich (März bis Juli)
HPLC-Analytiker für Fa. *Phytomed* in Hasle, Bern. (Aug. – Okt.)
- Okt. 2000 **Post-doc und Instruktor** am Dept. of Pharmacognosy, University of Mississippi in Oxford, MS (USA) (Oct. 2000 – Dec. 2002) in der Arbeitsgruppe Prof. Dr. Nikolaus Fischer
- 2003 Jan. – Feb. **Assistent** an der ETH Zürich, Institut für Pharmazeutische Wissenschaften
- März 2003 – **Universitätsassistent** am Institut für Pharmazeutische Wissenschaften, Bereich Pharmakognosie an der Karl-Franzens-Universität Graz
- März 2009 **Wissenschaftlicher Instruktor** in SEKEM, Kairo im Rahmen eines Marie Curie-Action-Programms, Mitarbeit am NAAN-project
- Apr. 2009 Vaterschaftskarenz
- Sept. 2009 Fortsetzung der Tätigkeit als Universitätsassistent bis Okt. 2009
- Nov. 2009 – c. Juli 2013 **Wissenschaftliche Aufsicht und Projektleitung** im FWF-Projekt: "Neolignane mit GABA_A-Rezeptor-Aktivität"; Betreuung von Dissertantinnen
- Jan 2010 – Konsulent in analytischen Fragen der Dienstleistungs-, Verwaltungs- und Forschungsgesellschaft (DVF) in Allerheiligen/Wildon
- Apr. 2010 – **Post-doc** (senior scientist) im FWF-Projekt "Nicht-induzierte Resistenz von Honigbienen April 2012 gegen *Paenibacillus larvae*" am Institut für Zoologie, Graz
- Juni 2011 **Habilitation** und Erhalt der *venia legendi* für das Fach "Pharmazeutische Biologie"
Mai 2012 – 50% **Universitätsassistentz** (Karenzvertretung) am Institut für Zoologie, Graz. Wiss. Arbeiten zum Thema "Immunfaktoren der Honigbiene"
- seit 2014 zusätzlich Mitwirkung (25%) im Projekt des österreichischen Lebensministeriums „Zukunft Biene“

Publikationsverzeichnis

- [1] Frei, B., Heinrich, M., Bork, P.M., Herrmann, D., Jaki, B., Kato, T., Kuhnt, M., Schmitt, J., **Schühly, W.**, Volken, C. and Sticher, O. Multiple Screening of Medicinal Plants from Oaxaca, Mexico: Ethnobotany and Bioassays as a Basis for Phytochemical Investigation. *Phytomed.* **5** 177-186 (1998)
- [2] **Schühly, W.**, Heilmann, J., Çalis, I. and Sticher, O. New Triterpenoids with Antibacterial Activity from *Zizyphus joazeiro*. *Planta Med.* **65** 740-743 (1999)
- [3] **Schühly, W.**, Heilmann, J., Çalis, I. and Sticher, O. Novel Triterpene Saponins from *Zizyphus joazeiro*. *Helv. Chim. Acta* **83** 1509-1516 (2000)
- [4] Heilmann, J., Çalis, I., Kirmizibekmez, H., **Schühly, W.**, Harput, S. and Sticher, O. Radical Scavenger Activity of Phenylethanoid Glycosides in FMLP Stimulated Human Polymorphonuclear Leukocytes – Structure Activity Relationships. *Planta Med.* **66** 746-748 (2000)
- [5] **Schühly, W.**, Khan, I. and Fischer, N.H. The Ethnomedicinal Use of Magnoliaceae from the Southeastern United States as Leads in Drug Discovery. *Pharm. Biol.* **39** 63-69 (2001)
- [6] Ersöz, T., **Schühly, W.**, Popov, S., Nedjalka, H. and Sticher, O. Iridoid and phenylethanoid glycosides from *Phlomis longifolia* var. *longifolia*. *Nat. Prod. Lett.* **15** 345-351 (2001)
- [7] Feltenstein, M.W., **Schühly, W.**, Warnick, J.E., Fischer, N.H. and Sufka, K.J. Anti-inflammatory and anti-hyperalgesic effects of sesquiterpene lactones from *Magnolia* and Bear's Foot. *Pharm. Biochem. & Behaviour* **79** 399-402 (2004)
- [8] Crockett, C., **Schühly, W.**, Belaj, F. and Khan, I.A. Hyperolactone C. *Acta Cryst. Sect. E Structure Reports Online* **E60**, o2174-o2176 (2005)
- [9] **Schühly, W.**, Crockett, S. and Fabian, W. Hyperolactone C: Determination of Its Absolute Configuration by Comparison of Experimental and Calculated CD Spectra. *Chirality* **17** 250-56 (2005)
- [10] Wenzig, E., Kunert, O., Ferreira, D., Schmid, M., **Schühly, W.**, Bauer, R. and Hiermann A. Flavonolignans from *Avena sativa*. *J. Nat. Prod.* **68** 289-92 (2005)
- [11] Frankfater, C., **Schühly, W.**, Fronczek, F.R. and Slattery, M. Processing of a sesquiterpene lactone by *Papilio glaucus* caterpillars. *J. of Chem. Ecol.* **31** 2541-50 (2005)
- [12] Ojwang, J.O., Wang, Y-H., Wyde, P.R., Fischer, N.H., **Schühly, W.**, Appleman, J.R., Hinds, S. and Shimasaki, C.D. A novel inhibitor of respiratory syncytial virus isolated from ethnobotanicals. *Antiviral Research* **68** 163-172 (2006)
- [13] Kunert, O., Adavi Rao, B.V., Babu, G.S., Padmavathi, M., Kumar, B.R., Alex, R.M., **Schühly, W.**, Simic, N., Kühnelt, D. and Appa Rao, A.V.N. Novel Steroidal Glycosides from two Indian *Caralluma* species, *C. stalagmifera* and *C. indica*. *Helv. Chim. Acta* **89** 201-209 (2006)
- [14] Swamy, R.C., Kunert, O., **Schühly, W.**, Bucar, F., Ferreira, D., Rani, V.S., Kumar, B.R. and Appa Rao, A.V.N. Structurally Unique Biflavonoids from *Selaginella chrysocaulos* and *Selaginella bryopteris*. *Chem. & Biodiv.* **3** 405-413 (2006)
- [15] Crockett, S., **Schühly, W.** and Bauer, R. Plant Antiemetics. *Pharmazie in unserer Zeit* **36** 381-388 (2007)
- [16] Ma, G., Khan, S.I., Benavides, G., **Schühly, W.**, Fischer, N.H., Khan, I.A. and Pasco, D.S. Inhibition of NF-κB-mediated transcription and induction of apoptosis by melampolides and

- repandolides. *Cancer Chemother. Pharmacol.* **60** 35-43 (2007)
- [17] **Schühly, W.**, Fabian, C., Jahangir, S. and Fabian W.M.F. Structure and absolute configuration of loliolide isomers determined by comparison of calculated and experimental CD spectra. *Proceedings of the International Electronic Conference on Synthetic Organic Chemistry*. **Nov. 11th**, 1-30 (2007)
- [18] Tatli, I.I., **Schühly, W.** and Akdemir, Z.S. Secondary metabolites from bioactive methanolic extract of *Verbascum pycnostachyum* Boiss. & Helder flowers. *Hacettepe Universitesi Eczacilik Fakultesi Dergisi* **27** 23-32 (2007)
- [19] Kunert, O., Swamy, R.C., Kaiser, M., Presser, A., Buzzi, S., Appa Rao, A.V.N. and **Schühly, W.** Antiplasmodial and Leishmanicidal Activity of Biflavonoids from Indian *Selaginella bryopteris*. *Phytochemistry Lett.*, **1** 171-74 (2008)
- [20] **Schühly, W.**, Ross, S.A., Mehmedic, Z. and Fischer, N.H. Essential Oil Analysis of the Follicles of Four North American *Magnolia* Species. *Nat. Prod. Comm.* **7** 1117-1119 (2008)
- [21] Tatli, I.I., **Schühly, W.**, Kunert, O., Bedir, E. and Akdemir, Z.S. Secondary metabolites from the aerial parts of *Verbascum dudleyanum* and their biological activities. *Chemistry of Natural Compounds*. **44** 292-95 (2008)
- [22] **Schühly, W.** Magnolia - Eine im Westen bislang als Heilpflanze wenig beachtete Pflanzengattung. *Phytotherapie Austria* **2** 8-10 (2008)
- [23] Kunert, O., Rao, V.G., Babu, G.S., Sujatha, P., Sivagamy, M., Anuradha, S., Rao, B.V.A., Kumar, B.R., Alex, R.M., **Schühly, W.**, Kühnelt, D., Rao, G.V., Appa Rao, A.V.N. Pregnane glycosides from *Caralluma adscendens* var. *fimbriata*. *Chem. & Biodiv.* **5** 239-250 (2008)
- [24] Gachet, M.S. and **Schühly, W.** *Jacaranda* – An ethnopharmacological and phytochemical review. *J. of Ethnopharm.* **121** 14-27 (2009)
- [25] Teppner, H., **Schühly, W.** and Weakley, A.S. The chromosome numbers of *Waldsteinia* (*Rosaceae-Columeliales*) in North America. *Phyton Annales Rei Botanicae* **48** 225-238 (2009)
- [26] **Schühly, W.**, Khan, S.I., and Fischer, N.H. Neolignans from North American *Magnolia* Species with Cyclooxygenase 2 Inhibitory Activity. *Inflammopharmacology* **17** 106-110 (2009)
- [27] **Schühly, W.**, Skarbina, J., Kunert, O., Nandi, O.I. and Bauer, R. Chemical characterization of *Magnolia biondii* (Flos Magnoliae, Xin Yi). *Nat. Prod. Comm.* **4** 231-234 (2009)
- [28] **Schühly, W.**, Hüfner, A., Pferschy-Wenzig, E.M., Prettnner, E., Adams, M., Bodensieck, A., Kunert, O., Oluwemimo, A., Haslinger, E. and Bauer, R. Design and synthesis of ten biphenyl-neolignan derivatives and their *in vitro* inhibitory potency against cyclooxygenase-1/2 activity and 5-lipoxygenase-mediated LTB₄-formation. *Bioorg. Med. Chem.* **17** 4459-4465 (2009)
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- [30] Crockett, S., Eberhardt, M., Kunert, O. and **Schühly, W.** *Hypericum* species in the Páramos of Central and South America: A special focus on *H. irazuense* Kuntze ex N. Robson. *Phytochem. Rev.* **9** 255-269 (2010)
- [31] Gachet, M.S., Lecaro, J.S., Kaiser, M., Brun, R., Navarrete, H., Muñoz, R.A., Bauer, R. and **Schühly, W.** Assessment of anti-protozoal activity of plants traditionally used in Ecuador in the treatment of leishmaniasis. *J. of Ethnopharm.* **128** 184-197 (2010)
- [32] Bodensieck, A., Fabian, W., Kunert, O., Belaj, F., Jahangir, S., **Schühly, W.** and Bauer, R.

- Absolute configuration of eremophilane sesquiterpenes from *Petasites hybridus*: Comparison of experimental and calculated CD spectra. *Chirality* **22** 308-319 (2010)
- [33] Blunder, M., Pferschy-Wenzig, E.M., Fabian, W.M.F., Hüfner, A., Kunert, O., Saf, R., **Schühly, W.** and Bauer, R. Derivatives of schisandrin with increased inhibitory potential on prostaglandin PGE₂ and leukotriene B₄ formation *in vitro*. *Bioorg. Med. Chem.* **18** 2809-2815 (2010)
- [34] Gachet, M.S., Kunert, O., Kaiser, M., Brun, R., Muñoz, R.A. and Bauer, R. and **Schühly, W.** Jacaranone-Derived Glucosidic Esters from *Jacaranda glabra* and their Activity against *Plasmodium falciparum*. *J. Nat. Prod.* **73** 553-556 (2010)
- [35] **Schühly, W.**, Gröblacher, B., Neyer, J., Fronczek, F., Fabian, W.M.F. and Kunert, O. Dibenzocyclooctadiene lignans from *Magnolia* and *Talauma* (Magnoliaceae): their absolute configuration ascertained by circular dichroism and X-ray crystallography and re-evaluation of previously published pyramidin structures. *Phytochemistry* **71** 1787-1795 (2010)
- [36] **Schuehly, W.**, Voith, W., Teppner, H. and Kunert, O. Substituted Dineolignans from *Magnolia garrettii*. *J. Nat. Prod.* **73** 1381-1384 (2010)
- [37] Zovko Končić, M., Kremer, D., **Schühly, W.**, Brantner, A., Karlović, K., Kalodera, Z. Chemical Differentiation of *Berberis croatica* and *B. vulgaris* Using HPLC Fingerprinting. *Croatica Chem. Acta* **83** 451-456 (2010)
- [38] Böhmdorfer, M., Maier-Salamon, A., Taferner, B., Reznicek, G., Thalhammer, T., Hering, S., Hüfner, A., **Schuehly, W.** and Jäger, W. In vitro Metabolism and Disposition of Honokiol in Rat and Human Livers. *J. Pharm. Sci.* **100** 3506-3516 (2011)
- [39] Gachet, M.S., Kunert, O., Kaiser, M., Brun, R., Zehl, M., Keller, W., Muñoz, R.A., Bauer, R. and **Schuehly, W.** Antiparasitic compounds from *Cupania cinerea* with activities against *Plasmodium falciparum* and *Trypanosoma brucei rhodesiense*. *J. Nat. Prod.* **74** 559-566 (2011)
- [40] Taferner, B., **Schuehly, W.**, Huefner, A., Baburin, I., Wiesner, K., Ecker, G.F. and Hering, S. Modulation of GABA_A-Receptors by Honokiol and Derivatives: Subtype Specificity and Structure-Activity Relationship. *J. Med. Chem.* **54** 5349-5361 (2011)
- [41] **Schuehly, W.**, Viveros Paredes, J. M., Kleyer, J., Huefner, A., Anavi-Goffer, S., Raduner, S., Altmann, K.-H. and Gertsch, J. Mechanisms of osteoclastogenesis inhibition by a new class of biphenyl-type cannabinoid CB₂ receptor inverse agonists. *Chem. & Biol.* **18** 1053-1064 (2011)
- [42] **Schuehly, W.** and Teppner, H. *Magnolia garrettii* at the botanic garden in Graz, Austria. – *Magnolia* – *J. Mag. Soc.* **46** (Issue 89) 36-39 (2011)
- [43] Liu, N.Q., **Schuehly, W.**, von Freyhold, M. and van der Kooy, F. A novel purification method of artemisinin from *Artemisia annua*. – *Ind. Crops & Prod.* **34** 1084-1088 (2011)
- [44] Kretschmer, N., Blunder, M., Kunert, O., Rechberger, G.N., Bauer, R. and **Schuehly, W.** Cytotoxic Furanogermacranolides from the Flowers of *Helianthus angustifolius*. *Planta Med.* **77** 1912-1915 (2011)
- [45] Chizzali, C., Khalil, M.N.A., Beuerle, T., **Schuehly, W.**, Richter, K., Flachowsky, H., Peil, A., Hanke, M.-V., Liu, B. and Beerhues, L. Formation of biphenyl and dibenzofuran phytoalexins in the transition zones of fire blight-infected stems of *Malus domestica* cv. 'Holsteiner Cos' and *Pyrus communis* cv. 'Conference'. *Phytochemistry* **73** 179-185 (2012)
- [46] Gandhe, S., Lakavath, S., Palatheeya, **Schuehly, W.**, Amancha, K., Nallamaddi, R.K.R., Palepu, A., Thakur, Y., Belvotagi, V.R.A.R., Kumar, B.R., Appa Rao, A.V.N. and Olaf Kunert, O. Cycloartanes from the gum resin of *Gardenia gummifera* L. f. *Chem. & Biodiv.* **10** 1613-1622 (2013)

- [47] Schomburg, C., **Schuehly, W.**, Da Costa, F.B., Klempnauer, K.-H. and Schmidt, T. Sesquiterpene lactones as inhibitors of Myb-dependent gene expression: Structure-activity relationships. *Eur. J. Med. Chem.* **63** 313-320 (2013)
- [48] Da Silva, D., da Gama Jaen Batista, D., de Araujo, J., Batista, M. Lionel, J., de Souza, E., Hammer, E., da da Silva, P., De Mieri, M., Adams, M., Zimmermann, S., Hamburger, M., Brun, R., **Schühly, W.** and de Nazaré Soeiro, J. Activities of psilostachyin A and Cynaropicrin against *Trypanosoma cruzi* *in vitro* and *in vivo*. *Antimicrob. Agents & Chemother.* **57** 5307-5314 (2013)
- [49] Ramabharathi, V. and **Schuehly, W.** How to deal with nomenclatorial ambiguities of trivial names for natural products? – A clarifying case study exemplified for "corymbosin". *Nat. Prod. Comm.* **9** 57-60 (2014)
- [50] Bernaskova, M., Kretschmer, N., **Schuehly, W.**, Huefner, A., Weis, R. and Bauer, R. Synthesis of tetrahydrohonokiol derivatives and their evaluation for cytotoxic activity against CCRF-CEM leukemia, U251 glioblastoma and HCT-116 colon cancer cells. *Molecules* **18** 1223-1237 (2014)
- [51] Hernández-López, J., Crockett, S., Kunert, O., Hammer, E., **Schuehly, W.**, Bauer, R., Crailsheim, K. and Riessberger-Gallé, R. *In vitro* growth-inhibition of *Paenibacillus larvae* by *Hypericum* extracts and isolated pure compounds. *Chem. & Biodiv.* **11** 695-708 (2014)
- [52] Hernández-López, J., **Schuehly, W.**, Crailsheim, K. and Riessberger-Gallé, U. Trans-generational immune priming in honeybees. *Proc. Royal Soc.* **B 281**: 20140454 (2014)
- [53] Baur, R., **Schuehly, W.** and Sigel, E. 4-O-Methylhonokiol is superior to honokiol in potentiating GABA_A receptor currents. *Biochim & Biophys Acta* **1840** 3017-3021 (2014)
- [54] Riessberger-Gallé, R., Hernández-López, J., **Schuehly, W.**, Crockett, S., Krainer, S. Crailsheim, K. Immune responses of honeybees and their fitness costs as compared to bumblebees. *Apidology* DOI: 10.1007/s13592-014-0318-x (2014)