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Academic backgroud

- Bachelor of Veterinary Medical Sciences, Faculty of Veterinary Medicine, South Valley University, Qena, **Egypt**, May 2006.
- Master of Veterinary Medical Science, Forensic Medicine and Toxicology Department, Faculty of Veterinary Medicine, South Valley University, Qena, **Egypt**, November 2009.
- PhD of Veterinary Medicine, Pharmacology and Toxicology Department, Faculty of Veterinary Medicine, Justus-Liebig-University Giessen, **Germany**, April 2013.

Employment

2006: Demonstrator, Forensic Medicine and Toxicology Department, Faculty of Veterinary Medicine, South Valley University, Qena, Egypt.

2009: Assistant lecturer, Forensic Medicine and Toxicology Department, Faculty of Veterinary Medicine, South Valley University, Qena, Egypt.

2010: PhD student, at the Leibniz Research Centre for Working Environment and Human Factors (IfADo), and Pharmacology and Toxicology Department, Faculty of Veterinary Medicine, Justus-Liebig-University Giessen, Germany.

2013: Lecturer, Forensic medicine and toxicology department, Faculty of veterinary medicine, South Valley University, Qena, Egypt.

2013: Post-Doctor at the Leibniz Research Centre for Working Environment and Human Factors (IfADo), Dortmund, Germany.

2015: Junior Group Leader at the Leibniz Research Centre for Working Environment and Human Factors (IfADo), Dortmund, Germany.

Awards

Inetrnational Prizes

- *Ebert Prize*, American Pharmacists Association, United States of America, 2016.

National Prizes

- *State Encouragement Awards, Academy of Scientific Research& Technology, Egypt, 2016.*
- *University Encouragement Award*, South Valley University, Egypt, 2015.
- *Scientific Publication Award*, South Valley University, Egypt, 2014.
- *Scientific Publication Award*, South Valley University, Egypt, 2015.
- *Scientific Publication Award*, South Valley University, Egypt, 2016.
- *Scientific Publication Award*, South Valley University, Egypt, 2017.
- *Scientific Publication Award*, South Valley University, Egypt, 2018.

Selected Publications

Peer reviewed journals

Ghallab A*, F. Schliess*., S. Hoehme*, S. G. Henkel*, D. Driesch, J. Bottger, R. Guthke, M. Pfaff, JG. Hengstler, R. Gebhardt, D. Haussinger, D. Drasdo and S. Zellmer. "Integrated Metabolic Spatial-Temporal Model for the Prediction of Ammonia Detoxification During Liver Damage and Regeneration." ***Hepatology*** 60, no.6 (2014): 2040-2051. *indicates shared first authorship. ***(impact factor: 14.076).***

Ghallab A, S.G. Henkel, G. Cellière, D. Driesch, S. Hoehme, U. Hofmann, S. Zellmer, P. Godoy, A. Sachinidis, M. Blaszkewicz, R. Reif, R. Marchan, L. Kuepfer, D. Häussinger, D. Drasdo, R. Gebhardt, JG. Hengstler. "Model guided identification and therapeutic implications of an ammonia sink mechanism." ***Journal of Hepatology***, 64, no.4 (2016): 860-871. ***(impact factor: 14.911).***

Ghallab A, U. Hofmann, S. Sezgin, N. Vartak, R. Hassan, A. Zaza, P. Godoy, M. Schneider, G. Guenther, YA. Ahmed, AA. Abbas, V. Keitel, L. Kuepfer, S. Dooley, F. Lammert, C. Trautwein, M. Spiteller, D. Drasdo, AF. Hofmann, PLM. Jansen, JG. Hengstler, R. Reif. “Bile micro-infarcts in cholestasis are initiated by rupture of the apical hepatocyte membrane and cause shunting of bile to sinusoidal blood”. ***Hepatology*** (2018), Accepted. ***(impact factor: 14.076).***

Jansen PLM, **A. Ghallab**, N. Vartak, R. Reif, FG. Scaap, J. Hampe and JG. Hengstler. " The ascending pathophysiology of cholestatic liver disease." ***Hepatology***, 65, no.2 (2017): 722-738. ***(impact factor: 14.076).***

Ghallab A*, M. Bartl*, M. Pfaff*, D. Driesch, S.G. Henkel, JG. Hengstler, S. Schuster, C. Kaleta, R. Gebhardt, S. Zellmer, P. Li. "Optimality in the zonation of ammonia detoxification in

rodent liver. " ***Arch Toxicol*** 89, no.11 (2015): 2069-2078. *indicates shared first authorship. ***(impact factor: 5.728).***

Ghallab A*, R. Reif*, L. Beattie, G. Guenther, L. Kuepfer, PM. Kaye and JG. Hengstler "In vivo imaging of systemic transport and elimination of xenobiotics and endogenous molecules in mice." ***Arch Toxicol*** 91, no. 3 (2017): 1335-1352. *indicates shared first authorship. ***(impact factor: 5.728).***

Sezgin S, R. Hassan, S. Zühlke, L. Kuepfer, JG. Hengstler, M. Spiteller, **A. Ghallab**. "Spatio-temporal visualization of the distribution of acetaminophen as well as its metabolites and adducts in mouse livers by MALDI MSI". ***Arch Toxicol*** (2018), accepted. ***(impact factor: 5.728).***

Koeppert S, A. Buescher, A. Babler, **A. Ghallab**, E M. Buhl, E. Latz, JG. Hengstler, ER. Smith, W. Jahnen-Dechent. "Cellular Clearance and Biological Activity of Calciprotein Particles Depend on their Maturation State and Crystallinity". ***Frontiers in Immunology*** (2018), Accepted. ***(impact factor: 5.511).***

Schenk A, **A. Ghallab**, U. Hofmann, R. Hassan, M. Schwarz, A. Schuppert, O. Schwen, A. Braeuning, D. Teutonico, JG. Hengstler and L. Kuepfer. "Physiologically-based modelling in mice suggests an aggravated loss of clearance capacity after toxic liver damage." ***Scientific Reports*** 7 (2017): 6224***. (impact factor: 4.122).***

Leist M., **A. Ghallab**, R. Graepel, R. Marchan, R. Hassan, S. H. Bennekou, A. Limonciel, M. Vinken, S. Schildknecht, T. Waldmann, E. Danen, B. Ravenzwaay, H. Kamp, I. Gardner, P. Godoy, F. Y. Bois, A. Braeuning, R. Reif, F. Oesch, D. Drasdo, S. Höhme, M. Schwarz, T. Hartung, T. Braunbeck, J. Beltman, H. Vrieling, F. Sanz, A. Forsby, D. Gadaleta, C. Fisher, J. Kelm, D. Fluri, G. Ecker, B. Zdrazil, A. Terron, P. Jennings, B. van der Burg, S. Dooley, A. H. Meijer, E. Willighagen, M. Martens, C. Evelo, E. Mombelli, O. Taboureau, A. Mantovani, B. Hardy, B. Koch, S. Escher, C. van Thriel, C. Cadenas, D. Kroese, B. van de Water, J. G. Hengstler."Adverse outcome pathways: opportunities, limitations and open questions." ***Arch Toxicol*** 91, no. 11 (2017). ***(impact factor: 5.728).***

Campos G, W. Schmidt-Heck, **A. Ghallab**, K. Rochlitz, L. Putter, D. B. Medinas, C. Hetz, A. Widera, C. Cadenas, B. Begher-Tibbe, R. Reif, G. Gunther, A. Sachinidis, JG. Hengstler and P. Godoy. "The Transcription Factor Chop, a Central Component of the Transcriptional Regulatory Network Induced Upon CCl_4 Intoxication in Mouse Liver, Is Not a Critical Mediator of Hepatotoxicity." ***Arch Toxicol*** 88, no. 6 (2014): 1267-1280. ***(impact factor: 5.728).***

Thiel C, S. Schneckener, M. Krauss, **A. Ghallab**, U. Hofmann, T. Kanacher, S. Zellmer, R. Gebhardt, JG. Hengstler and L. Kuepfer. "A Systematic Evaluation of the Use of Physiologically-Based Pharmacokinetic Modeling for Cross-Species Extrapolation*". **Journal of Pharmaceutical Sciences*** 104, no. 1 (2015): 191-206 ***(impact factor: 3.075).***

Godoy P, A. Widera,…. **A. Ghallab**, …. and JG. Hengstler. " Gene network activity in cultivated primary hepatocytes is highly similar to diseased mammalian liver tissue." ***Arch Toxicol*** 90, no. 10 (2016): 2513-2529. ***(impact factor: 5.728).***

Reif R, A. Adawy, N. Vartak, J. Schroeder, G. Guenther, **A. Ghallab**, W. Schormann, M. Schmidt, JG. Hengstler. “Activated ErbB3 translocates to the nucleus via clathrin-independent endocytosis in proliferating cells. ” ***The Journal of Biological Chemistry*** 291, no. 8 (2016): 3837-3847. ***(impact factor: 4.125).***

Heise T, M. Schug, D. Storm, H. Ellinger-Ziegelbauer, H. J. Ahr, B. Hellwig, J. Rahnenfuhrer, **A. Ghallab**, G. Guenther, J. Sisnaiske, R. Reif, P. Godoy, H. Mielke, U. Gundert-Remy, A. Lampen, A. Oberemm and JG. Hengstler. "In Vitro - in Vivo Correlation of Gene Expression Alterations Induced by Liver Carcinogens." ***Curr Med Chem*** 19, no. 11 (2012): 1721-1730. ***(impact factor: 3.469).***

Thiel C, U. Hofmann, **A. Ghallab**, R. Gebhardt, J. G. Hengstler and L. Kuepfer. "Towards knowledge-driven cross-species extrapolation*." **Drug Discovery Today: Disease Models*** 22, no. 2016 (2017).

Yasser A. Ahmed, S. Ali, **A. Ghallab.** "Hair histology as a tool for forensic identification of some domestic animal species". ***EXCLI Journal*** 17 (2018): 663-670. ***(impact factor: 2.424).***

Ghallab A,"Blueprint for stem cell differentiation into liver cells". ***EXCLI Journal*** 14 (2015): 1 017-1019. ***(impact factor: 2.424).***

Ghallab A, "Acetaminophen hepatotoxicity." ***Arch Toxicol*** 89, no. 12 (2015): 2449-2451. ***(impact factor: 5.728).***

Ghallab A, "Role of the circadian clock system in breast cancer". ***EXCLI Journal*** 14 (2015): 540-541. ***(impact factor: 2.424).***

Ghallab A, "Perspectives in stem cell research—unbiased quantification of the similarity between in vitro generated and primary hepatocytes." ***Arch Toxicol*** 89, no. 11 (2015): 2185-2187. ***(impact factor: 5.728).***

Ghallab A, "In vitro test systems and their limitations". ***EXCLI Journal*** 12 (2013): 1024-1026 ***(impact factor: 2.424).***

Ghallab A, "Perspectives in Toxicologic Pathology: Quantification of Bile Canalicular Networks." ***Arch Toxicol*** 88, no. 10 (2014): 1907-1908. ***(impact factor: 5.728).***

Drasdo D, J. Bode, U. Dahmen, O. Dirsch, S. Dooley, R. Gebhardt, **A. Ghallab**, P. Godoy, D. Haussinger, S. Hammad, S. Hoehme, H. G. Holzhutter, U. Klingmuller, L. Kuepfer, J. Timmer, M. Zerial and JG. Hengstler. "The Virtual Liver: State of the Art and Future Perspectives." ***Arch Toxicol*** 88, no. 12 (2014): 2071-5. ***(impact factor: 5.728).***

Ghallab A, and H. M. Bolt. "In Vitro Systems: Current Limitations and Future Perspectives."***Arch Toxicol*** 88, no. 12 (2014): 2085-2087. ***(impact factor: 5.728).***

Ghallab A, “Human Non-Parenchymal Liver Cells For Co-Cultivation Systems.” ***EXCLI Journal*** 13 (2014):1295-1296. ***(impact factor: 2.424).***

Ghallab A, “Systems toxicology.” ***EXCLI Journal*** 14 (2015):1261-1263. ***(impact factor: 2.424).***

Ghallab A, “New methods for quantification of bile canalicular dynamics.” ***EXCLI Journal*** 14 (2015):1264-1266. ***(impact factor: 2.424).***

Ghallab A, “Interspecies extrapolation by phsyologically based pharmacokinetic modelling.” ***EXCLI Journal*** 14 (2015):1267-1269. ***(impact factor: 2.424).***

Ghallab, A. “The Rediscovery of HEPG2 Cells for Prediction Of Drug Induced Liver Injury (DILI).” ***EXCLI Journal*** 13 (2014):1286-1288. ***(impact factor: 2.424).***

Book contribution

Hengstler, JG, S. Hammad, **A. Ghallab**, R. Reif and P. Godoy. “In Vitro Systems for Hepatotoxicity Testing”. Anna Bal-Price, Paul Jennings (eds). ***In Vitro Toxicology Systems***, Methods in Pharmacology and Toxicology, DOI 10.1007/978-1-4939-0521-8_2, (2014): 27-44.

Patent

Alpha-ketoglutarate in combination with glutamate dehydrogenase for treating hyperammonemia. ***European Patent Office,*** publication no. WO2016083399 A1.