



Curriculum Vitae

Piotr Skowron, Ph.D., D.Sc., Professor

Current affiliation and official address

- Department of Molecular Biotechnology, Faculty of Chemistry, University of Gdansk, ul. Wita Stwosza 63, 80-308 Gdańsk, Poland.
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Education, degrees and academic titles

- Studies – 1981-1986, Biology, specialty: Molecular Biology; Faculty of Biology and Earth Sciences, University of Gdansk, Poland
- M.Sc. – 1986, Biology, specialty: Molecular Biology, Faculty of Biology and Earth Sciences, University of Gdansk, Poland
- Ph.D. – 1992, Biological Sciences (Biology), specialty: Molecular Biology; McArdle Laboratory for Cancer Research, University of Wisconsin-Madison, USA, (promoter prof. Waclaw Szybalski) and Dept. of Microbiology, Faculty of Biology, Geography and Oceanology, University of Gdansk, Poland (intercollegiate)
- Habilitation (D.Sc.) – 2011, Biological Sciences (Biology), specialty: Molecular Biotechnology (new genetic engineering technologies), Faculty of Biology, University of Gdansk, Poland
- Professor (title) – 2014, Faculty of Biology, University of Gdansk, Poland

Foreign scientific scholarships and residences

- Mc Ardle Laboratory for Cancer Research, Faculty of Oncology, University of Wisconsin-Madison, Wisconsin (USA) – 1989-1991
- Molecular Biology Resources Inc. (USA), biotechnology industry – 1992-1994
- CHIMERx (USA), biotechnology industry – 1994-1998
- Vivantis Technologies Sdn Bhd (Malaysia), biotechnology industry – 2005 (1 month)
- Revongen Corp. (Malaysia), biotechnology industry – 2012 (1 month)

Career/employment

- Research Assistant – 1985-1992, Department of Microbiology, Faculty of Biology, Geography and Oceanology, University of Gdansk, Poland
- Ph.D. Student (stipend) – 1989-1991, Mc Ardle Laboratory for Cancer Research, Faculty of Oncology, University of Wisconsin-Madison, USA
- Lecturer/researcher (Adjunct) – 1992-1993, Department of Microbiology, Faculty of Biology, Geography and Oceanology, University of Gdansk, Poland

- Specialist for Molecular Cloning and Protein Expression – 1992-1994, Molecular Biology Resources Inc., Wisconsin, USA, (molecular biotechnology company, R&D division)
- Head of Research Team for Molecular Cloning and Protein Expression – 1994-1998, CHIMERx, Wisconsin, USA, (molecular biotechnology company, R&D division)
- Lecturer/researcher (Adjunct) – 1998-2001, Department of Microbiology, Chemical Faculty, Gdansk University of Technology, Poland
- Director for R&D, Vice President, co-founder, co-owner – 1998-2007, EURx Ltd., Poland-USA, (molecular biotechnology company)
- Head of Department of Molecular Biotechnology – 2007-present, Institute for Environment and Human Health Protection, Faculty of Chemistry, University of Gdansk, Poland
- Head of the Science-Industry Consortium: University of Gdansk - POCh S.A. – 2009-present,
- Director for R&D, President, co-founder, co-owner – 2011-present – BioVentures Institute Ltd., Poland (recombinant vaccines)
- Co-founder, co-owner – 2012-present, Pharmoris Ltd., Poland (pharmacy)
- Cofounder, co-owner – 2012- present, MedVentures Ltd. Poland (biomedical applications)
- Lecturer/scientist (Adjunct) – 2007-2012, Faculty of Chemistry, University of Gdansk, Poland
- Associate Professor /Head of Dept. – 2012-present, Faculty of Chemistry, University of Gdansk, Poland
- Professor /Head of Dept. – 2012-present, Faculty of Chemistry, University of Gdansk, Poland

Academic functions

- Head (and founder) of Department of Molecular Biotechnology – 2007-present, Institute for Environment and Human Health Protection, Faculty of Chemistry, University of Gdansk, Poland

Academic staff education

- 3 Ph.D. promoted, promoting currently 8 Ph.D. students, numerous promoted and guided M.Sc. students.

Expert (academic) and editorial experience

- Expert for the National Centre for Research and Development (NCBiR) (Poland)
- Expert for the Polish Agency for Enterprise Development (PARP) (Poland)
- Editor of grant applications, M.Sc. thesis, books, international publications from ISI Master Journal List

Honors and Awards

- Chemistry Olympics Finalist (twice) – 1978-1979
- Championship in academic powerlifting/bodybuilding competition - 1982
- MSc awarded by the President of University of Gdansk – 1986
- President of the University of Gdansk Award for scientific achievements – 1991
- PhD thesis awarded by the President of University of Gdansk – 1992
- Molecular Biology Resources Inc. Awards (USA), for industrial research and applications in the field of molecular biotechnology – 1994-2002
- Interview in The Newsweek – 2003
- Brown belt in Okinawa Goju-Ryu Karate Do - 2005
- Promoter of the MSc thesis, awarded 1st Prize by the Polish Chemical Society – 2011
- Promoter of the PhD thesis, distinguished by the Polish Chemical Society – 2012
- President of the University of Gdansk Award for scientific achievements – 2012
- President of the University of Gdansk Award for scientific achievements – 2014
- President of the University of Gdansk Award for scientific achievements – 2016
- Pomeranian Employees Organization '*Primum Cooperatio*' award for outstanding achievements in 25-years of academia-industry cooperation - 2015

Scientific interests

- New genetic engineering technologies
- Restriction endonucleases and other DNA interacting proteins
- Recombinant vaccine and engineered effector proteins-based antiviral and anticancer therapies
- Investigating and biotechnological exploration and protection of the biodiversity

Scientific experience and achievements

- Cloning, expression and protein engineering of over 100 genes and their variants of an scientific, industrial and applications.
- Discovery and defining the new group of enzymes cleaving DNA- bifunctional restriction endonucleases-methyltransferases – ‘*Thermus* sp. Family’, cloning and characteristics of their coding genes, proteins and mechanism of action.
- Inventor of novel technology for cloning of extremely toxic genes.
- Construction of the expression system based on the new positive recombinant selection mechanism.
- Co-author of the concept and experimental implementation of two DNA amplification technologies, alternative to PCR.
- Development of DNA randomized fragmentation technologies for genomic libraries constructions, DNA labeling and metagenomic research, with the use of artificial/modified endonucleases.
- Development of methodology for the labile DNA-restriction endonuclease complexes investigations.
- Development of a new generation vaccine construction technological platform
- Cloning, expression and application of enzymes for the use as antidotum and biosensor components to reverse symptoms and detects warfare chemical weapons and pesticides

Applied research, business and business-related experience and achievements

- 13 years of employment in American biotechnological industry, 11 years as Director/Group Leader of the biotechnology industrial research (5 years in the USA)
- Expert for Vivantis Technologies Sdn Bhd / BSTM Group Sdn Bhd (Malaysia) – 2010-present
- Expert for Revongen Corporation Group (Malaysia, Thailand, Australia, Singapore e.a.) – 2011-present
- First world development of technology for DNA isolation in the popular spin-microcolumn format (global market approaching 1 bln USD) – 1990
- 17 patents/applications in the field of new genetic engineering technologies (WO, PL, USA, EU, Israel, Japan, China, India)
- 78 completed and applied industrial biotechnological projects
- Co-founder, director for R&D (developed majority of company recombinant products) of the American-Polish biotechnological company – EURx Ltd. (Poland)
- Receiving R&D financing of app. 4 mln USD from the Molecular Biology Resources Inc. (USA) – 1998-2007
- Founding the Science-Industry Consortium: University of Gdansk - POCh Ltd - 2009-present, receiving NCBR development grant no NR12-0070-06/2009 (2009-2013 for civil-military applications for development of enzymes against chemical weapons (1,85 mln PLN).
- Receiving grant for the industrial research in the field of the new vaccine technological platform, under the Innovative Economy Operating Programme 1.4, NCBiR (2012-2015): POIG.01.04.00-22-140/12, Jagiellonian Innovation Center, SATUS Venture Capital (4.6 mln PLN)
- Receiving grant for the industrial research in the field of the new bioactive hydrogel dressings of the new generation, under the Innovative Economy Operating Programme 3.1, NCBR (2007-2013), with Nickel Technology Park Poznan, UDA-POIG.03.01.00-00-010/10-00. (200,000 EURO)
- Initiated and received as consortium partner a grant STRATEGMED1/235077/9/NCBR/2014 (acronym REGENNOVA) for the applied research in the field of the new regenerative medicine strategies, under the NCBR STRATEGMED programme (2014-2017) (total consortium funding 17.8 mln PLN)
- Received as consortium partner a grant STRATEGMED3/306853/9/NCBR/2017 (acronym TARGETTELO) for the applied research in the field of the new anty-cancer therapies, under the NCBR STRATEGMED programme (2017-2020) (total consortium funding 19.7 mln PLN)
- Received as inventor and head of the project a grant TECHMATSTRATEGII/410747 (acronym BIONANOVA) for the applied research in the field of the new biodegradable nanoparticles, under the NCBR TECHMATSTRATEG II programme (2019-2023) (total consortium funding 25.8 mln PLN)
- Co-founder and co-owner of 10 biotechnology companies

Publication list

- **Patents (issued and patent applications) (26)**
 1. Skowron P, Zylisz-Stachula A, Zolnierkiewicz O, Skowron M, Janus L, Jezewska-Frackowiak J, Szymanska A: **Sposób uzyskiwania białka poliepitopowego oraz wektor DNA do realizacji tego sposobu.** (*Eng.*: A method of obtaining a polyepitopic protein as well as a DNA vector for embodying this method.) *Republic of Poland Patent Office no 228341* (2018)

2. Skowron P, Żylicz-Stachula A, Żebrowska A, Palczewska-Groves M, Maciejewska N, Czupryn A, Janus Ł, Mucha P, Pikuła M, Piotrowski A, Pikuła M, Rodziewicz-Motowidło S, Sawicka J.: **Zmodyfikowane wektory powielająco-ekspresyjne, białka fuzyjne, kompozycja oraz ich zastosowanie.** *Republic of Poland Patent Office no P.427146* (2018).
3. Mucha P, Załuska I, Czupryn A, Mazuryk J, Beręsewicz M, Krupska O, Wiśniewska M, Koziński K, Skowron P, Palczewska-Groves M, Żylicz-Stachula A, Żebrowska J, Rodziewicz-Motowidło S, Piotrowski A, Pikuła M, Sachadyn P, Janus Ł: **Peptydy poliRGD otrzymane metodą chemiczną i biotechnologiczną o działaniu przeciwuszkodzeniowym i/lub neuroprotektynym oraz zestaw do oznaczania ich aktywności.** (*Eng. PolyRGD peptides obtained by chemical and biotechnology methods with injury-reducing and/or neuroprotective effects and a kit for their activity evaluation.*) *Republic of Poland Patent Office no P.425131* (2018).
4. Mucha P, Załuska I, Czupryn A, Mazuryk J, Beręsewicz M, Krupska O, Wiśniewska M, Koziński K, Skowron P, Palczewska-Groves M, Żylicz-Stachula A, Żebrowska J, Rodziewicz-Motowidło S, Piotrowski A, Pikuła M, Sachadyn P, Janus Ł: **PolyRGD peptides obtained by chemical and biotechnology methods with injury-reducing and/or neuroprotective effects and a kit for their activity evaluation.** *European Patent Office no EP 18000319.6* (2018).
5. Sachadyn P, Sosnowski P, Sass P, Podolak-Popinigis J, Górnikiewicz B, Czupryn A, Janus Ł, Mucha P, Pikuła M, Piotrowski A, Skowron P, Rodziewicz-Motowidło S: **Kompozycja farmaceutyczna zawierająca XXX oraz środek leczniczy do regeneracji ran.** (*Eng. Use of XXX for promoting wound healing and regeneration.*) *Republic of Poland Patent Office no P423672* (2018).
6. Sachadyn P, Sosnowski P, Sass P, Podolak-Popinigis J, Górnikiewicz B, Czupryn A, Janus Ł, Mucha P, Pikuła M, Piotrowski A, Skowron P, Rodziewicz-Motowidło S: **Use of XXX for promoting wound healing and regeneration.** *WO Patent Application PCT/PL2018/000027* (2018).
7. Sachadyn P, Sosnowski P, Sass P, Podolak-Popinigis J, Górnikiewicz B, Czupryn A, Janus Ł, Mucha P, Pikuła M, Piotrowski A, Skowron P, Rodziewicz-Motowidło S: **Use of epigenetic inhibitor 1-XXX for promoting wound healing, complex tissue and organ regeneration.** *European Patent Office no EP18000264.4* (2018).
8. Rodziewicz-Motowidło S, Pikuła M, Deptuła M, Karpowicz P, Sas P, Wardowska A, Sawicka J, Dzierżyńska M, Kasprzykowski F, Sosnowski P, Mieczkowska A, Filipowicz N, Madanecki P, Piotrowski A, Czupryn A, Mucha, P, Skowron, P, Janus, Ł, Sachadyn P: **Nowe peptydowe pochodne płytkopochodnego czynnika wzrostu (PDGF), sposób ich otrzymywania, kompozycja farmaceutyczna oraz zastosowanie.** (*Eng. New peptide derivatives of platelet derived growth factor (PDGF), the method of their preparation, pharmaceutical composition and application.*) *Republic of Poland Patent Office no P.425038* (2018).
9. Rodziewicz-Motowidło S, Pikuła M, Deptuła M, Karpowicz P, Sas P, Wardowska A, Sawicka J, Dzierżyńska M, Kasprzykowski F, Sosnowski P, Mieczkowska A, Filipowicz N, Madanecki P, Piotrowski A, Czupryn A, Mucha, P, Skowron, P, Janus, Ł, Sachadyn P: **New peptide derivatives of platelet derived growth factor (PDGF), the method of their preparation, pharmaceutical composition and application.** *European Patent Office no EP18000305.5* (2018).
10. Skowron PM, Brodzik RW, Koller K-P: **Neutral heat-sensitive serine protease derived from *O. corvinae*.** *European Patent Office no EP17185519.0* (2017)
11. Skowron P, Jasiński J: **Sposób uzyskiwania rekombinantowej, biologicznie aktywnej butyrylocholinoesterazy końskiej i jej pochodnych oraz sposób uzyskiwania biologicznie aktywnych cholinoesteraz i butyrylocholinoesteraz oraz ich pochodnych w mikroorganizmie *Leishmania tarentolae*.** (*Eng.: A method of obtaining a recombinant, biologically active cholinesterases and butyrylcholinesterases and their derivatives in microorganism *Leishmania tarentolae*.*) *Republic of Poland Patent Office no P.423116* (2017)
12. Skowron P, Kropinski A, Żylicz-Stachula A, Janus L, Szemiako K, Skowron M, Bukrejewska M, Zwara A, Łoś J, Łoś M: **Sposób wykorzystania sekwencji nukleotydowej i kodowanych Otwartych Ram Odczytu genomu termofilnego bakteriofaga, infekującego gatunki**

bakterii *Bacillus (Geobacillus)*. (Eng.: A method of usage of a nucleotide sequence and coded Open Reading Frames present in the thermophilic bacteriophage, infecting species of *Bacillus (Geobacillus)* bacteria.) *Republic of Poland Patent Office no P.418712* (2016)

13. Seroczynska K, Bystrzycki Roman, Banaszczyk J, Wozniak D, Jędrzejczak G, Partryka T, Skowron P, Jeżewska-Frąckowiak J: **Samorozpuszczalna kapsułka do otrzymywania roztworów do zmywania.** (Eng.: Self-soluble capsule for the preparation of washing solutions.) *Republic of Poland Patent Office no P.419386* (2016)
 14. Seroczynska K, Bystrzycki Roman, Banaszczyk J, Wozniak D, Jędrzejczak G, Partryka T, Skowron P, Jeżewska-Frąckowiak J: **Self-soluble capsule for the preparation of washing solutions.** *European Patent Office no EP16207662.4* (2016)
 15. Skowron P, Zylisz-Stachula A, Zolnierkiewicz O, Skowron M, Janus L, Jeżewska-Frąckowiak J, Krefft D, Nidzworski D, Szemiako K, Maciejewska N, Nowak M, Szymanska A: **A method of obtaining a polyepitopic protein as well as a DNA vector for embodying this method.** *WO Patent Application 2015162560 A1* (2015). In 2016 modified and filed in: (15.) **EU** no EP15738474.4, (16.) **USA** no 15305453, (17.) **China** no CN 106488983 A, (18.) **India** no 201647039411, (19.) **Israel** no 248011, (20.) **Japan** no 2017-507091
 21. Skowron P, Jeżewska-Frąckowiak J, Seroczynska K, Banaszczyk J, Wozniak D, Mazur P, Krefft D, Tadeusz Ossowski T: **Transformowana komórka *Escherichia coli* oraz sposób oceny skuteczności preparatów lub technik myjących w zmywaniu powierzchni.** (Eng.: A transformed *Escherichia coli* cell and a method of evaluation of an effectiveness of cleaning agents and surface cleaning techniques.) *Republic of Poland Patent Office no P.415436* (2015)
 22. Mead D, Skowron PM, Swaminathan N, Van Etten J: **Dinucleotide restriction endonuclease preparations and methods of use.** *European Patent EP 0690870 A1* (1996)
 23. Nickerson D, Mueller R, Skowron P, Swaminathan N, Piehl R: **DNA encoding a thermostable DNA polymerase enzyme.** *WO Patent Application 1,996,014,417* (1996)
 24. Mueller R, Skowron PM, Swaminathan N, Piehl R: **Biologically active fragments of *Thermus flavus* DNA polymerase.** *WO Patent Application 1,996,014,405* (1996)
 25. Mead D, Swaminathan N, Van Etten J, Skowron PM: **Recombinant CviJI restriction endonuclease.** *United States Patent no US005472872A*, USA (1995)
 26. Mead D, Swaminathan N, Van Etten J, Skowron PM: **Dinucleotide restriction endonuclease preparations and methods of use.** *WO Patent Application 1,994,021,663* (1994)
- **ISI Master Journal List Publications** (44 publications, IF app. 162, Index H = 14)
1. Mieczkowska, A, Adriana Schumacher, A, Filipowicz F, Wardowska A, Zieliński M, Madanecki P, Nowicka E, Langa P, Deptuła M, Zieliński J, Kondej K, Renkielska A, Buckley PG, Crossman DK, Crowley MR, Czupryn A, Mucha P, Sachadyn P, Janus Ł, Skowron P, Rodziejewicz-Motowidło S, Cichorek M, Piłkuła M, Piotrowski A: **Immunophenotyping and transcriptional profiling of *in vitro* cultured human adipose tissue derived stem cells.** *Scientific Reports* 2018, 8: 1-13
 2. Krefft D, Papkov A, Prusinowski M, Skowron PM, Zylisz-Stachula A: **Randomized DNA libraries construction tool: a new 3-bp 'frequent cutter' TthHB27I/sinefungin endonuclease with chemically-induced specificity.** *BMC Genomics* 2018, <https://doi.org/10.1186/s12864-018-4748-0>.
 3. Skowron PM, Kropinski AM, Zebrowska J, Janus L, Szemiako K, Czajkowska E, Maciejewska N, Skowron M, Łoś J, Łoś M, Zylisz-Stachula A: **Sequence, genome organization, annotation and proteomics of the thermophilic, 47.7-kb *Geobacillus stearothermophilus* bacteriophage TP-84 and its classification in the new *Tp84virus* genus.** *PLOS ONE* 2018, **13**: e0195449.
 4. Jeżewska-Frąckowiak J, Seroczynska K, Banaszczyk J, Wozniak D, Ozog A, Zylisz-Stachula A, Ossowski T and Skowron PM: **Detection of endospore producing *Bacillus* species from commercial probiotics and their preliminary microbiological characterization.** *J. Environ. Biol.* 2017, **38**: 1435-1440.

5. Krefft D, Papkov A, Zylicz-Stachula A, Skowron PM: **Thermostable proteins bioprocesses: The activity of restriction endonuclease-methyltransferase from *Thermus thermophilus* (RM.TthHB27I) cloned in *Escherichia coli* is critically affected by the codon composition of the synthetic gene.** *PLOS ONE* 2017, **12**:e0186633.
6. Skowron PM, Anton BP, Czajkowska E, Zebrowska J, Sulecka E, Krefft D, Jezewska-Frackowiak J, Zolnierkiewicz O, Witkowska M, Morgan RD, Wilson GG, Fomenkov A, Roberts RJ and Zylicz-Stachula A: **The third restriction–modification system from *Thermus aquaticus* YT-1: solving the riddle of two TaqII specificities.** *Nucleic Acids Research* 2017, doi: 10.1093/nar/gkx599.
7. Zylicz-Stachula A, Zebrowska J, Czajkowska E, Wrese W, Sulecka E, Skowron PM: **Engineering TaqII bifunctional endonuclease DNA recognition fidelity: the effect of a single amino acid substitution within the methyltransferase catalytic site.** *Molecular Biology Reports* 2016, **43**:269-282.
8. Zebrowska J, Zolnierkiewicz O, Skowron MA, Zylicz-Stachula A, Jezewska-Frackowiak J, Skowron PM: **A putative Type IIS restriction endonuclease GeoICI from *Geobacillus* sp - A robust, thermostable alternative to mezophilic prototype BbvI.** *Journal of Biosciences* 2016, **41**:27-38.
9. Skowron MA, Zebrowska J, Wegrzyn G, Skowron PM: **MmoSTI restriction endonuclease, isolated from *Morganella morganii* infecting a tropical moth, *Actias selene*, cleaving 5'-|CCNGG-3' sequences.** *J Appl Genetics* 2016, **57**:143-149.
10. Krefft D, Zylicz-Stachula A, Mulkiewicz E, Papkov A, Jezewska-Frackowiak J, Skowron PM: **Two-stage gene assembly/cloning of TthHB27I, a member of a TspDTI-subfamily of bifunctional restriction endonucleases.** *Journal of Biotechnology* 2015, **194**:67-80.
11. Jezewska-Frackowiak J, Lubys A, Vitkute J, Zakareviciene I, Zebrowska J, Krefft D, Skowron M, Agnieszka Zylicz-Stachula A, Skowron PM: **A new prototype IIS/IIC/IIG endonuclease-methyltransferase TsoI from the thermophile *Thermus scotoductus*, recognizing 5'-TARCCA(N11/9)-3' sequences.** *Journal of Biotechnology* 2015, **194**:19-26.
11. Zylicz-Stachula A, Polska K, Skowron PM, Rak J: **Artificial Plasmid Labeled with 5-Bromo-2'-deoxyuridine: A Universal Molecular System for Strand Break Detection.** *ChemBioChem* 2014, **15**:1409-12.
12. Zylicz-Stachula A, Zolnierkiewicz O, Sliwinska K, Jezewska-Frackowiak J, Skowron PM: **Modified 'one amino acid-one codon' engineering of high GC content TaqII-coding gene from thermophilic *Thermus aquaticus* results in radical expression increase.** *Microbial Cell Factories* 2014, **13**:7.
13. Zylicz-Stachula A, Jezewska-Frackowiak J, Skowron PM: **Cofactor analogue-induced chemical reactivation of endonuclease activity in a DNA cleavage/methylation deficient TspGWI N₄₇₃A variant in the NPPY motif.** *Molecular Biology Reports* 2014, **41**:2313-23.
14. Orlikowska M, Szymańska A, Borek D, Otwinowski Z, Skowron PM, Jankowska E.: **Structural characterization of V57D and V57P mutants of human cystatin C, an amyloidogenic protein.** *Acta Crystallogr D Biol Crystallogr.* 2013, **69**:577-86.
15. Skowron PM, Vitkute J, Ramanauskaite D, Mitkaite G, Jezewska-Frackowiak J, Zebrowska J, Zylicz-Stachula A, Lubys, A: **Three-stage biochemical selection: cloning of prototype class IIS/IIC/IIG restriction endonuclease-methyltransferase TsoI from the thermophile *Thermus scotoductus*.** *BMC Molecular Biology*, 2013, **14**:17.
16. Zylicz-Stachula A, Zolnierkiewicz O, Jasiński J, Skowron PM: **A new genomic tool: ultra-frequently cleaving TaqII/sinefungin endonuclease with combined 2.9 bp recognition site, applied to the construction of horse DNA libraries.** *BMC Genomics* 2013, **14**:370.
17. Żylicz-Stachula A, Żolnierkiewicz O, Lubys A, Ramanauskaite D, Mitkaite G, Bujnicki JM, Skowron PM: **Related bifunctional restriction endonuclease-methyltransferase triplets: TspDTI, Tth111II/TthHB27I and TsoI with distinct specificities.** *BMC Molecular Biology* 2012, **13**:13.
18. Żylicz-Stachula A, Żolnierkiewicz O, Śliwińska K, Jezewska-Frackowiak J, Skowron PM: **Bifunctional TaqII restriction endonuclease: redefining the prototype DNA recognition site and establishing the Fidelity Index for partial cleaving.** *BMC Biochemistry* 2011, **12**:62.
19. Orlikowska M, Jankowska E, Borek D, Otwinowski Z, Skowron P, Szymanska A: **Crystallization and preliminary X-ray diffraction analysis of V57 mutants of an amyloidogenic protein - human cystatin C.** *Acta Crystallographica Section F* 2011, **F67**:1608-1611.
20. Żylicz-Stachula A, Żolnierkiewicz O, Jezewska-Frackowiak J, Skowron PM: **Chemically-induced**

affinity star restriction specificity: a novel TspGWI/sinefungin endonuclease with theoretical 3-bp cleavage frequency. *BioTechniques* 2011, **50**:397-406.

21. Sobolewski I, Polska K, Żylicz-Stachula A, Jeżewska-Frąckowiak J, Rak J, Skowron PM: **Enzymatic synthesis of long double-stranded DNA labeled with the haloderivatives of nucleobases in a precisely pre-determined sequence.** *BMC Biochemistry* 2011, **12**:24.
22. Michalska B, Sobolewski I, Polska K, Zielonka J, Żylicz-Stachula A, Skowron PM, Rak J: **PCR synthesis of double stranded DNA labeled with 5-bromouridine. A step towards finding a bromonucleoside for clinical trials.** *Journal of Pharmaceutical and Biomedical Analysis* 2011, **56**:671-677.
23. Polska K, Zielonka J, Chomicz L, Czerwicka M, Stepnowski P, Guzow K, Wiczek W, Smużyńska M, Kasprzykowski F, Żylicz-Stachula A, Skowron PM, Rak J: **Unexpected photoproduct generated via the acetone- sensitized photolysis of 5-Bromo-2'-deoxyuridine in a water/isopropanol solution: experimental and computational studies.** *Journal of Physical Chemistry B* 2010, **114**: 16902-16907.
24. Żylicz-Stachula A, Bujnicki JM, Skowron PM: **Cloning and analysis of bifunctional DNA methyltransferase/nuclease TspGWI, the prototype of a *Thermus* sp. family.** *BMC Molecular Biology* 2009, **10**:52.
25. Skowron PM, Majewski J, Żylicz-Stachula A, Rutkowska SR, Jaworowska I, Harasimowicz-Słowińska R: **A new *Thermus* sp. class-IIS enzymes subfamily: isolation of a "twin" restriction endonuclease TspDTI, with a novel specificity 5`-ATGAA(N11/9)-3` related to TspGWI, TaqII and Tth111II.** *Nucleic Acid Research* 2003, **31**:e74.
26. Żylicz-Stachula A, Harasimowicz-Słowińska R, Sobolewski I, Skowron PM: **TspGWI, a thermophilic class-IIS restriction endonuclease from *Thermus* sp. recognizes novel asymmetric sequence 5`-ACGGA(N11/9)-3`.** *Nucleic Acid Research* 2002, **30**:e33.
27. Rutkowska SM, Skowron PM: **Rapid screening of elution conditions prior to immunopurification of proteins.** *BioTechniques* 1999, **27**:929-932.
28. Kaczorowski T, Sęktas M, Skowron PM, Podhajska AJ: **The FokI methyltransferase from *Flavobacterium okeanokoites*. Purification and characterization of the enzyme and its truncated derivatives.** *Molecular Biotechnology (currently: New Biotechnology)* 1999, **13**:1-15.
29. Swaminathan N, McMaster K, Skowron PM, Mead DA: **Thermal cycle labeling: zeptomole detection sensitivity and microgram probe amplification using CviJI* restriction-generated oligonucleotides.** *Analytical Biochemistry* 1998, **255**:133-141.
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