

Andrzej Kutner
Curriculum Vitae



Personal details

Current occupation: Department of Bioanalysis and Drug Analysis, Faculty of Pharmacy, Medical University of Warsaw, 02-097 Warsaw, 1 Banacha, Poland, research professor, <https://wf.wum.edu.pl/en>
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Education

- 1976 M.Sc. in chemistry, with distinction, Chemistry Department, University of Warsaw, "Synthesis and Baeyer-Villiger rearrangement of cholestanones", supervisor - Prof. Władysław J. Rodewald
- 1982 Ph.D. in chemical sciences, with distinction, Chemistry Department, University of Warsaw, thesis: "Studies on natural cholanoic acids of therapeutic potential", supervisor – Dr. Romana Jaworska
- 1994 D.Sc. (habilitation), Pharmacy Department, Medical Academy of Warsaw (currently: The Medical University of Warsaw), "Studies on active analogs of vitamins D"
- 2011 professor in pharmaceutical sciences, Pharmacy Department, Medical Academy of Warsaw (currently: Medical University of Warsaw)

Research positions and honours

- 1976 – 2018 Pharmaceutical Research Institute (PRI), Warsaw, PL, from research assistant to professor
- 1984-1986 and 1987 University of Wisconsin-Madison, Department of Biochemistry, USA, research associate with Prof. Hector F. DeLuca
- 1990-1997 Head, Contract research and manufacturing with a pharmaceutical company Solvay B.V., The Netherlands, "Design, synthesis and manufacturing of

- vitamin D compounds”
- 1993 New York University, Department of Chemistry, USA, visiting scientist with Prof. Stephen R. Wilson
- 1998 Visiting Professor, short visits and lectures in the USA at University of Minnesota, Duluth, Chemistry Dept., with Prof. Ronald Caple; University of California, Riverside, Chemistry Dept., with Prof. William H. Okamura; University of Wisconsin-Madison, Biochemistry Dept, with Prof. H.F. DeLuca
- 1999 Guest Editor, *Current Pharmaceutical Design*, Special Issue “Vitamin D Inhibitors of Cancer Growth”
- 2000-2012 Research Director of PRI, three consecutive terms
- 2006-2018 „Strategies of Pharmaceutical syntheses”, monographic course of lectures for M.Sc’s students at the Chemistry Department, University of Warsaw
- 2012 - 2015 Chair, Scientific Board, PRI
- 2012 -2014 External Expert to National Science Center, Cracow, PL
- 2012 - 2013 Member, National Committee for evaluation of grant proposals, National Center for Research and Development, Operational Program of Innovative Economy PO IG 2007-2012, Action 1.3.2., patent protection of R&D, the representative of the scientific community, Warsaw, PL
- 2013 - present External Expert, National Center for Research and Development, Warsaw, PL
- 2014 Member of the Panel of Chemical and Pharmaceutical Sciences, World Undergraduate Award, Ireland
- 2016 - present External Expert of the Ministry of Development, Warsaw, PL
- 2018 - present Official representative of the National Center of Research and Development to the Bridge Alfa Program, Life Sciences and RSD Funds and reviewer of multiple R+D Projects, Warsaw, PL
- 2019 - present
- the Medical University of Warsaw, Faculty of Pharmacy, Department of Bioanalysis and Drug Analysis, research professor
 - Austrian Science Fund (FWF), independent reviewer
 - representative of the National Center of Research and Development to the Investment Committee of the Intelligent Development Operational Program, Action 1.3.1. Bridge Alfa, LSI and RDS Funds; 11 reviews of R&D projects
- 2020- present
- external expert, Intelligent Development Operational Program, Action 3.2.2. „Loan for technological innovations” (Agreement No. 034-01/2020 na lata 2020-2027)
 - representative of National Center of Research and Development to the Investment Committee, Intelligent Development Operational Program, Action 1.3.1., Bridge Alfa (Agreement No. 50/2020/E)
 - member, Project Evaluation Committee, Intelligent Development Operational Program, Action 3.2.2. “Loan for technological innovations” 2014-2020, Call No. 6 and 7
 - Section Editor, „Natural products chemistry”, *Molecules* (MDPI), https://www.mdpi.com/journal/molecules/sectioneditors/natural_products_chemistry
 - Co-Chair, Scientific Committee, Interdisciplinary Conference of Drug Science, ACCORD 2021.

EU funded grants

2005-2008 FP6-LSH-2004-1.2.1-5 IFESCIHEALTH, Project acronym: EUMAPP, European

Union MicrodoseAMS Partnership Programme, “Microdosing studies to gain enhanced absorption, distribution, metabolism, excretion (ADME) – parameters for biopharmaceuticals”, Project lead at PRI, grant ID:18672, <https://cordis.europa.eu/project/rcn/78419/factsheet/en>

2013-2016 FP7-PEOPLE-2012-ITN, Project acronym: DECIDE, “Decision-making within cells and differentiation entity therapies”, Co-chair and WP2 Lead, grant ID: 315902, <https://www.birmingham.ac.uk/generic/decide/partners/index.aspx>

2018-2022 Horizon 2020, MSCA, RISE, Project acronym: ORBIS, “Open Research Biopharmaceutical InternshipSupport”, Co-chair and WP1 Co-Lead, 2018, grant ID: 778051, <http://www.orbisproject.eu>

Major national grants

National Centre for Research and Development (NCRD, Warsaw, PL), Project WND-POIG.01.03.01-14-062/09 „Innovative technologies of *cardiovascular* drugs of a special therapeutic and social importance”, Operational Program of Innovative Economy (OPIE 2007-2013 (extended for 2014), Priority 1, Activity 1.3, Support for R&D Projects for entrepreneurs completed by research entities, Sub-activity 1.3.1, set of five projects, lead.

NCRD Project UDA-POIG.01.03.01-14-069/08-00 „Development of innovative technologies of *oncologic* drugs of a special therapeutic and social significance” OPIE, 2007-2013, Priority 1, Activity 1.3, Support for R&D Projects for entrepreneurs completed by research entities, Sub-activity 1.3.1, set of five projects, lead.

NCRD Project UDA-POIG.01.03.01-14-068/08-00 „Development of innovative technologies of *ophthalmic* drugs of a special therapeutic and social significance” OPIE 2007-2013, Priority 1, Activity 1.3, Support for R&D Projects for entrepreneurs made by research entities, Sub-activity 1.3.1, set of five projects, lead.

Project KB/150/12.852/IT1-B/U/08, Technological Initiative of the Ministry of Science and Higher Education, 2009-2013, ”Development of a synthetic technology of the pharmaceutical substance *paricalcitol* and its dosage form used in chronic renal failure of dialyzed patients”, scientific consultant.

Project KB/151/13364/IT1-B/U/08, Technological Initiative of the Ministry of Science and Higher Education, 2008-2012 (extended, 2014), ”Development of a synthetic technology of the pharmaceutical substance *capecitabine* and its dosage form used as an anticancer drug”, lead.

Research interests

medicinal chemistry, structure-activity relationship, synthetic strategies of pharmaceutical substances, design and synthesis of vitamin A and D anticancer analogs, structure analysis of nuclear receptor ligands

Recent awards

- 2009 Award of the Institute of Physical Chemistry of the Polish Academy of Sciences for the best paper of 2008, S.L. Randzio, A. Kutner, Metastability and instability of organic crystalline substances, *J. Phys. Chem. B*, **112**, 1435-1444 (2008)
- 2011 Team award, Gold Medal, "Innovative manufacturing process of tacalcitol – an active substance of an antipsoriatic drug", 60th Brussels INNOVA, Belgium
- 2012 Team award, Bronze Medal, International Warsaw Invention Show IWIS2012 "A novel convergent synthesis of antiglaucoma $PGF_{2\alpha}$ analogue - travoprost"
- 2016 Team award, Gold Medal, International Warsaw Invention Show IWIS2016 „Prasugrel – innovative technology of a drug product”.
- 2018 Team award, ERiNET Innovatoren Preis 2018, International Trade Fair Ideas Inventions New Products, IENA'2018, Nurnberg, Germany, „Molecularly imprinted polymers employing carbazole and thiophene monomers and their application as recognition layers in chemosensors of aripiprazole and human chorionic gonadotropin"

Recent publications (2019-2020)

1. Nachliely M, Trachtenberg A, Khalfin B, Nalbandyan K, Cohen-Lahav M, Yasuda K, Sakaki T, **Kutner A**, Danilenko M. Dimethyl fumarate and vitamin D derivatives cooperatively enhance VDR and Nrf2 signaling in differentiating AML cells *in vitro* and inhibit leukemia progression in xenograft mouse model. *J. Steroid Biochem. Mol. Biol.*, 2019, 189, 8-16, [doi:10.1016/j.jsbmb.2018.11.017](https://doi.org/10.1016/j.jsbmb.2018.11.017), IF 4.561.
2. Kotlarz A, Przybyszewska M, Swoboda P, Neska J, Miłoszewska J, **Kutner A**, Markowicz S. Imatinib inhibits the regrowth of human colon cancer cells after treatment with 5-FU and cooperates with vitamin D analogue PRI-2191 in downregulation of expression of stemness-related genes in 5-FU refractory cells. *J. Steroid Biochem. Mol. Biol.*, 2019, 189, 48-62, [doi:10.1016/j.jsbmb.2019.02.003](https://doi.org/10.1016/j.jsbmb.2019.02.003), IF 4.561.
3. Milczarek M, Rossowska J, Wietrzyk J, Stachowicz M, **Kutner A**, Kłopotowska D. Tacalcitol increases the sensitivity of colorectal cancer cells to 5-fluorouracil by downregulating the thymidylate synthase. *J. Steroid Biochem. Mol. Biol.*, 2019, 190, 139-151, [doi:10.1016/j.jsbmb.2019.03.017](https://doi.org/10.1016/j.jsbmb.2019.03.017), IF 4.561.
4. Anisiewicz A, Filip-Psurska B, Pawlik A, Nasulewicz-Goldeman A, Piasecki T, Kowalski K, Maciejewska M, Jarosz J, Banach J, Papiernik D, Mazur A, **Kutner A**, Maier JA, Wietrzyk J. Calcitriol analogues decrease lung metastasis but impair bone metabolism in aged ovariectomized mice bearing 4T1 mammary gland tumors. *Aging Dis.*, 2019, 10, 977-991, [doi: 10.14336/AD.2018.0921](https://doi.org/10.14336/AD.2018.0921), IF 5.058.
5. Maj E, Trynda J, Maj B, Gębura K, Bogunia-Kubik K, Chodyński M, **Kutner A**, Wietrzyk J. Differential response of lung cancer cell lines to vitamin D derivatives depending on EGFR, KRAS, p53 mutation status and VDR polymorphism. *J. Steroid Biochem. Mol. Biol.*, 2019, 193, 105431, [doi: 10.1016/j.jsbmb.2019.105431](https://doi.org/10.1016/j.jsbmb.2019.105431), IF 4.561.
6. Berkowska K, Corcoran A, Grudzień M, Chodyński M, **Kutner A**, Marcinkowska E. Investigating the role of megalin in semi-selectivity of side-chain modified 19-*nor* analogs of vitamin D. *Int. J. Mol. Sci.* 2019, 20, 4183, [doi:10.3390/ijms20174183](https://doi.org/10.3390/ijms20174183), IF 3.257.

7. Magdalena Milczarek, Michał Chodyński, Anita Pietraszek, Kaori Yasuda, Toshiyuki Sakaki, Joanna Wietrzyk, **Andrzej Kutner**, Synthesis, CYP24A1-dependent metabolism and functional activity of 1,25-dihydroxy-19-nor-20a-homo-ergocalciferols PRI-5105 and PRI-5106, *Int. J. Mol. Sci.* 2020, 21(2), 642; doi.org/10.3390/ijms21020642, IF4.183.
8. Geoffrey Brown, **Andrzej Kutner**, Ewa Marcinkowska, Vitamin D and haematopoiesis, in Vitamin D in Tissue Microenvironment, Michael Danilenko, Section Editor, *Current Tissue Microenvironment Reports* 2020, 1, 1–11, doi.org/10.1007/s43152-020-00001-0.
9. Monika Wanat, Maura Malińska, **Andrzej Kutner**, Krzysztof Woźniak, Relationbetween crystalstructures of precursors and final products: example of vitamin D intermediates, *Molecules* 2020, 25(8), 1802; doi.org/10.3390/molecules25081802, IF 3.060.
10. Anna Piotrowska, Justyna Wierzbicka, Kamila Kwiatkowska, Michał Chodyński, **Andrzej Kutner**, Michał A. Żmijewski, Antiproliferative activity of side-chain truncated vitamin D analogs PRI-1203 and PRI-1204 against human malignant melanoma cell lines, *Eur. J. Pharmacol.* 2020, 881, 173170, [doi:10.1016/j.ejphar.2020.173170](https://doi.org/10.1016/j.ejphar.2020.173170), IF 3.120.
11. Marianna Gajda, Renata Rybakiewicz, Maciej Cieplak, Teresa Żołek, Dorota Maciejewska, Edyta Gilant, Piotr J. Rudzki, Katarzyna Grab, **Andrzej Kutner**, Paweł Borowicz, Włodzimierz Kutner, Krzysztof R. Noworyta, Low-oxidation-potential thiophene-carbazole monomers for electro-oxidativemolecular imprinting: Selective chemosensing of aripiprazole, *Biosensors and Bioelectronics*, 2020, 169, 112589, [doi:10.1016/j.bios.2020.112589](https://doi.org/10.1016/j.bios.2020.112589), IF 9.520.

Reviewer for scientific journals

Molecules (MDPI), *Pharmaceuticals* (MDPI), *International Journal of Molecular Sciences*, *Journal of Steroid Biochemistry Molecular Biology*, *Steroids*



