4th GERMAN PHARM-TOX SUMMIT

85. Jahrestagung
der Deutschen Gesellschaft für experimentelle und klinische Pharmakologie und Toxikologie (DGPT)
und 21. Jahrestagung des Verbundes Klinische Pharmakologie (VKliPha)
in Zusammenarbeit mit der AGAH

PROGRAMME

25–28 FEBRUARY
STUTTGART | 2019

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Hosting societies

German Society for Experimental und Clinical Pharmacology and Toxicology (DGPT)
(Deutsche Gesellschaft für experimentelle und klinische Pharmakologie
und Toxikologie e. V.)
www.dgpt-online.de

Association of Clinical Pharmacology (VKliPha)
(Verbund Klinische Pharmakologie in Deutschland e. V.)
www.vklipha.de

Association for Applied Human Pharmacology (AGAH)
(Arbeitsgemeinschaft für Angewandte Humanpharmakologie e. V.)
www.agah.eu

Conference chairs

Prof. Dr. Matthias Schwab
Dr. Margarete-Fischer-Bosch-Institute of Clinical Pharmacology
Stuttgart

Prof. Dr. Holger Barth
Institute of Pharmacology and Toxicology
University of Ulm, Medical Center

Scientific committee

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PD Dr. Kurt Bestehorn (Duesseldorf)
Dr. Andrea Kliewer (Jena)
Dr. Barbara Schug (Oberursel)
Prof. Dr. Matthias Schwab (Stuttgart, Tuebingen)
Prof. Dr. Thomas Wieland (Mannheim)

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Dear colleagues and friends,

It is our great honour and pleasure to welcome you at the 4th German Pharm-Tox Summit from 25–28 February 2019 in Stuttgart. Traditionally, this is a joint conference organized and held by the German Society for Experimental and Clinical Pharmacology and Toxicology (DGPT) together with the Association of Clinical Pharmacology (VKliPha) and the Association for Applied Human Pharmacology (AGAH).

To make the 4th German Pharm-Tox Summit an excellent scientific congress presenting cutting edge science from experimental and clinical Pharmacology and Toxicology, for the first time two Universities, namely Tuebingen and Ulm, also represented by the two Congress Presidents from the German Societies of Clinical Pharmacology and Toxicology, respectively, joint together with the Dr. Margarete Fischer-Bosch-Institute of Clinical Pharmacology in Stuttgart.

We are confident that the three plenary talks as well as the various symposia and the short talk sessions will and provide exciting insight on hot topics of pharmacology, clinical pharmacology, and toxicology, but also allow to look across the borders of the own research topics.

Welcome to Stuttgart!

Prof. Dr. Matthias Schwab
Congress President DGPT

Prof. Dr. Holger Barth
President GT
Congress President DGPT

Prof. Dr. Thomas Wieland
President DGPT, DGP

Prof. Dr. Ingolf Cascorbi
President DGKliPha

PD Dr. Kurt Bestehorn
Speaker VKliPha

Prof. Dr. Georg Wensing
President AGAH

Reutlingen	Heilbronn	Ulm
11:00–17:00 **Advanced course in toxicology** p. 11	**11:00–17:00** **Advanced course in computational pharmacology and toxicology** p. 11	**13:00–17:00** **Advanced course in pharmacology** Pharmakologielehre entsprechend dem Nationalen Kompetenzbasierten Lernzielkatalog Medizin (NKLM) p. 12

Pharmacology (DGP)	Poster session
Toxicology (GT)	VKliPha
Clinical Pharmacology (DGKliPha)	Forum Young Scientist
General	AGAH Workshop
Industry	Social programme

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Pharmacology (DGP)	Poster session
Toxicology (GT)	VKliPha
Clinical Pharmacology (DGKliPha)	Forum Young Scientist
General	AGAH Workshop
Industry	Social programme

Monday, 25 February

10:00–17:00 Prüfungen in der Toxikologie
Turm B

17:00–18:00 Vorstandssitzung der Deutschen Gesellschaft für Pharmakologie (DGP)
Reutlingen

17:00–18:30 Erweiterte Vorstandssitzung der Gesellschaft für Toxikologie (GT)
Heilbronn

18:00–21:00 Treffen der AG Planmäßige Professoren der Experimentellen und Klinischen Pharmakologie und Toxikologie
ACHTUNG! Robert-Bosch-Krankenhaus • Atrium • Raum E109
Anderer Ort Auerbachstraße 112 • 70376 Stuttgart

Tuesday, 26 February

13:00–14:00 AK Computational Toxicology
Reutlingen AK 3R Praxis/Alternativmethoden

Wednesday, 27 February

13:00–14:00 AK Carcinogenese
Reutlingen

11:30–13:00 Editorial board meeting in Nauyn-Schmiedebergs Archives of Pharmacology
Turm B

13:00–14:00 Präsidiumssitzung und Mitgliederversammlung der Deutschen Gesellschaft für Experimentelle und Klinische Pharmakologie und Toxikologie (DGPT) e. V.
Turm B

11:00–17:00 Advanced course in toxicology

Reutlingen

Chair W. Aulmann (Monheim a. R.)

11:00 Begrüßung/Einführung
W. Aulmann (Monheim a. R.), H. Foth (Halle a. d. S.)

11:10 Herausforderungen bei der Zulassung von „Herbal Medicinal Products“
R. Länger (Vienna/AT)

11:45 Risikobewertung von „Botanicals“ und „botanical preparations“: das Vorgehen der EFSA
U. Gundert-Remy (Berlin)

12:20 Bewertung des kanzerogenen Risikos von Pyrrolizidinalkaloiden
R. Stahlmann (Berlin)

13:00 Mitgliederversammlung

14:00 Bewertung des kanzerogenen Risikos von Eugenol
J. Wiesner (Bonn)

14:35 Standards in Anbau und Produktion von Herbal Medicinal Products
B. Steinhoff (Bonn)

14:00 Podiumsdiskussion
Moderation G. Degen (Dortmund)

U. Gundert-Remy (Berlin), H. Foth (Halle a. d. S.), R. Länger (Wien/AT)
R. Stahlmann (Berlin), B. Steinhoff (Bonn), J. Wiesner (Bonn)

11:00–17:00 Advanced course in computational pharmacology and toxicology

Heilbronn

Chairs L. T. Anger (Frankfurt a. M.), U. Fuhr (Cologne)

11:00 Physiology based pharmacokinetic simulations in drug development to support drug interactions and paediatric clinical trials
S. Läer (Duesseldorf)

11:50 Applications of physiologically based toxikinetic monitoring (PBTK) for *in vitro* to *in vivo* extrapolation (IVIVE) – a case study with potential endocrine disrupting compounds
E. Fabian (Ludwigshafen a. R.)

13:30 Computational prediction of the pharmacological activity of small molecules: virtual screening and mode of action prediction
J. Kirchmair (Hamburg; Bergen/NO)

14:20 *In silico* toxicology – computational methods for prediction of toxicity endpoints
L. T. Anger (Frankfurt a. M.)

15:25 Systems toxicology – possibilities and limitations
J. G. Hengstler (Dortmund)

16:15 Quantitative systems pharmacology – simulating cellular drug responses within a whole-body context
L. Küpfer (Leverkusen)

13:00–17:00 Advanced course in pharmacology
Ulm Pharmakologielehre entsprechend dem Nationalen Kompetenzbasierten Lernzielkatalog Medizin (NKLM)

Pharmakologielehre entsprechend dem Nationalen Kompetenzbasierten Lernzielkatalog Medizin (NKLM)
R. Seifert (Hannover)

Der NKLM stellt die Grundlage für die Entwicklung des neuen Gegenstandskataloges (GK) des Instituts für Medizinische und Pharmazeutische Prüfungsfragen (IMPP) dar und ist damit für die Lehre und die Staatsexamensprüfungen von größter Bedeutung. Die Lehre stellt das alle pharmakologische Universitätsinstitute verbindende Element dar und ist für die akademische Zukunft des Faches essentiell.
Im NKLM und GK wird die klassische Trennung von experimenteller und klinischer Pharmakologie aufgehoben. Stattdessen werden die auf pathophysiologischen Mechanismen basierten Prinzipien der Pharmakotherapie in den Vordergrund gestellt. Zugleich ist es ein wichtiges Ausbildungsziel von NKLM und GK, dass der Student sein Wissen praxisnah anwenden kann. Der Advanced Course richtet sich an Pharmakologiedozenten aller Erfahrungsstufen und wird am Beispiel des seit vielen Jahren mit Lehrpreisen ausgezeichneten Moduls „Pharmakologie und Toxikologie“ der Medizinischen Hochschule Hannover sowie des neuen am NKLM orientierten Lehrbuches „Basiswissen Pharmakologie“ aufzeigen, wie die Ziele des NKLM und GK erreicht werden können und somit die zentrale Querschnittsfachposition der Pharmakologie in der medizinischen Ausbildung gesichert wird.

08:30–09:30 Short talks
König-Karl-Halle
Chairs

Toxicology – Organ toxicology

A. Braeuning (Berlin), H. Hintzsche (Erlangen)

08:30
1
Mitochondrial toxicology – rescuing mitochondria in Wilson disease avoids acute liver failure
H. Zischka (Munich)

08:45
2
Epithelial-fibroblast crosstalk – necessary requirement for the nephrotoxicity of ochratoxin A (OTA)?
M.-C. Schulz, M. Gekle, G. Schwerdt (Halle a. d. S.)

09:00
3
The use of AOP-driven analyses for determining molecular mechanisms of liver steatosis induced by triazole fungicides *in vitro*
C. Knebel, A. Lampen, P. Marx-Stoelting, A. Braeuning (Berlin)

09:15
4
Development of a neurotoxicity assay that is tuned to detect mitochondrial toxicants
J. Delp, M. Funke, M. Leist (Konstanz)

09:30–10:30 Short talks
König-Karl-Halle
Chairs

Toxicology – Food toxicology

E. Richling (Kaiserslautern), W. Wätjen (Halle a. d. S.)

09:30
5
Human CYP3A4-mediated toxification of the pyrrolizidine alkaloid lasiocarpine
J. Ebmeyer, S. Hessel-Pras, A. These, H. Glatt, A. Braeuning
A. Lampen (Berlin)

09:45
6
Monitoring urinary exposure biomarkers of dietary acrylamide intake in vegans and persons without dietary preferences
K. Goerke, M. Ruenz (Kaiserslautern), K. Abraham, A. Lampen (Berlin)
T. Bakuradze, G. Eisenbrand, E. Richling (Kaiserslautern)

10:00
7
Regulatory decision about the safety of food products in the case of chronic toxicity
H. Hintzsche (Erlangen)

10:15
8
Organ toxicity mediated by the food contaminant 3-MCPD is based on oxidative stress
K. Schultrich, T. Buhrke (Berlin), C. Henderson, R. Wolf (Dundee/GB), A. Braeuning
A. Lampen (Berlin)

09:00–10:30 Short talks
Bertha-Benz-Saal Pharmacology – Cardiac pharmacology and treatment I
Chair R. Gilsbach (Freiburg i. Br.)

09:00 9 Dapagliflozin ameliorates diastolic function in a non-diabetic model of heart failure
D. Cappetta, K. Urbanek, L. P. Ciuffreda, A. Cozzolino (Naples/IT)
R. Coppini (Florence/IT), L. Berrino, A. De Angelis (Naples/IT)

09:15 10 Regional characterisation of the NLRP3 inflammasome in the diabetic mouse heart
K. Leineweber (Essen), S. Kleeschulte (Essen, Duesseldorf), S. Stolte
D. Dobrev, A. Fender (Essen)

09:30 11 MicroRNA-21 in cardiac resident macrophages regulates pressure cardiac remodelling
D. P. Ramanujam, A. P. Schön, C. Beck, G. Felician, A. Dueck, S. Engelhardt (Munich)

09:45 12 Local sympathetic control of myocardial remodeling
K. Ziegler, J. Kerler, J. Werner, S. Engelhardt (Munich)

10:00 13 Cholesterol depletion predisposes to congenital heart defects due to cilia dysfunction
L. Maerz, M. Burkhalter, C. Schilpp, O. Wittekind, M. Frick, M. Philipp (Ulm)

10:15 14 IndivuHeart – individual risk assessment for heart diseases with patient-specific iPSC-derived engineered heart tissue
B. Ulmer, A. Shibamiya, M. Schulze, T. Schulze, E. Schulze, M. Karakas, S. Schmitt
T. Zeller, A. Hansen, T. Eschenhagen (Hamburg)

09:00–10:30 Short talks
Karlsruhe Pharmacology – Immunopharmacology
Chair S. Beer-Hammer (Tuebingen)

09:00 15 *In vitro* pharmacological characterisation of the novel TLR2 antagonist MMG-11
M. Grabowski, M. S. Murgueitio, G. Wolber, G. Weindl (Berlin)

09:15 16 Lysosomotropic drugs enhance pro-inflammatory responses to IL-1β in macrophages by inhibiting internalisation of the IL-1 receptor
C. Lübow, G. Weindl (Berlin)

09:30 17 LPS-neutralizing peptides reduce outer membrane vesicle-induced inflammatory responses
A. Pfalzgraff (Berlin), W. Correa, L. Heinbockel, A. B. Schromm (Borstel)
C. Lübow (Berlin), N. Gisch (Borstel), G. Martinez-de-Tejada (Pamplona/ES)
K. Brandenburg (Borstel), G. Weindl (Berlin)

09:45
18
Hierarchical control of chromatin structure and gene activation by cytokine-responsive enhancers
M. Kracht, S.-S. Weiterer, J. Meier-Sölch, L. Jurida (Giessen)
A. Mizi (Goettingen), T. Georgomanolis (Cologne), A. Papantonis (Goettingen)

10:00
19
mTOR contributes to LPS-triggered neuroinflammation – modulation of IκB-α/NF-κB/HIF-1α signaling pathway
D. S. Guden, M. Temiz-Resitoglu, S. P. Senol, D. Kibar, S. N. Yılmaz, B. Tunctan
S. Sahan-Firat (Mersin/TR)

10:15
20
The phospholipase C-γ2 mutant S707Y associated with acquired ibrutinib resistance of chronic lymphocytic leukemia is activated via Bruton's tyrosine kinase independent of its kinase activity
M. Wist, Y. Zhou, J. Haas, S. Endres, A. Schade, P. Gierschik, C. Walliser (Ulm)

09:00–10:30
Reutlingen
Chair
Short talks
Clinical pharmacology – Disease models and drug development
M. Fromm (Erlangen)

09:00
21
Transcriptional effectors of etoposide contribute to cytotoxicity in AML cell lines
P. More, U. Gödtel-Armbrust, V. Shah, M. Mathäs, T. Kindler, M. Andrade
L. Wojnowski (Mainz)

09:15
22
Expression of clinically relevant nuclear receptors in the human intestine and liver
L. Gödtke, D. Busch, P. Erdmann, S. Brück, L.-I. Partecke, C.-D. Heidecke
S. Oswald (Greifswald)

09:30
23
The Glucocorticoid-Induced Leucine Zipper (GILZ) mediates statin-induced muscle damage
J. V. Valbuena Perez, J. Hoppstaedter (Saarbrücken)
W. K. F. Tse (Fukuoka/JP), S. Bruscoli, S. Flamini (Perugia/IT), A. Andreas
J. Herrmann, R. Mueller (Saarbrücken), C. Riccardi (Perugia/IT)
A. K. Kiemer (Saarbrücken)

09:45
24
Comprehensive drug uptake transporter proteomics and metabolomic profiling of human liver
A. T. Nies (Stuttgart, Tuebingen), N. Handin (Uppsala/SE), E. Schaeffeler, M. Haag
U. Hofmann, S. Winter, C. Neul, K. Klein, U. M. Zanger (Stuttgart, Tuebingen)
P. Artursson (Uppsala/SE), M. Schwab (Stuttgart, Tuebingen)

10:00
25
Splenomegaly associated anaemia in global IRAG-deficient mice is attenuated by esomeprazole
M. Majer, A. Schramm, J. Schloßmann (Regensburg)

10:15
26

Inhibition of nucleoside diphosphate kinases as a novel therapeutic approach in cardiovascular diseases
S. Lomada (Mannheim), P. Attwood (Perth/AU), A. Kannt (Frankfurt a. M.) T. Wieland, C. Vettel (Mannheim)

10:30–10:45 Coffee break in the industrial exhibition

10:45–11:00
König-Karl-Halle

Opening ceremony

Welcome note by the conference chairs
M. Schwab (Stuttgart, Tuebingen), H. Barth (Ulm)

Welcome note by the president of the DGPT
T. Wieland (Mannheim)

11:00–11:45
König-Karl-Halle
Chair

Plenary lecture I
Toxicology
H. Barth (Ulm)

Plenary lecture
V. Auwärter (Freiburg i. Br.)

12:00–12:45
Bertha-Benz-Saal & Karlsruhe

Meet the company
(see page 76)

11:45–13:00
Reutlingen

Special event
Toxicology in Germany 2019

12:45–13:30
Foyer

Get together within the industrial exhibition
(see page 68)

13:30–14:30
List-Saal/Empore

Poster session I
(see page 38)

14:30–16:00 König-Karl-Halle	Symposium 1 · Paul Martini Symposium Prävention und Management immunologischer Nebenwirkungen bei innovativen Therapieansätzen
Chairs	S. Jahn (Neu-Isenburg), K. Bestehorn (Duesseldorf)
14:30	Pathomechanismen der Entstehung immunologischer Nebenwirkung bei der Anwendung von Biotherapeutika S. Jahn (Neu-Isenburg)
14:50	Infektionsrisiken bei Therapie mit Biotherapeutika in der Rheumatologie T. Harrer (Erlangen)
15:10	Risiko-Prävention zur Vermeidung/zum Management von immunologischen Nebenwirkungen von Biotherapeutika J. Leemhuis (Grenzach-Wyhlen/CH)
15:30	Immunologische Nebenwirkungen bei neuen Krebstherapien zur Behandlung des malignen Melanoms T. Eigentler (Tuebingen)
15:50	Discussion
16:00–16:15	Coffee break in the industrial exhibition
16:15–17:45 König-Karl-Halle	Symposium 2 Novel psychoactive substances – toxicokinetics and toxicodynamics
Chairs	M. R. Meyer (Homburg), P. Dargan (London/GB)
16:15	Introduction into novel psychoactive substances including aspects of clinical toxicology P. Dargan (London/GB)
16:40	Novel psychoactive substances – toxicokinetics and toxicodynamics 1 L. Wagmann (Homburg)
17:05	Novel psychoactive substances – toxicokinetics and toxicodynamics 2 H. H. Maurer (Homburg)
17:30	Discussion

16:15–17:45 Bertha-Benz-Saal	Symposium 3 Novel aspects of molecular imaging
Chairs	P. Gierschik (Ulm), T. Wieland (Mannheim)
16:15	Translational imaging for psychiatric drug development A. Sartorius (Mannheim)
16:35	Chorioallantoic membrane (CAM) imaging for biodistribution assessment of new compounds V. Rasche (Ulm)
17:00	Multimodal imaging in basic research and clinical translation B. Pichler (Tuebingen)
17:20	Decipher the neuro-glio-vascular interaction with multi-modal fMRI X. Yu (Tuebingen)
16:15–17:45 Karlsruhe	Symposium 4 Publication 4.0 – Wie publizieren wir in der Zukunft?
16:15	Verhandlungen und Ziele des DEAL-Konsortiums H. Hippler (Bonn)
16:35	Publizieren im digitalen Zeitalter einer globalen Wissenschaft C. Schulz (Goettingen)
16:55	Open Access – nicht ohne Open Science B. Pulverer (Heidelberg)
17:15	Diskussion
16:15–17:45 Reutlingen	Symposium 5 Guideline-based polypharmacy – challenges and solutions
Chairs	M. Wehling (Mannheim), K. Bestehorn (Duesseldorf)
16:15	Incidence and consequences of guideline-based polypharmacy M. Wehling (Mannheim)
16:40	Medication plan – problem or solution? W. E. Haefeli (Heidelberg)
17:05	Geriatric assessment and therapeutic individualization to avoid polypharmacy M. Gosch (Nuremberg)
17:30	Discussion

17:45–19:15 König-Karl-Halle	General meeting Gesellschaft für Toxikologie (GT)
17:45–19:15 Bertha-Benz-Saal	General meeting Deutsche Gesellschaft für Pharmakologie (DGP)
17:45–19:15 Karlsruhe	General meeting Deutsche Gesellschaft für Klinische Pharmakologie und Therapie (DGKliPha)
17:45–19:15 Reutlingen	General meeting Arbeitsgemeinschaft für Angewandte Humanpharmakologie e. V. (AGAH)
19:30–21:00 ATTENTION! Other venue	Social evening Forum Junge Wissenschaft – Science Slam Café Félix (see page 68)

08:30–09:30 Short talks
König-Karl-Halle Toxicology – Biotransformation and toxicokinetics
Chairs A. Mangerich (Konstanz), N. Schupp (Duesseldorf)

08:30
27
Carbon monoxide releasing molecule 401 (CORM-401) modulates phase I metabolism of the tricyclic antidepressant amitriptyline
M. Walter, P. Brenneisen, W. Stahl, D. Stucki (Duesseldorf)

08:45
28
Grouping of 14 structural different pyrrolizidine alkaloids due to their hepatotoxic properties
J. Glück, J. Waizenegger, C. Luckert, A. Braeuning, A. Lampen, S. Hessel-Pras (Berlin)

09:00
29
Pesticides induce the ABCG2 efflux activity in the bovine mammary gland
L. Kuhnert (Leipzig), M. Giantin, M. Dacasto (Padova/IT), S. Halwachs
W. Honscha (Leipzig)

09:15
30
Mevalonate depletion leads to an increased lifespan in C. elegans
A. Jahn, G. Fritz, S. Honnen (Duesseldorf)

09:30–10:30 Short talks
König-Karl-Halle Toxicology – Genotoxicity
Chairs A. Cartus (Kaiserslautern), C. Henninger (Duesseldorf)

09:30
31
Survivin inhibitor LLP3 sensitizes colorectal cancer cells to irinotecan in the context of a specific XAF1/p53 signature
M. Tomicic, C. Steigerwald, B. Rasenberger, M. Christmann (Mainz)

09:45
32
The natural compound methyleugenol activates the ATR-CHK1-p53 mediated DNA damage response and triggers caspase-dependent cell death
D. Heylmann, A. S. Vollmer (Giessen), D. Begaliew, S. Peter, T. Nikolova
M. Christmann (Mainz), J. A. Fuhlbrueck, S. Stegmüller, A. T. Cartus (Kaiserslautern)
J. Fahrer (Giessen, Mainz)

10:00
33
Dietary heme alters intestinal microbiota and induces chronic intestinal inflammation with colorectal tumor formation
N. Seiwert (Giessen, Mainz), S. Stroh, H. Zillmer (Mainz), J. Döhring (Hannover)
P. Steinberg (Hannover, Karlsruhe), P. Adams, N. Hövelmeyer (Mainz)
S. Wirtz (Erlangen), B. Kaina, S. Försch (Mainz), J. Fahrer (Giessen, Mainz)

10:15
34
PARP1 regulates genotoxic stress-induced nucleolar-nucleoplasmic shuttling of the genome maintenance factors WRN and XRCC1 in a protein and toxicant-specific manner
S. Veith, A. Schink, M. Engrecht, M. Mack, L. Rank, P. Rossatti, M. Hakobyan
T. Hefele, M. Frensch, D. Goly, A. Fischbach, A. Bürkle, A. Mangerich (Konstanz)

09:00–10:30 Short talks
Bertha-Benz-Saal Pharmacology – Cardiac pharmacology and treatment II
Chair F. Cuello (Hamburg)

09:00 CRISPR interference reveals functional genomic interactions in cardiac myocytes
35 M. Schwaderer, S. Nothjunge, L. Hein, R. Gilsbach (Freiburg i. Br.)

09:15 Chromatin interactions in mouse cardiomyocytes during postnatal development and in cardiac hypertrophy
36 S. Nothjunge, J. Wolff, T. Kehl, B. Grüning, L. Hein, R. Gilsbach (Freiburg i. Br.)

09:30 Transcriptional mechanisms of atrial remodeling and arrhythmia in cardiac myocytes
37 C. Rommel, M. Barg, M. Schwaderer (Freiburg i. Br.)
U. Ravens (Freiburg i. Br., Dresden), L. Hein (Freiburg i. Br.)

09:45 Antiarrhythmic CNP effects are mediated by phosphodiesterase 2
38 S. Kämmerer, M. Fahmi, J. Siegert, K. Richter, F. Dutt, S. Künzel, M. Wagner
A. El-Armouche (Dresden)

10:00 Alterations in pulmonary vasculature and lung inflammation in a model of heart failure with preserved ejection fraction – effects of ranolazine
39 A. De Angelis, L. P. Ciuffreda, D. Cappetta, A. Liparulo, T. P. Russo, A. Miccichè
B. D'Agostino, L. Berrino, K. Urbanek (Naples/IT)

10:15 Inhibition of cardiac lymphangiogenesis in imatinib-induced cardiomyopathy
40 K. Urbanek (Naples/IT), D. Madeddu, S. Cavalli, C. Frati, A. Falco
B. Lorusso (Parma/IT), D. Cappetta, L. Berrino, A. De Angelis (Naples/IT)
F. Quaini (Parma/IT)

09:00–10:30 Short talks
Karlsruhe Pharmacology – G-protein coupled receptors
Chair B. Möpps (Ulm)

09:00 Voltage dependence of prostanoid receptors
41 M. Kurz, A.-L. Krett, M. Bünemann (Marburg)

09:15 Agonist induced association and dissociation of mAch-receptor G-protein complexes measured by FRET-techniques in intact cells and receptor membranes
42 H. Lemoine (Duesseldorf), O. Ilyaskina, M. Bünemann (Marburg)

09:30 Dynamic insights into class A GPCR activation dynamics – a novel way to develop subtype selective agonists?
43 M. Kauk (Jena), M. Bermudez (Berlin), D. Volpato (Wuerzburg),D. Schaller (Berlin)
N. Yurdagül-Hemmrich, U. Zabel, U. Holzgrabe (Wuerzburg), G. Wolber (Berlin)
C. Hoffmann (Jena, Wuerzburg)

09:45
44
Allosteric coupling is linked to GPCR ligand bias
M. Bermudez, A. Bock (Berlin)

10:00
45
Crystal structure of the parathyroid hormone 1 receptor in complex with a peptide agonist
J. Ehrenmann, J. Schöppe, C. Klenk (Zurich/CH), M. Rappas
A. S. Doré (Cambridge/GB), L. Kummer, A. Plückthun (Zurich/CH)

10:15
46
HA-epitope tag knockin mice demonstrate lack of μ-opioid receptor splice variants in mouse brain
S. Fritzwanker, A. Kliewer, S. Schulz (Jena)

09:00–10:30
Reutlingen
Chair

Short talks
Clinical pharmacology – Clinical pharmacology and drug therapy

H. Brauch (Stuttgart)

09:00
47
Piperacillin plasma concentrations are subtherapeutic in burn patients following a standard dosage regimen
K. Olbrisch, T. Kisch, J. Thern, E. Kramme, J. Rupp, T. Graf (Luebeck)
S. Wicha (Hamburg), P. Mailänder, W. Raasch (Luebeck)

09:15
48
Outcomes following guided de-escalation of antiplatelet treatment in acute coronary syndrome patients with and without diabetes mellitus undergoing percutaneous coronary intervention – a prespecified analysis from the randomized TROPICAL-ACS trial
D. Trenk (Bad Krozingen), R. Hein, L. Gross (Munich), D. Aradi (Balatonfüred/HU)
C. Jacobshagen (Goettingen), T. Geisler (Tuebingen), M. Hadamitzky (Munich)
K. Huber (Vienna/AT), F. T. Nagy (Szeged/HU), C. A. Dézsi (Győr/HU), Z. Huczek
L. Koltowski (Warsaw/PL), H. Mudra (Munich), H. Ince (Berlin), M. Baylacher
S. Deuschl, S. Massberg, D. Sibbing (Munich)

09:30
49
Increased sphingosine-1-phosphate serum concentrations in subjects with periodontal disease – a matter of inflammation
E. Moritz, G. Jedlitschky, J. Negnal, M. V. Tzvetkov, T. Kocher, B. Holtfreter
B. H. Rauch (Greifswald)

09:45
50
Medication safety in patients treated with new oral antitumor agents: a prospective, randomized investigation on the impact of intensified clinical pharmaceutical/clinical pharmacological care on patient safety and well-being (AMBORA-Study – supported by the German Cancer Aid (70112447))
P. Dürr, K. Schlichtig, F. Dörje, M. F. Fromm (Erlangen)

10:00
51
Gender-specific alterations of bile acid homeostasis in Non-alcoholic Fatty Liver Disease (NAFLD)
M. Haag (Stuttgart, Tuebingen), J. Tevini, A. Feldman, S. K. Eder
T. K. Felder (Salzburg/AT), C. Datz (Salzburg, Oberndorf/AT)
E.-K. Mustonen (Stuttgart, Tuebingen), T. Schiergens (Munich), K. Klein
S. Winter, U. M. Zanger, O. Burk, M. Schwab (Stuttgart, Tuebingen)
E. Aigner (Salzburg/AT)

10:15
52
Cardiovascular drugs – adherence monitoring in oral fluid by means of hyphenated high-resolution mass spectrometry
L. H. J. Richter, C. M. Jacobs, F. Mahfoud, I. Kindermann, M. Böhm
M. M. Meyer (Homburg)

10:30–11:00 Coffee break and industrial exhibition

11:00–11:45
König-Karl-Halle
Chair
Plenary lecture II
Clinical pharmacology
I. Cascorbi (Kiel)

Liquid biopsy – a new diagnostic concept in oncology
K. Pantel (Hamburg)

12:00–13:00
Bertha-Benz-Foyer
Industrial symposium
(see page 76)

13:00–14:00
List-Saal/Empore
Poster session II
(see page 52)

14:00–15:00
König-Karl-Halle
Chairs
Short talks
Toxicology – Toxins I
R. Gerhard (Hannover), K. Ernst (Ulm)

14:00
53
Biohybrid transporters for cell-type selective delivery and controlled release of therapeutic peptides
M. Fellermann, S. Carle, F. Weiß, J. Michaelis, H. Barth (Ulm)

14:15
54
Chronic senescence in mesenchymal stem cells as possible mechanism in wound healing disorder after sulfur mustard exposure
S. Rothmiller (Munich, Konstanz), A. Bürkle (Konstanz), D. Steinritz
H. Thiermann, A. Schmidt (Munich)

14:30
55
Inhibition of *Clostridium difficile* toxins TcdA and TcdB by human serum albumin
S. Fischer, P. Papatheodorou (Ulm), A. di Masi (Rome/IT), M. Hägele, M. Müller
A. Kleger, H. Barth (Ulm)

14:45
56
Recombinant claudin molecules as innovative capture structures for clostridium perfringens enterotoxin
J. Weisemann, S. Mahrhold (Hannover), M. Krüger, T. Neumann
B. G. Dorner (Berlin), A. Rummel (Hannover)

14:00–15:00
Bertha-Benz-Saal
Chair
Short talks
Pharmacology – Ion channels
A. Dietrich (Munich)

14:00
57
Novel modulator of TRPC6 function in platelets
T. Bentrcia, V. Flockerzi (Homburg)

14:15
58
The contribution of individual ORAI proteins to agonist- and store dependent Ca2+ entry, activation of connective tissue mast cells and anaphylaxis
V. Tsvilovskyy, K. Oehlenschlaeger, C. Stengl, A. Solis-Lopez, D. Schumacher
U. Kriebs (Heidelberg), A. Roers (Dresden), M. Trebak (Hershey, PA/US)
P. Worley (Baltimore, MD/US), M. Freichel (Heidelberg)

14:30
59
Role of calcium channel subunits in bone
A. Belkacemi, A. Raza, K.-M. Busch, V. Flockerzi (Homburg)

14:45
60
Reduced neuropathic pain behavior in mice lacking the cyclic nucleotide-gated channel subunit CNGB1
W. Kallenborn-Gerhardt, R. Lu, J. Jonas Petersen, K. Metzner, M. S. Kuth
S. Heine (Frankfurt a. M.), O. Drees (Witten), M. Paul (Frankfurt a. M.)
E. Becirovic (Munich), L. Kennel, C. Flauaus, T. Groß, G. Wack, S. W. Hohmann
D. Del Turco (Frankfurt a. M.), M. Biel (Munich), G. Geisslinger (Frankfurt a. M.)
S. Michalakis (Munich), A. Schmidtko (Frankfurt a. M.)

14:00–15:00
Karlsruhe
Chair
Short talks
Pharmacology – Membrane transporters
S. Oswald (Greifswald)

14:00
61
Identification and functional characterization of novel genetic variants of the human multidrug resistance protein 2 (MRP2/ABCC2)
C. Kölz, E. Schaeffeler, R. Tremmel, S. Winter, K. Klein, U. M. Zanger
M. Schwab, A. T. Nies (Stuttgart, Tuebingen)

14:15
62
Frequently used veterinary drug combinations alter the bovine ABCG2 efflux activity
M. Wegrad, L. Kuhnert, W. Honscha (Leipzig)

14:30
63
Sorafenib therapy for treatment of liver cancer is independent from organic cation transporter 1 (OCT1/SLC22A1)
M. Chen (Columbus, OH/US), C. Neul, E. Schaeffeler, F. Frisch, S. Winter
M. Schwab (Stuttgart, Tuebingen), H. Koepsell (Wuerzburg)
S. Hu (Columbus, OH/US), S. Laufer (Tuebingen), S. D. Baker
A. Sparreboom (Columbus, OH/US), A. T. Nies (Stuttgart)

14:45 64	OCT1 of mice and men – species-specific differences in the function of OCT1 M. J. Meyer (Greifswald, Goettingen), M. Bolesta, R. Krätzner, T. Seitz J. Brockmöller (Goettingen), M. V. Tzvetkov (Greifswald)
14:00–15:00 Reutlingen Chair	Symposium 6 IMI-initiatives meet pharmacology M. Schwab (Stuttgart, Tuebingen)
14:00	ITCC-P4 IMI initiative S. Pfister (Heidelberg)
14:15	DIAMOND IMI initiative R. Roubenoff (Basel/CH)
14:30	c4c IMI initiative M. Turner (Liverpool/GB)
14:45	Discussion
15:00–15:30	Coffee break in the industrial exhibition
15:30–17:00 König-Karl-Halle Chairs	Symposium 7 Novel approaches for detection and neutralization of biological toxins Joint-Symposium GT – Robert-Koch-Institut Berlin H. Barth (Ulm), B. Dorner (Berlin)
15:30	The antibiotic agent bacitracin as potent novel inhibitor for various clinically relevant bacterial toxins H. Barth (Ulm)
15:50	Preliminary working title – a novel pharmacological inhibitor of bacterial protein toxins D. Gillet (Gif sur Yvette Cedex/FR)
16:10 IT1	Harnessing high-affinity receptor interactions for bi-functional detection of botulinum neurotoxins D. Stern (Berlin)
16:30 IT2	Exploring receptor binding and tailor-made high affinity mAbs for detection of enterotoxins M. Krüger (Berlin)
16:50	Discussion

15:30–17:00 Symposium 8
Bertha-Benz-Saal Ion channels as new drug targets
Chairs R. Caballero (Madrid/ES), A. Ferrer-Montiel (Elche/ES)
K. Groschner (Graz/AT)

15:30 New paradigms in the modulation of cardiac ion channels
R. Caballero (Madrid/ES)

15:50 The molecular structure of the canonical TRPC4 channel
S. Raunser (Dortmund)

16:10 Lipid regulation of TRPC channels
K. Groschner (Graz/AT)

16:30 Soft drugs as a novel pharmacological paradigm for TRP channels
A. Ferrer-Montiel (Elche/ES)

16:50 Discussion

15:30–17:00 Symposium 9
Karlsruhe Organ on a chip
Chair S. Honnen (Düsseldorf), E. Bankoglu (Würzburg)

15:30 From Organ-on-a-chip tools towards “patients” on chips – enforcing a paradigm shift in drug development
U. Marx (Berlin)

16:00 Microphysiological models – emerging platforms for disease modelling and drug testing *in vitro*
A. Mosig (Jena)

16:30 Parallelisierbare Organ-on-a-Chip als mikrophysiologische Modelle von komplexen humanen 3D-Geweben
P. Loskill (Stuttgart)

Discussions directly after the talks

15:30–17:00 Reutlingen Chairs	Symposium 10 State of the art of cardiovascular diseases K. Bestehorn (Duesseldorf), B. Rauch (Greifswald)
15:30	Anticoagulation B. Rauch (Greifswald)
15:50	Diabetes mellitus J. Seufert (Freiburg i. Br.)
16:10	State of the art of lipid therapy in coronary heart disease O. Weingärtner (Jena)
16:30	Heart failure S. Störk (Wuerzburg)
16:50	Discussion
17:00–17:15	Coffee break in the industrial exhibition
17:15–18:45 König-Karl-Halle Chairs	Symposium 11 Computational toxicology L. T. Anger (Frankfurt a. M.), M. Frericks (Ludwigshafen a. R.)
17:15 IT3	Introduction to computational/in silico toxicology L. T. Anger (Frankfurt a. M.)
17:28 IT4	Application of QSAR for genotoxicity prediction of plant protection residues and impurities M. Frericks (Ludwigshafen a. R.)
17:41 IT5	Read-across under REACH J. vom Brocke (Helsinki/FI)
17:55	From paper archive to knowledge management – how european data sharing initiatives (eTOX, eTransafe) are changing the view on preclinical safety data T. Steger-Hartmann (Berlin)
18:20	*In silico* prediction of xenobiotic metabolism J. Kirchmair (Hamburg; Bergen/NO)

17:15–18:45 Bertha-Benz-Saal	Symposium 12 · Joint-Symposium DGPT – SSPT *Swiss Society of Pharmacology and Toxicology* Novel drug targets in the immune system
Chairs	J. Pfeilschifter (Frankfurt a. M.), H.-U. Simon (Bern/CH)
17:15	Sphingolipid signaling in inflammatory diseases J. Pfeilschifter (Frankfurt a. M.)
17:35	The IL-1 receptor family M. Kracht (Gießen)
17:55	Molecular mechanism of NET formation H.-U. Simon (Bern/CH)
18:15	Immune mechanisms in cancer C. Bourquin (Geneva/CH)
18:35	Discussion
17:15–18:45 Reutlingen	Symposium 13 · IUPHAR symposium
Chairs	I. Cascorbi (Kiel), A. K. Daly (Newcastle/GB)
17:15	Drug-induced liver injury A. K. Daly (Newcastle/GB)
17:40	Pharmacogenomics in cancer C. Rodríguez-Antona (Madrid/ES)
18:05	Predictability of genotype-phenotype relationship R. Böhm (Kiel)
18:30	Discussion
18:45–19:15 König-Karl-Halle	Award ceremony
19:45–23:30	Social evening at the “Restaurant Plenum” (see page 68)

The workshop addresses young scientists working in basic pharmacological research and other colleagues involved in biomedical research who would like to know more about early phase clinical development.

Biomarkers and pharmacodynamic models will be the focus of this workshop. Translation from knowledge derived from non-clinical studies to planning and conduct of early clinical trials aims at mitigating risk as well as at increasing the predictability for a safe and successful development. Biomarkers fit for purpose and meaningful pharmacodynamic models are most important tools in this context.

Learn from experts in early medicines development how to assess safety and tolerability, how to investigate mechanisms of action and how to demonstrate proof of concept for promising new compounds in healthy subjects and patients.

Breaks present a good opportunity for networking with faculty and colleagues. The number of participants is limited to 50 persons.

09:00–10:45	Morning session
Heilbronn	
Chairs	G. Wensing (Wuppertal), B. Schug (Oberursel)
09:00	Welcome G. Wensing (Wuppertal)
09:05	Pharmacodynamic endpoints and inclusion of biomarkers in early clinical trials J. Rengelshausen (Aachen), M. Zühlsdorf (Darmstadt)
12:15–17:00	Afternoon session
Heilbronn	Introduction to biomarkers and pharmacodynamic models and their use in drug development
Chairs	J. Rengelshausen (Aachen), K. Breithaupt-Grögler (Frankfurt a. M.)
12:15	Biomarkers for cardiovascular pharmacodynamic effects – may ‘digital’ biomarkers provide more realistic data than bedside assessments? F. Kramer (Wuppertal)

13:00	Challenges in using biomarkers for developing anticoagulants D. Kubitza (Wuppertal)
13:45	Break for plenary lecture GPTS
14:00	Safety markers in early phase trials (drug induced renal and liver injury, assessment of neurological adverse reactions) F. Donath (Erfurt) Introduction to topic: F. Donath (Erfurt) Specific safety markers: *Speakers to be determined*
15:15	How to evaluate drug effects on the QT(c) interval in healthy subjects and patients J. Rengelshausen (Aachen)
16:00	Break
16:15	Stratified medicine – development of companion diagnostics M. Zühlsdorf (Darmstadt)
16:45	Wrap-up and conclusion J. Rengelshausen (Aachen), K. Breithaupt-Grögler (Frankfurt a. M.)

08:30–09:30 Short talks
König-Karl-Halle Toxicology – Toxic compounds
Chairs S. Honnen (Duesseldorf), V. Lange (Dortmund)

08:30
65
Human skin sensitization potential and potency of terpene hydroperoxides in an epidermal skin environment
M. Silva e Sousa, J. Lichter, M. T. Schellenberger, B. Blömeke (Trier)

08:45
66
Increased concentration of angiotensin II causes DNA damage, an increased mutation frequency and an initiation of epithelial to mesenchymal transition in rat kidney
C. Hartmann (Duesseldorf), B. Epe (Mainz), N. Schupp (Duesseldorf)

09:00
67
Long-term effects of inhaled nanoparticles in rats – ceriumdioxide and bariumsulphate
L. Ma-Hock, K. Wiench, S. Groeters, B. van Ravenzwaay
R. Landsiedel (Ludwigshafen a. R.), H. Ernst, D. Schaudien (Hannover)

09:15
68
Are additives from plastic a notable source for dermal exposure?
C. Hutzler, N. Bartsch, B. Vieth, A. Luch (Berlin)

09:30–10:30 Short talks
König-Karl-Halle Toxicology – Toxins II
Chairs R. Gerhard (Hannover), K. Ernst (Ulm)

09:30
69
Eschericia coli subtilase cytotoxin – binding, uptake and effects on cultured cells
K. Sessler, A. Schroll, S. Noettger (Ulm), M. Krause, H. Schmidt (Hohenheim)
P. Papatheodorou, H. Barth (Ulm)

09:45
70
The enzymatically active domain of diphtheria toxin (DT) is transported by non-toxic DT mutants in a binary toxin like fashion
S. Carle, M. Fellermann, H. Barth (Ulm)

10:00
71
Photorhabdus luminescens Tc toxin is inhibited by the protease inhibitor MG132 and activated by protease cleavage resulting in increased binding to target cells
P. Ng'ang'a, S. Ost, A. E. Lang, K. Aktories (Freiburg i. Br.)

10:15
72
Production, isolation and interaction of botulinum neurotoxin E and associated proteins from *C. botulinum* strain Beluga
A. Przykopanski (Hannover), M. Krüger (Berlin), R. Jin (Irvine, CA/US)
B. G. Dorner (Berlin), A. Rummel (Hannover)

09:00–10:30 Short talks
Bertha-Benz-Saal Pharmacology – Cancer pharmacology and treatment
Chair T. Worzfeld (Marburg)

09:00
73
Organotypic head and neck cancer models for drug testing
L. Gronbach, C. Wolff, K. Klinghammer, C. Zoschke, U. Keilholz
M. Schäfer-Korting (Berlin)

09:15
74
Targeting endolysosomal calcium channels as novel strategy to treat cancer
M. Müller, Y.-K. Chao, S. Gerndt, J. Schürmann, R. Schütz, C. Atzberger
P. Nguyen, M. Biel, F. Bracher, M. Keller, A. M. Vollmar, C. Grimm
K. Bartel (Munich)

09:30
75
Two-pore channels shut down – targeting TPC2 inhibits proliferation of cancer cells *in vitro* and inhibits tumor growth *in vivo*
M. Müller, Y.-K. Chao, S. Gerndt, P. Nguyen, M. Biel, F. Bracher, A. M. Vollmar
M. Keller, C. Grimm, K. Bartel (Munich)

09:45
76
The mitochondrial disruptor CPI-613 synergizes with standard chemotherapeutics in the treatment of colorectal cancer *in vitro* and *in vivo*
C. Neitzel (Giessen, Mainz), S. Stroh, G. Nagel (Mainz), A. Moritz (Giessen)
M. Linnebacher (Rostock), J. Fahrer (Giessen, Mainz)

10:00
77
The role of the inducible dual-specificity phosphatases 2 in regulation of oncogene signaling in diffuse large B cell lymphoma
H. Bruckmüller (Kiel, Tromsö/NO), B. Johansen (Tromsö/NO), I. Nagel (Kiel)
J. Hollmann (Tromsö/NO), J. Wise, H. Holte, J. H. Myklebust (Oslo/NO)
I. Cascorbi (Kiel), O. M. Seternes (Tromso/NO)

10:15
78
Identification of the negative gating modulator of the transient receptor potential cation channel TRPM7 NS8593 as a novel inhibitor of MRTF/SRF-dependent gene expression and hepatocarcinogenesis
S. Voringer, S. Zierler, V. Chubanov, T. Gudermann (Munich), S. Muehlich (Erlangen)

09:00–10:30 Short talks
Karlsruhe Pharmacology – GTP-binding proteins
Chair S. Lutz (Goettingen)

09:00
79
Comparison of ß1-Adrenoceptor(AR) signalling in intact cells and receptor membranes using FRET-based assays
T. Pfeifer, H. Lemoine (Duesseldorf)

09:15
80
RKIP translates β-adrenergic receptor signaling into mitochondrial protection
T. Brand (Dortmund), N. Gedik, G. Heusch, P. Kleinbongard (Essen)
R. Horvath (Newcastle upon Tyne/GB), K. Lorenz (Wuerzburg, Essen, Dortmund)

09:30
81
Inactivation of Gαi3-proteins protects from post-ischemic cardiac infarct progression in a cell-type specific manner in mice
S. Killinger, L. Beichert, D. Köhler, C. Eggstein, S. Schwegmann, P. Rosenberger
B. Nürnberg, S. Beer-Hammer (Tuebingen)

09:45
82
Lack of Gαi2 in adipocytes protects from diet-induced obesity
V. Leiss, A. Schönsiegel (Tuebingen), T. Gnad, S. Scheibler (Bonn), T. Sartorius
J. Machann (Tuebingen), A. Sassmann, S. Offermanns (Bad Nauheim)
H.-U. Häring (Tuebingen), A. Pfeifer (Bonn), B. Nürnberg (Tuebingen)

10:00
83
Endothelin-1 signals via Gq-dependent and Gq-independent pathways in brown adipocytes
J. Garg, J. H. Yang, L. Prünte, A. Pfeifer (Bonn)

10:15
84
Impairment of cerebrovascular reactivity to CO2 alters behavioral and respiratory responses in mice
J. Wenzel (Luebeck), C. Bettoni (Zurich/CH), J. C. Assmann (Luebeck)
M. Wegmann (Borstel), G. M. König, E. Kostenis (Bonn)
S. Offermanns (Bad Nauheim, Bonn), C. A. Wagner (Zurich/CH)
M. Schwaninger (Luebeck)

09:00–10:30
Reutlingen
Chair

Short talks
Clinical pharmacology – Pharmacogenomics and personalized medicine

M. V. Tzvetkov (Greifswald)

09:00
85
The use of Yohimbine for phenotyping of CYP2D6 activity
M. Vay, P. Rose (Heidelberg), M. Meyer (Greifswald), G. Mikus (Heidelberg)

09:15
86
Profiling of ototoxicity risk in platinum-treated children
E. Abdel-Kahaar, L. Maier, O. Zolk (Ulm), A. am Zehnhoff-Dinnesen, R. Parfitt
P. Matulat, D. Deuster, A. Tillmanns (Muenster), S. Elsner
E.-M. Wolschon (Luebeck), C. Kuehni, R. Kuonen, A. Weiss (Bern/CH)
M.-L. Garré (Genova/IT) T. Kepak, K. Kepakova (Brno/CZ), J. Kruseova
A. Luks (Prague/CZ), J. Falck Winther, L. Kenborg (Copenhagen/DK)
H. Lackner (Graz/AT), S. Bielack (Stuttgart)
M. van den Heuvel-Eibrink (Utrecht/NL), G. Calaminus, K. Baust (Bonn)
J. Beck (Erlangen), L. Kremer (Amsterdam/NL)
E. Clemens (Utrecht, Rotterdam/NL)
T. Langer (Luebeck; Utrecht, Rotterdam/NL)

09:30
87
Therapeutic drug monitoring after liver transplantation in times of precision medicine
J. Brockmöller, J. Matthaei, C. Dücker (Goettingen), M. Koch (Hamburg)
M. Stockmann (Berlin), M.-L. Bräuer, F. Streit, M. Oellerich (Goettingen)

09:45
88
Variants in nudix hydrolase 15 (NUDT15) and their importance for thiopurine-related haematotoxicity in an European cohort
E. Schaeffeler, S. Jaeger, V. Klumpp (Stuttgart), J. Yang (Memphis, TN/US)
S. Igel (Stuttgart), L. Hinze, M. Stanulla (Hannover), M. Schwab (Stuttgart, Tuebingen)

10:00
89
Kisch.ch – a pharmacokinetic drug interaction table containing Cytochrome P450, Uridine 5'-diphospho-glucuronosyltransferase enzymes, P-gylcoprotein, breast cancer resistant protein, organic anion transporters, organic cation transporter and organic-anion-transporting polypeptides 1B, among other
A. Sigaroudi, H. Vollbrecht (Essen)

10:15
90
Androgen receptor gene expression predicts endocrine treatment outcome in early-stage luminal breast cancer
W. Schroth, R. Hoppe, F. Büttner, S. Winter, S. Kandabarau (Stuttgart)
H. A. Brauer (Seattle, WA/US), P. Fritz (Stuttgart), M. Schwab (Stuttgart, Tuebingen)
T. E. Mürdter (Stuttgart), H. Brauch (Stuttgart, Heidelberg)

10:15–10:30 Coffee break in the industrial exhibition

10:45–11:30 Plenary lecture III – Pharmacology
König-Karl-Halle
Chairs P. Gierschik (Ulm), T. Wieland (Mannheim)

10:45 G proteins and GPCPRs transforming potential
S. Gutkind (La Jolla, CA/US)

11:30–11:45 Coffee break in the industrial exhibition

11:45–13:15 Symposium 14
König-Karl-Halle
Rauchen 2.0 – neue Tabak- und Tabakersatzprodukte
Chairs M. Esselen (Muenster), A. Cartus (Kaiserslautern)

11:45 Toxikologie und Suchtaspekte von Nikotin
B.-M. Mayer (Graz/AT)

12:10 Harm reduction bei Tabakerhitzern (tabacco heating systems, THS)
A. Nussbaum (Graefelfing)

12:35 Risikobewertung und Regulation von E-Zigaretten und Tabakerhitzern
F. Henkler (Berlin)

13:00 Diskussion

11:45–13:15 Symposium 15
Bertha-Benz-Saal Non-canonical GPCR signaling
Chairs B. Nürnberg (Tuebingen), M. Freissmuth (Vienna/AT)

11:45 GPCR-independent activation of G proteins by DAPLE controls neural tube morphogenesis
M. Garcia-Marcos (Boston, MA/US)

12:10 Non canonical GPCR signaling – when evidence challenges paradigms as soon as they are well established
E. Kostenis (Bonn)

12:35 Receptor activity modifying proteins and relations; non-canonical modulators of GPCR signalling
D. R. Poyner (Birmingham/GB)

13:00 Activation of b-catenin-dependent gene transcription by Gs-coupled receptors
S. Jansen (Mannheim)

11:45–13:15 Symposium 16
Karlsruhe Scientific and regulatory aspects of ethnicity and their consequences for clinical drug development
Chairs B. Schug (Oberursel), G. Wensing (Wuppertal)

11:45 Lecture
A. Gross (Ermington/AU)

12:30 Discussion
A. Gross (Ermington/AU), I. Cascorbi (Kiel), A. Kovar (Frankfurt a. M.)
H. Blode (Berlin)

11:45–13:15 Symposium 17
Reutlingen Pharmakologie-historisches Forum
Chairs A. Philippou (Innsbruck/AT), H. Greim (Munich)

11:45 Einleitung
IT6 H. Greim (Munich)

11:55 Die Geschichte des Dr. Margarete Fischer-Bosch-Instituts
IT7 U. Klotz (Stuttgart)

Diskussion

12:15 IT8 — Emil Starkenstein – Leben und Wirken
H. Greim (Munich)

Diskussion

12:55 — Schlussworte
A. Philippou (Innsbruck/AT)

13:15–13:30 — Coffee break in the industrial exhibition

13:30–15:00 König-Karl-Halle — Symposium 18
Kinases as therapeutic targets in the cardiovascular system
Chairs: F. Cuello (Hamburg), K. Lorenz (Dortmund)

13:30 — Manipulating titin's kinase activity
M. Gautel (London/GB)

13:50 — Rho-dependent kinases in the heart – friend or froe?
S. Lutz (Goettingen)

14:10 — Targeting histidine phosphorylation by nucleoside diphosphate kinases
T. Wieland (Mannheim)

14:30 — Kinase-coupled TRP channels as therapeutic targets
T. Gudermann (Munich)

14:50 — Discussion

13:30–15:00 Bertha-Benz-Saal — Symposium 19 · Symposium Arbeitskreis Neuropharmakologie und -toxikologie
Novel aspects of Alzheimer's dementia
Chairs: M. Schwaninger (Luebeck), J. Klein (Frankfurt a. M.)

13:30 — Beyond amyloid – widening the view on Alzheimer's disease
C. Behl (Mainz)

13:50 — Nuritional interventions in Alzheimer's disease – LipiDiDiet
T. Hartmann (Saarbrücken)

14:10 — Neuroinflammation in Alzheimer's disease
M. T. Heneka (Bonn)

14:30 — Non-coding RNAs in neurodegenerative disease
H. Soreq (Jerusalem/IL)

14:50 — Discussion

13:30–15:00 Reutlingen	Symposium 20 Precision medicine and drug development
Chair	M. Schwab (Stuttgart, Tuebingen)
13:30	Novel aspects in personalized treatment of lymphoma G. Ott (Stuttgart)
13:55	Novel aspects in personalized treatment of renal cancer J. Bedke (Tuebingen)
14:20	Novel aspects in personalized treatment of brain tumors G. Tabatabai (Tuebingen)
14:40	Discussion
15:00–15:30 König-Karl-Halle	Poster award ceremony and closing

Poster session I · Tuesday, 26 February

Pharmacology – GPCR I P1–P22
Pharmacology – Cyclic nucleotides ..... P23–P34 · LP1
Pharmacology – Ion channels P35–P44
Pharmacology – Drug transport and metabolism ..... P45–P56 · LP2

Toxicology – Toxins P174–P182
Toxicology – Nanomaterials P183–P192
Toxicology – Biomonitoring and biomarkers P193–P201
Toxicology – Toxilogical methods and *in vitro* toxicology P202–P229

General – Education P230–P233

Poster session II · Wednesday, 27 February

Pharmacology – Cardiovascular pharmacology I P57–P68
Pharmacology – Cardiovascular pharmacology II P69–P79
Pharmacology – Cardiovascular pharmacology III P80–P90
Pharmacology – Immune pharmacology and inflammation P91–P99
Pharmacology – Cancer pharmacology and treatment P100–P110
Pharmacology – Disease models, drug development and delivery system P111–P117

Clinical pharmacology – Pharmacokinetics and pharmacodynamics P118–P123
Clinical pharmacology – Pharmacogenomics and personalized medicine P124–P130
Clinical pharmacology – Clinical pharmacology and drug therapy P131–P137

Toxicology – Genotixicity and carcinogenesis P138–P147
Toxicology – Organ toxicology P148–P166
Toxicology – Food toxicology P167–P173

Pharmacology – GPCR I

Chairs M. Bünemann (Marburg), D. Meyer zu Heringdorf (Frankfurt a. M.)

P1 Enhanced opioid analgesia and loss of tolerance but exacerbation of side effects in mice expressing phosphorylation-deficient, G protein-biased μ-receptors
A. Kliewer, Stefan Schulz (Jena)

P2 Mini G protein recruitment as an approach to the functional characterization of histamine receptor ligands
C. Höring, L. Grätz, T. Littmann, A. Buschauer †, G. Bernhardt
A. Strasser (Regensburg)

P3 A BRET-based assay to determine the binding of ligands to GPCRs using pyrylium-labeled fluorescent tracers
L. Grätz, T. Littmann, E. Bartole, S. Biselli, A. Pegoli, M. Keller, A. Buschauer †
G. Bernhardt (Regensburg)

P4 Identification of structural determinants that control CCR2 receptor internalization
B. Möpps, A. Kleinsteuber, S. Beier (Ulm)

P5 Real-time allosteric modulation at adenosine A1 receptor
N. Rüttiger (Jena), N. Ziegler, U. Zabel (Wuerzburg), C. Hoffmann (Jena)

P6 Dynamic mass redistribution analysis of histamine H4 receptor ligands in HEK293T cells
U. Seibel, A. Buschauer †, G. Bernhardt, A. Strasser (Regensburg)

P7 Investigation of GPCR-β-arrestin interactions using a split-luciferase complementation assay – application to the D2long and D3 receptor
L. Forster, A. Buschauer †, G. Bernhardt (Regensburg)

P8 Structural analysis of determinants for high-affinity binding of G proteins to muscarinic receptors
V. Jelinek, M. Bünemann (Marburg)

P9 Analysis of molecular determinants for agonist specific voltage sensitivity of the μ-opioid receptor
S. B. Kirchhofer, J. G. Ruland, A. Flöser, P. Kolb, M. Bünemann (Marburg)

P10 Morphine-activated neuronal GIRK currents reflect voltage sensitivity of the μ-opioid receptors
J. G. Ruland (Marburg), S. Klindert (Bath/GB; Marburg),C. P. Bailey (Bath/GB)
M. Bünemann (Marburg)

P11 Systems neuropharmacology of opioid receptor blockade in social fear learning in humans
J. Haaker (Hamburg, Stockholm/SE), B. Lindström (Zurich/CH), J. Yi, P. Petrovic
A. Olsson (Stockholm/SE)

P12 Characterization of molecular mechanisms of Veldoreotide, a pan-somatostatin analogue
P. Dasgupta, T. Günther, S. Schulz (Jena)

P13 Platelet expression of sphingosine-1-phosphate receptors S1PR1-5 – shedding light on autocrine S1P signaling
E. Moritz, R. Wolf, C. Roll, K. Gelaeva, M. V. Tzvetkov, G. Jedlitschky
B. H. Rauch (Greifswald)

P14 Calcium entry in cardiac fibroblasts contributes to fibrotic processes
A. Rehman, W.-H. Zimmermann, S. Lutz (Goettingen)

P15 Stability of high affinity GPCR-G protein complexes as a measure of GPCR-G protein selectivity
O. Ilyaskina, A.-L. Krett, M. Bünemann (Marburg)

P16 Co-internalization of arrestin3 with G protein-coupled receptors is independent of ubiquitination of Lys11 or Lys12
N. Mösslein, D. Zindel (Marburg), J. K. S. Tiemann (Leipzig), M. E. Sommer (Berlin)
P. W. Hildebrand (Leipzig), M. Bünemann, C. Krasel (Marburg)

P17 Histamine H1 receptors mediate flow-induced vasodilation
U. Storch (Munich), S. Erdogmus, L. Danner (Munich), A. Wirth
S. Offermanns (Bad Nauheim, Heidelberg), T. Gudermann
M. Mederos y Schnitzler (Munich)

P18 Effects of physiological temperature on signaling and gene expression
D. Faro, T. Gudermann, I. Boekhoff, A. Breit (Munich)

P19 Effect of cell surface expression and linker sequences on the recruitment of arrestin to the GIP receptor
S. Al-Sabah, L. Adi (Kuwait/KW), M. Bünemann, C. Krasel (Marburg)

P20 Multisite phosphorylation is required for sustained interaction with GRKs and arrestins during rapid μ-opioid receptor desensitization
E. Miess (Jena), A. B. Gondin (Victoria/AU), A. Yousuf (Sydney/AU)
R. Steinborn (Jena), N. Mösslein, Y. Yang, M. Göldner, J. G. Ruland
M. Bünemann, C. Krasel (Marburg), C. J. MacDonald (Sydney/AU)
M. L. Halls (Victoria/AU), S. Schulz (Jena), M. Canals (Victoria/AU)

P21 Dynamic receptor conformations influence residence time for different ligands and subsequent G-protein activation
A. Godbole, N. Rüttiger, N. Ziegler, C. Hoffmann (Jena)

P22 Evidence for functional interaction between cannabinoid receptor 2 and β2-adrenergic receptor
L. Mensching, A. Sharaf, S. Rading, C. Keller (Hamburg)
M. Scheffold (Hamburg, Ulm), V. O. Nikolaev, M. Karsak (Hamburg)

Pharmacology – Cyclic nucleotides

Chair R. Feil (Tuebingen)

P23 Gαi3/GFP-reporter mouse – an investigational tool for visualization of Gαi3
I. A. M. Groh, A. Speidel, V. Leiss, J. Weischedel, L. Koob, B. Nürnberg
S. Beer-Hammer (Tuebingen)

P24 cGMP imaging in neurosensory tissues
M. Wolters, Z. Zhao, D. Möhrle, M. Knipper, T. Euler, R. Feil (Tuebingen)

P25 Phosphorylation of juxtamembrane serine and threonine residues of guanylyl cyclase B is essential for sensory axon bifurcation
H. Schmidt (Tuebingen, Berlin), D. M. Dickey (Minneapolis, MN/US)
A. Dumoulin (Berlin), M. Octave (Tuebingen), J. W. Robinson (Minneapolis, MN/US)
R. Kühn (Berlin), R. Feil (Tuebingen), L. R. Potter (Minneapolis, MN/US)
F. G. Rathjen (Berlin)

P26 cCMP exerts immunomodulatory functions in astrocytes
J. Scharrenbroich, S. Wolter, S. Kälble, R. Seifert, E. Schneider (Hannover)

P27 Annexin A4 – a specific inhibitor of adenylyl cyclase type 5
C. Rolfes, H. Alexander, A. Klemme, M. Domnik, F. Ulrich Müller (Muenster)

P28 Real-time cGMP imaging reveals the spatiotemporal activity of sGC modulators in the kidney
D. Stehle, S. Feil (Tuebingen), A. Bénardeau (Wuppertal)
R. Feil (Tuebingen)

P29 Characterization of cyclic nucleotide phosphodiesterases potentially involved in pain processing
T. Groß, J. Petersen, L. Kennel, J. Schlaudraff, D. Del Turco, R. Lu
W. Kallenborn-Gerhardt, A. Schmidtko (Frankfurt a. M.)

P30 Elucidating the role of the effector protein ExoY in Pseudomonas aeruginosa infections
B. Schirmer, C. Kloth, J. Rothschuh, A. Munder, R. Seifert (Hannover)

P31 Distinct functions of NO-GC isoforms in the processing of chronic pain
J. Petersen (Frankfurt a. M.), E. Mergia (Bochum), L. Kennel
T. Groß (Frankfurt a. M.), O. Drees, R. Steubing, C. I. Real (Witten)
W. Kallenborn-Gerhardt, R. Lu (Frankfurt a. M.), A. Friebe (Wuerzburg)
D. Koesling (Bochum), A. Schmidtko (Frankfurt a. M.)

P32 Roles of the NO-sensitive guanylyl cyclases in the induction of COPD
M. Verheyen, M. Peters, A. Bufe, D. Koesling, E. Mergia (Bochum)

P33 A-kinase anchoring proteins define cAMP compartments in TGF-β1/cigarette smoke induced lung epithelial-to-mesenchymal transition
M. Schmidt (Groningen/NL), H. Zuo, N. Musheshe, V. O. Nikolaev (Hamburg)

P34 Does phosphodiesterase 2 protect against cardiac arrhythmia?
M. Fahmi, M. Günscht (Dresden), K. Lorenz (Dortmund), M. Wagner
A. El-Armouche, S. Kämmerer (Dresden)

LP1 NO-induced cGMP signals of cardiac myocytes originates from connected Fibroblasts
L. Menges, C. Krawutschke (Bochum), A. Füchtbauer (Aarhus/DK)
P. Sandner (Wuppertal), D. Koesling, M. Russwurm (Bochum)

Pharmacology – Ion channels

Chair R. Lukowski (Tuebingen)

P35 Sulfur mustard induced expression of heat shock 70 kDa Protein 6 (HSPA6) is dependent on transient receptor potential channel A1 (TRPA1) channels
R. Lüling, H. John, H. Mückter, A. Dietrich, T. Gudermann, H. Thierman, T. Popp
D. Steinritz (Munich)

P36 Store-operated (SOCE) and receptor-operated Ca2+ entry (ROCE) in STIM1/2- and TRPC1/6-deficient primary murine lung fibroblasts
L. Bendiks, T. Gudermann (Munich), S. Feske (New York,NY/US)
A. Dietrich (Munich)

P37 Influence of EF-hand phosphorylation on biophysical gating properties of CaV1.3 voltage-gated calcium channels
S. Salamon, S. Herzig, E. Kuzmenkina, J. Matthes (Cologne)

P38 Regulation of GIRK current by α1B- and ET1-receptors
A. Niemeyer, A. Rinne, L. Pott, M.-C. Kienitz (Bochum)

P39 Optical membrane potential acquisition in human atrial engineered heart muscle constructs and human atrial biopsies
F. Seibertz, R. A. Solano, K. Ort, L. Cyganek, I. Kutschka, W.-H. Zimmermann
N. Voigt (Goettingen)

P40 Tri-agonist-induced PLC activation is associated with robust insulin secretion from murine islets
N. Khajavi (Munich, Berlin), B. Finan (Munich), O. Kluth (Nuthetal)
T. D. Müller (Munich), S. Mergler (Berlin), A. Schulz (Leipzig), G. Kleinau
P. Scheerer (Berlin), A. Schürmann (Nuthetal), T. Gudermann
M. H. Tschöp (Munich), H. Krude (Berlin)
R. D. DiMarchi (Bloomington, IN/US), H. Biebermann (Berlin)

P41 TRPC1-mediated currents in heterologous expression and isolated pituitary cells
B. Wardas, H. Wang, A. Raza, S. Mannebach-Götz, U. Wissenbach, A. Beck
V. Flockerzi (Homburg)

P42 Identification of inhibitory Ca2+ binding sites in the upper vestibule of the yeast vacuolar TRP channel
M. Amini, H. Wang, A. Belkacemi, G. Schlenstedt, V. Flockerzi, A. Beck (Homburg)

P43 Electrophysiological characterization of TRPV2 in mouse microglia
M. Malihpour, V. Flockerzi, T. Belkacemi, A. Beck (Homburg)

P44 Ca2+ transport via TRPV6 is regulated by rapid internalization of the channel
A. Kogel (Leipzig), C. Fecher-Trost, U. Wissenbach, V. Flockerzi (Homburg)
M. Schaefer (Leipzig)

Pharmacology – Drug transport and metabolism

Chair M. Fromm (Erlangen)

P45 Expression, localization and functional analysis of cancer type OATP1B3 in different stably transfected cell lines
B. Haberkorn, J. König, M. Fromm (Erlangen)

P46 Regulation of the basal promoter activity of the human MRP4 (ABCC4) transporter
A. Kragl, K. Ziems, J. Glaubitz, S. Grammbauer, S. Bröderdorf (Greifswald)
S. P. C. Cole (Kingston, ON/CA), M. V. Tzvetkov, G. Jedlitschky (Greifswald)

P47 Stereoselective uptake of fenoterol and atenolol by the organic cation transporter OCT1
O. Jensen, M. Rafehi, J. Brockmöller (Goettingen)

P48 OATP1A2 is an uptake transporter for the sympathomimetic drug formoterol
T. Kuusik, M. Hasan, M. V. Tzvetkov, M. Grube (Greifswald)

P49 The role of DNA methylation and hydroxymethylation for the expression of the lactate transporter MCT4/SLC16A3 in primary clear cell renal cell carcinoma and distant metastases
P. Fisel (Stuttgart, Tuebingen), D. Schollenberger, S. Rausch (Tuebingen)
S. Winter (Stuttgart, Tuebingen), S. Kruck, J. Hennenlotter (Tuebingen)
A. T. Nies (Tuebingen, Stuttgart), M. Scharpf, F. Fend, J. Bedke (Tuebingen)
M. Schwab, E. Schaeffeler (Stuttgart, Tuebingen)

P50 Functional comparison of the organic anion transporting polypeptide 1B3 of humans and macaca fascicularis
K. Brecht (Basel/CH)

P51 Drug-metabolizing enzymes are regulated by inflammation-associated microRNAs
N. Kugler, K. Klein, U. M. Zanger (Stuttgart, Tuebingen)

P52 Molecular characterisation of the human farnesyltransferase beta-subunit
A. Hagemann (Witten), M. Bermudez (Berlin), G. Müller (Essen), R. Maltaner
H. S. Bachmann (Witten)

P53 From sphingosine to S1P – a study of turnover rates in different human blood cells
R. Moj, E. Moritz, S. Römer, R. Wolf, M. V. Tzvetkov, B. H. Rauch (Greifswald)

P54 Compensatory mechanisms for methylglyoxal detoxification in experimental & clinical diabetes
J. Morgenstern, N. Volk, D. Schumacher, Y. Oguchi (Heidelberg)
S. Kopf (Heidelberg, Neuherberg), J. B. Groener, P. Paul Nawroth
T. Fleming (Heidelberg Neuherberg), M. Freichel (Heidelberg)

P55 Targeting mitochondria overcomes resistance to cisplatin-induced apoptosis of high grade serous ovarian cancer
M. Kleih, K. Böpple, A. Gaißler, M. Dong, S. Heine, F. Essmann
W. E. Aulitzky (Stuttgart)

P56 Putative interaction and activity of a yeast/human hybrid geranylgeranytransferase
A. Schulte, D. Jung, R. Maltaner, A. Hagemann, H. S. Bachmann (Witten)

LP2 Establishment of a novel, cell-based Autotaxin Assay
C. Dobersalske, M. Grundmann, A. Timmermann, F. Koelling (Wuppertal)
R. Harris (Nashville, TN/US), C. Fuerstner, M. Becker, F. Wunder (Wuppertal)

Toxicology – Toxins

P174 Utilizing the anthrax toxins transport component PA63 as delivery tool for the tumor metastasis suppressor protein NDPK-A
I. Felix, H. Barth (Ulm), T. Wieland (Mannheim)

P175 Expression of the cell surface receptors of Clostridioides difficile Toxin B and their ineffective/lack of internalization
D. Schöttelndreier, H. Genth, R. Lindner, M. Winny, G. Grassl (Hannover)

P176 C3-mediated anti-proliferative effect is Rac1-dependent
A. Rohrbeck, J. Schulze, A. Hartmann, L. Heinkele, A. Warnecke, T. Lenarz
S. Hagemann, I. Just (Hannover)

P177 Inhibition of endosomal/lysosomal degradation protects cellular C3
A. Rohrbeck, S. Hagemann, I. Just (Hannover)

P178 Innovative detection of *Clostridium perfringens* enterotoxin based on receptor interaction
T. Neumann, M. Krüger (Berlin), J. Weisemann, S. Marhold
A. Rummel (Hannover), B. G. Dorner (Berlin)

P179 Combined pharmacological inhibition of cellular chaperones protects cells from intoxication with *Clostridium botulinum* C2 toxin
K. Ernst, C. Kling, M. Landenberger, H. Barth (Ulm)

P180 Cysteine 2232 in Clostridioides difficile TcdB modulates receptor binding
C. Schneider, S.-Y. Chung, R. Gerhard (Hannover)

P181 Effect of *Clostridioides difficile* TcdB on production and metabolism of reactive oxygen species
R. Gerhard, L.-A. Beer (Hannover)

P182 Binding of the *Yersinia pseudotuberculosis* cytotoxic necrotizing factor (CNFY) to its cellular receptor
S. Kowarschik, G. Schmidt (Freiburg i. Br.)

Toxicology – Nanomaterials

P183 Preparation and different sterilisation approaches for magnetic nanoparticles: towards industrial production
O. Ibarrola Moreno (Miñano/ES)

P184 Results and objectives of the SolNanoTOX project
H. Sieg, L. Böhmert, A. Braeuning, A. Lampen, K. Schultrich (Berlin)

P185 Characteristics of different zinc oxide nanoparticles and their cytotoxic & genotoxic effects on human gut cells
N. Hirschfeld, A. Mittag, T. Schneider, M. Glei (Jena)

P186 Investigation on the toxic potential of zinc oxide nanoparticles in human intestinal cell
A. Mittag, M. Glei (Jena)

P187 Comparison of potential adverse effects of engineered metal nanoparticles on human intestinal cells
T. Schneider, M. Glei (Jena)

P188 Analysis of toxicological effects of metal oxide nanoparticles on human Caco-2 cells by flow cytometry
D. Steinmetz, T. Schneider, M. Glei (Jena)

P189 Validation of an exposure system for cell cultures with BaSO4 aerosols
F. Glahn (Halle a. d. S.), M. Bacanli (Ankara/TR), B. Schumann, D. Schneider
O. Krings, H. Foth (Halle a. d. S.)

P190 Adverse effects of long and straight multiwalled carbon nanotubes on cytoskeleton, nuclear lamina, and genome-wide transcriptome of primary human mesothelial cells
S. M. Reamon-Buettner, I. Voepel, A. Hiemisch (Hannover), V. Eckert (Dresden)
D. Schaudien, C. Ziemann (Hannover)

P191 Extension of neutrophilic life span after carbon nanoparticle exposure: a toxicologically relevant endpoint for nanoparticle safety
T. Hornstein, T. Spannbrucker, K. Unfried (Duesseldorf)

P192 Carbon nanoparticles induce cell cycle arrest, senescence and loss of gap junctional intercellular communication in lung epithelial cells
T. Spannbrucker, N. Ale-Agha, T. Hornstein, J. Haendeler
K. Unfried (Duesseldorf)

Toxicology – Biomonitoring and biomarkers

Chair K. Abraham (Berlin)

P193 Short-term urinary biomarkers of exposure to fatty acid esters of 2-/3-MCPD and glycidol – a human intervention study
K. Abraham, J. Hielscher, J. Kuhlmann, B. Monien, A. Lampen (Berlin)

P194 The explosive trinitrotoluene (TNT) induces carbonyl reductase in the Blue mussel (M. edulis)
J. S. Strehse (Kiel), M. Brenner (Bremerhaven), M. Kisiela, K. Köbsch E. Maser (Kiel)

P195 Biomonitoring of mycotoxins in human milk samples from Lower Saxony and Bavaria/Germany (LUPE 8)
K. Muñoz (Landau), S. Groschupp (Landau, Hannover), R. Huppmann (Hannover) H. Fromme (Munich), K.-M. Wollin (Hannover)

P196 Biomonitoring of heat-induced food contaminants – quantitative analysis of furan dependent glutathione- and lysin-adducts in rat urine as putative biomarkers of exposure
D. Karlstetter, A. Mally (Wuerzburg)

P197 Pesticide concentrations in urine of preschool children – results of the 2nd human biomonitoring study in North Rhine-Westphalia Germany
Y. Chovolou, S. Sievering, J. Engelmann (Essen), T. Göen (Erlangen) T. Schettgen (Aachen), M. Kraft (Essen)

P198 Fully automated dried blood spot analysis to screen large populations fast and cost effectively
S. Gaugler (Muttenz/CH; Zaragoza/ES)

P199 Exposure assessment of volatile organic compounds from consumer products
M. Even, M. Girard, A. Rich, C. Hutzler, A. Luch (Berlin)

P200 UDEMM: ÖkoToxEMM – toxicological and environmental monitoring of the emission of pollutants from munition in the sea
D. Appel, J. S. Strehse, H.-J. Martin, E. Maser (Kiel)

P201 Sorption of perfluoroalkyl acids and their alternatives DONA and HFPO-DA (GenX) to serum albumin
F. Allendorf, N. Ulrich, U. Berger, K.-U. Goss (Leipzig)

Toxicology – Toxicological methods and *in vitro* toxicology

P202 A fluorometric method to measure cell death in intestinal organoids
K. Bode, S. Müller, T. Brunner (Konstanz)

P203 Challenges of exposing human lung cells to sulfur mustard (SM) at the air-liquid interface (ALI) *in vitro*
A. Tsoutsoulopoulos (Munich), M. Siegert (Munich, Berlin), H. John (Munich)
T. Zubel, A. Mangerich (Konstanz), A. Schmidt (Neubiberg, Munich), H. Mückter
T. Gudermann, H. Thiermann, D. Steinritz, T. Popp (Munich)

P204 iPSC and iPSC-derived proximal tubule cells differ in their response to nephrotoxic substances
C. Hirsch, G. Fritz, J. Adjaye, N. Schupp (Duesseldorf)

P205 Colonizing 3D-skin – impact on cutaneous gene transcription
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Venue (see page 78 for a map of the venue)

Haus der Wirtschaft
Willi-Bleicher-Straße 19 • 70174 Stuttgart

Bitte beachten Sie, dass das Treffen der AG Planmäßige Professoren der Experimentellen und Klinischen Pharmakologie und Toxikologie an einem anderen Ort stattfindet (siehe S. 10).

Conference website

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Cloakroom

The cloakroom is located in the ground floor.

Online programme

For current detailed information regarding the scientific programme, please have a look at our session planner at programm.conventus.de/gpts2019. Compose your individual programme and review it at any time on your way.

You can find a list of invited speakers on the website:
www.gpts-kongress.de/programme/scientific-programme.

Conference language

The conference language is English. Sessions that are held in German are marked with a German flag. Short talks have to be presented in English only.

Evaluation

Please take a few moments to fill out the evaluation form to help us refine and improve the upcoming conferences. An online evaluation of the congress is available online at www.gpts-kongress.de/evaluation.

Catering

During breaks coffee and water will be available in the exhibition area. There will be no catering during lunchtime (except during the Get together on Tuesday and during the lunch symposium on Wednesday).
The venue has a cafeteria in the ground floor where participants can buy food and beverages.
Please note that due to the regulations of the venue, there will be no lunch provided during the Advanced Courses.

Publication of abstracts

All abstracts will be published online in the “Naunyn-Schmiedeberg‘s Archives of Pharmacology” of the publisher Springer Basel (Basel/CH) and are available online on the conference website www.gpts-kongress.de from 18 February until 14 March 2019.

Certification

The conference is certified by the medical chamber of Baden-Württemberg as follows:

Tuesday, 26 February	Category B	6 Points
Wednesday, 27 February	Category B	6 Points
Thursday, 28 February	Category B	6 Points

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Please scan your EFN barcode daily at the EFN certification counter near the check-in. The certificate of attendance will be printed automatically. The points will be transferred to the medical chamber of Baden-Württemberg electronically.

A general certificate of attendance can be printed with the barcode on your name badge at the certification counter.
Your name badge also provides access to the scientific sessions and to the industrial exhibition. Therefore, please wear your name badge during the whole conference.

Awards

During the German Pharm-Tox Summit the following prizes will be awarded during the award ceremony on 27 February, 18:45–19:15, König-Karl-Halle:

- Merck-Young-Scientist Award
- GT-Toxicology-Award

Additionally the best posters and short talks selected from abstract submissions will be honored with an award. A selected jury will review the presentations during the conference. The awards will be given at the closing ceremony on 28 February, 15:00–15:30, König-Karl-Halle. We would like to invite all abstract authors to participate.
The following awards will be given:

Toxicology

- GT poster award
- Toxins-Award (best poster in the field of biological toxins)
- GT short talk-award

Pharmacology

- Poster awards
- Award short talks (Thieme-Verlag)

Clinical pharmacology

- Poster awards
- Award short talks (Thieme-Verlag)

Presentation upload – Media check-in

Speakers can upload their presentation in the speakers' ready room that is located in "Turm B". For submission, please use a USB flash drive, CD or DVD disc that is not protected by any software. Professional staff and equipment will be available for you to arrange and preview your presentation.

Time allocation

Please prepare your presentation for the allotted amount of time. Chairs and moderators may interrupt should you overrun your time limit.
Speakers of short talks have a time frame of 15 minutes (including 3 minutes of discussion time).

Posters

Please note that the poster session will be split into two parts. The allocation of topics to the poster sessions is shown on page 38. The authors are asked to be present at their poster during the respective session for questions and discussion.

Poster session I · Tuesday, 26 February, 13:30–14:30.
Posters should be hung by Monday or Tuesday morning and be removed by Tuesday, 26 February, 17:45.
Poster session II · Wednesday, 27 February, 13:00–14:00.
Posters should be hung by Wednesday morning and be removed by Thursday, 28 February, 13:30.

Pins will be provided on your poster board. Please do not use any other type of pins than those provided. All poster boards will be labelled with a poster number. You can find your poster number in this programme booklet. Posters that have not been removed, will be considered waste.

Tuesday, 26 February

Get together

You are invited to join the Get together with drinks and snacks during the lunch break in the industrial exhibition.
Allow yourself interesting conversations with colleagues, old friends, exhibitors and make new acquaintances.

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Time	12:45–13:30
Venue	Industrial exhibition
Price	Included in conference fee

Social evening Forum Junge Wissenschaft

The Forum Young Scientists invites you to the second FJW Science Slam DGPT 2019.
The aim is to present research work comprehensibly, vividly, and entertaining. The audience will decide by applause, who will be awarded with the “Schäfer-Barth-Award” 2019.

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Time	19:30–21:00
Location	Café Félix
	Robert-Bosch-Platz 1 • 70713 Stuttgart
Distance from venue	600 m
Price	EUR 15

Wednesday, 27 February

Social evening

The “Restaurant Plenum” is located in the Federal parliament of Baden-Württemberg and is one of the best in Stuttgart. You are welcome to a marvelous evening with delicious food and beverages as well as interesting conversations.

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Time	19:45–23:30
Location	Restaurant Plenum
	Konrad-Adenauer-Straße 3 • 70713 Stuttgart
Distance from venue	1 km
Price	EUR 60

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10–13 SEPTEMBER 2019
MUNICH/DE

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Tuesday, 26 February

12:00–12:45 Meet the company

Bertha-Benz-Saal

Chair K. Bestehorn (Duesseldorf)

npi electronic GmbH
PhenoSys GmbH
Promega GmbH
RTC S.p.A.
Stemcell Technologies Germany GmbH

12:00–12:45 Meet the company

Karlsruhe

Chair M. Schwab (Stuttgart, Tuebingen)

Agilent Technologies Sales & Services GmbH & Co.
bio.logis Genetic Information Management GmbH
Cellbox Solutions GmbH
Data Sciences International/Hugo Sachs Elektronik
LGC Standards GmbH

Wednesday, 27 February

12:00–13:00 Agilent Technologies Sales & Services GmbH & Co. KG

Bertha-Benz-Foyer

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D. Gebhard (Munich)

Bravo Workstation for Metabolomic Sample Prep.
A. Zerlin (Munich)

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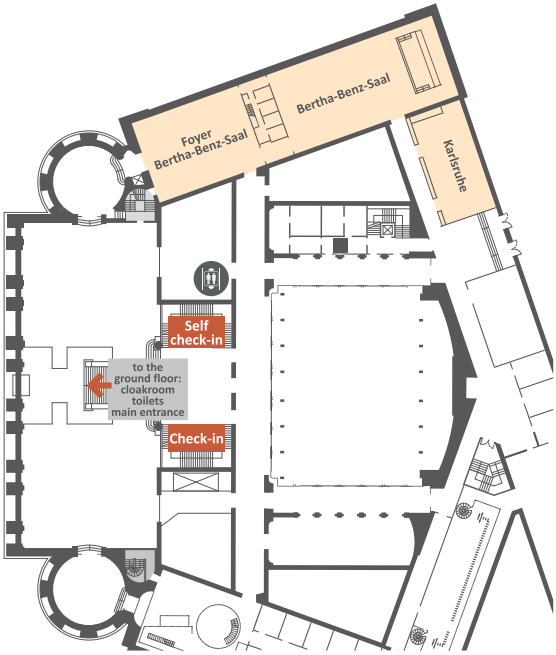

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