List of all publications: ¥equal contribution, *corresponding author

[A1] Peer-reviewed original research article publications

(91) Bi, C.;¥ Mahardhika, A.B.;¥ **Pillaiyar, T.;** Müller, C.E.* Discovery and characterization of quinoxaline and quinoline carboxamides as allosteric cannabinoid receptor modulators. *Biochem. Pharmacol*. **2026,** *243*, .117485.

(90) Flury, P.; Vishwakarma, J.; Sylvester, K.; Higashi-Kuwata, N.; Dabrowska, A.; Delgado, R.; Cuell, A.; Basu, R.; Taylor, A.B.; de Oliveira, E.G.; Sá Magalhães Serafimg, M.; Qiao, J.; Chen, Y.; Yang, S.; O'Donoghue, A.J.; Mitsuya, H.; Gütschow, M.; Laufer, S.A.; Müller C.E.; Harris, R.S.; **Pillaiyar, T**.* Azapeptide-based SARS-CoV-2 Main Protease Inhibitors: Design, Synthesis, Enzyme Inhibition, Structural Determination, and Antiviral Activity. *J. Med. Chem*, **2025,** *68*, 19339–19376

(89) Flury, P.; Krüger, N.; Sylvester, K.; Breidenbach, J.; Al Hamwi, G.; Qiao, J.; Chen, Y.; Rocha, C.; Serafim, M.S.M.; Barbosa da Silva, E.; Pöhlmann, S.; Poso, A.; Kronenberger, T.; Rox, K.; O'Donoghue, A.J.; Yang, S.; Sträter, N.; Gütschow, M.; Laufer, S.A.; Müller C.E.; **Pillaiyar, T**.*Design, Synthesis, and Unprecedented Interactions of Covalent Dipeptide-Based Inhibitors of SARS-CoV-2 Main Protease and Its Variants Displaying Potent Antiviral Activity. *J Med Chem.* **2025**, *68*, 3626–3652.

(88) Laspa, Z.; Baunach, V-D.; Schaale, D.; Sigle, M.; Hochuli, R.; Castor, T.; Bayrak, A.; Harm, T.; Mueller, K.A.L.; **Pillaiyar, T**.; Laufer, A.S.; Rohlfing, A. K.; Gawaz, M.P.* Hemin-induced platelet activation is regulated via ACKR3 chemokine surface receptor-implications for passivation of vulnerable atherosclerotic plaque. *FEBS J.* **2025** Jan 21. doi: 10.1111/febs.17407. Online ahead of print.

(87) Dicenta-Baunach, V.; Laspa, Z.; Schaale, D.; Sigle, M.; Bayrak, A.; Castor, T.; **Pillaiyar, T**.; Laufer, A.S.; Gawaz, M.P. Rohlfing, A. K.* ACKR3 agonism induces heterodimerization with chemokine receptor CXCR4 and attenuates platelet function. *Eur. J. Clin. Invest.* **2025,** Jan;55(1):e14327.

(86) Liebing, A.D.; Rabe. P.; Krumbholz, P.; Zieschang, C.; Schulz, A.; **Pillaiyar, T**. Kraft, R.; Garcia-Marcos, M.; Stäubert, C.* Succinate receptor 1 localisation influences cellular metabolism and vice versa. *FEBS J.* **2025** Jan 21. doi: 10.1111/febs.17407. Online ahead of print.

(85) Imberg, L.; Siutkina, A.I.; Erbacher, C.; Schmidt, J.; Broekmans, D.F.; Ovsepyan, R.A.; Daniliuc, C.G.; Gonçalves de Oliveira, E.; Serafim, M.S.M.; O'Donoghue, A.J.; **Pillaiyar, T**.; Panteleev, M.A.; Poso, A.; Kalinina, S.A.; Bermúdez, M.; Nekipelov, K.; Bendas, G.; Karst, U.; Kalinin, D.V. Pyrazinyl-Substituted Aminoazoles as Covalent Inhibitors of

Thrombin: Synthesis, Structure, and Anticoagulant Properties. *ACS Pharmacol. Transl. Sci.* **2024,** *8*, 146-172

(84) Bayrak, A.; Szpakowska, M., Baunach, V-D.; Rohlfing, A. K.; Rasch, A.; Chevigné, A.; Gawaz, M. Laufer, S.A.; **Pillaiyar, T**.* Novel Small-Molecule Atypical Chemokine Receptor 3 (ACKR3) Agonists: Design, synthesis, and pharmacological evaluation for antiplatelet therapy. *J. Med. Chem.* **2024,** *67*, 14553–14573.

(83) Oneto, A.; Al Hamwi, G.; Schäkel, L.; Krüger, N.; Sylvester, K.; Petry, M.R.I.; Shamleh, R.A.; **Pillaiyar, T**. Claff, T.; Schiedel, A.C.; Sträter, N.; Gütschow, M.; and Müller; C.E.* Non-peptidic irreversible inhibitors of SARS-CoV-2 main protease with potent antiviral activity. *J. Med. Chem.* **2024,** *67*, 14986-15011.

(81) Flury, P.; [¥,] Breidenbach, J.; [¥,] Krüger, N.; [¥,] Voget, R.; Schäkel, L.; Si, Y.; Krasniqi, V.; Calistri, S.; Olfert, M.; Sylvester, K.; Rocha, C.; Ditzinger, R.; Rasch, A.; Pöhlmann, S.; Kronenberger, T.; Poso, A.; Rox, K.; Laufer, S.A.; Müller, C.E.; Gütschow, M.; * Pillaiyar T.* Cathepsin-targeting SARS-CoV-2 inhibitors: Design, synthesis, and biological Activity. *ACS Pharmacol. Transl. Sci.* **2024**, *7*, 1195-1196.

(80) **Pillaiyar, T**.;[¥,]* Wozniak, M.;[¥] Abboud, D.; Rasch, A.; Liebing, A.D.; Poso, A.; Kronenberger, T.; Stäubert, C.; Laufer, S.A.; Hanson, J.* Development of Ligands for the Super Conserved Orphan G protein-coupled Receptor GPR27 with improved efficacy and Potency. *J. Med. Chem.* **2023,** *66*, 17118-17137

(79) Marx, D.; [¥] Alnouri, M.W.; [¥] Clemens, S.; [¥] Gedschold, R.; [¥] Riedel, Y.; Al Hamwi, G.; **Pillaiyar, T**.; Hockemeyer, J.; Namasivayam, V.; Müller. C.E.* Discovery of potent agonists for the predominant variant of the orphan MAS-related G protein-coupled receptor X4 (MRGPRX4). *J. Med. Chem.* **66 (23), 15674-15698**.

(78) Bi, C.; [¥] Schäkel, L.; [¥] Mirza, S.; Sylvester, K.; Pelletier, J.; Lee, S.Y.; **Pillaiyar, T**.; Sévigny, J.; Müller, C.E.* Synthesis and structure-activity relationships of ticlopidine derivatives and analogs as inhibitors of ectonucleotidase CD39. *Bioorg. Chem.* **2023**, *135*, 106460.

(77) Geiger, N.; Diesendorf, V.; Roll, V.; König, E.-M.; Obernolte, H.; Sewald, K.; Breidenbach, J.; **Pillaiyar, T**.; Gütschow, M.; Müller, C.E.; Bodem, J. * Cell type-specific anti-viral effects of novel SARS-CoV-2 main protease inhibitors. *Int. J. Mol. Sci.* **2023**, *24,* 3972.

(76) Krüger, N.; [¥] Kronenberger, T.; [¥] Xie, H.; [¥] Rocha, C.; Pöhlmann, S.; Su, H.; Xu, Y.;* Laufer, A.S. **Pillaiyar, T.***. Discovery of polyphenolic natural products as SARS-CoV-2 M^{pro} inhibitors for COVID-19. *Pharmaceuticals*, **2023**, *16*, 190.

(75) Mahardhika, A.B.; Ressemann, A.; Kremers, S.E.; Gregório Castanheira, M.S.; Schoeder, C.T.; Müller, C.E.;* **Pillaiyar, T.*** Design, synthesis, and structure-activity relationships of diindolylmethane derivatives as cannabinoid CB2 receptor agonists. *Arch. Pharm.* (Weinheim). **2023**, *356*, e2200493.

(74) Bayrak, A.; [¥] Mohr, F.; [¥] Kolb, K.; [¥] Szpakowska, M.; Shevchenko, E.; Dicenta, V.; Rohlfing, A.K.; Kudolo, M.; Pantsar, T.; Günther, M.; Kaczor, A.; Poso, A.; Chevigné, A.; **Pillaiyar, P.;*** Gawaz, M.;* Laufer, S.A.* Discovery and development of first-in-class ACKR3/CXCR7 2 superagonists for platelet degranulation modulation. *J. Med. Chem.* **2022**, *65*, 13365-13384.

(73) Ferreira, G.M.; **Pillaiyar, T**.; Hirata, M.H.; Poso A.; and Kronenberger, T. * Inhibitor induced conformational changes in SARS-COV-2 papain-like protease. *Sci. Rep.* **2022**, *12*, 11585.

(72) **Pillaiyar, T**.;*,[¥] Flury, P.;[¥] Krüger, N.;[¥] Su,H.;[¥] Schäkel, L.;[¥] Barbosa Da Silva, E.; Eppler, O.; Kronenberger, T.; Nie, T.; Luedtke, S.; Rocha, C.; Sylvester. K.; Petry, M. R.I.; McKerrow, J.H.; Poso A.; Pöhlmann, S.; Gütschow M.; O'Donoghue, A. J.; Xu, Y.;* Müller, C.E and Laufer, S.A. Small molecule thioesters as SARS-CoV-2 Main protease inhibitors: Enzyme inhibition, structure-activity relationships, antiviral activity, and X-ray structure determination. *J. Med. Chem.* **2022**, *65*, 9376-9395.

(71) Dolanc, D.; Zorec, T.M.; Smole, Z.; Maver, A.; Horvat, A.; **Pillaiyar, T.**; Trkov Bobnar, S.; Vardjan, N.; Kreft, M.; Chowdhury, H.H.; Zorec, R.* The activation of GPR27 increases cytosolic L-lactate in 3T3 embryonic cells and astrocytes. *Cells*, **2022**, *11*, 1009.

(70) Flury, P.; Eppler, O.; Schollmeyer, D.; Laufer, S.; **Pillaiyar, T**.* 2, 2, 2-Trifluoroethanol-mediated hydroarylation of fluorinated alkynes with indoles: Application to diindolylmethanes. *Arch. Pharm.* (Weinheim) **2022**, *355*, e2100488.

(69) Schäkel, L.; Mirza, S.; Pietsch, M.; Lee, S.Y.; Keuler, T.; Sylvester, K.; Pelletier, J.; Sévigny, J.; **Pillaiyar, T.**; Namasivayam, V.; Gütschow, M.; Müller, C.E.* 2-Substituted thienotetrahydropyridine derivatives: Allosteric ectonucleotidase inhibitors. *Arch. Pharm.* (Weinheim) **2021**, *354*, e2100300.

(68) Braune, M.; Scherf, N.; Heine, C.; Sygnecka, K.; **Pillaiyar, T**.; Parravicini, C.; Heimrich, B.; Abbracchio, M.P.; Müller, C.E.; Franke, H.* Involvement of GPR17 in Neuronal Fibre Outgrowth. *Int. J. Mol. Sci.* **2021**, *22*, 11683.

(67) **Pillaiyar, T**.;* Rosato, F.; Wozniak, M.; Blavier, J.; Charles, M.; Laschet, C.; Kronenberger, T.; Müller, C.E.; Hanson, J. Structure-activity relationships of agonists for the orphan G protein-coupled receptor GPR27. *Eur. J. Med. Chem.* **2021,** *225*, 113777.

(66) Konno, S.; Kobayashi, K.; Senda, M.; Funai, Y.; Seki, Y.; Tamai, I.; Schäkel, L.; Sakata, K.; **Pillaiyar, T.;** Taguchi, A.; Taniguchi, A.; Gütschow, M.; Müller, C.E.; Takeuchi, K.; Hirohama, M.; Kawaguchi, A.; Kojima, M.; Senda, T.; Shirasaka, Y.; Kamitani, W.; Hayashi, Y.* 3CL Protease inhibitors with an electrophilic arylketone moiety as anti-SARS-CoV-2 agents. *J. Med. Chem.* **2022**, *65*, 2926–2939.

(65) **Pillaiyar, T.**;* Sedaghati, M.; Mahardhika, A.B.; Wendt, L. L.; Müller, C. E.* Iodine-catalyzed electrophilic substitution of indoles: Synthesis of (un)symmetrical diindolylmethanes with a quaternary carbon center. *Beilstein J. Org. Chem.* **2021**, *17*, 1464-1475.

(64) Breidenbach, J.; ¥ Lemke, C.; ¥ **Pillaiyar, T.;** ¥ Schäkel, L.; ¥ Al Hamwi, G.; Diett, M.; Gedschold, R.; Geiger, N.; Lopez, V.; Mirza, S.; Namasivayam, V.; Schiedel, A.C.; Sylvester, K.; Thimm, D.; Vielmuth, C.; Phuong Vu, L.; Zyulina, M.; Bodem, J.; Gütschow, M.; * Müller, C.E.* Targeting the Main Protease of SARS-CoV-2: From the Establishment of High Throughput Screening to the Design of Tailored Inhibitors. *Angew. Chem. Int. Ed. Engl.* **2021,** *60*, 10423-10429.

(63) Manickam, M.; Boggu, P.R.; **Pillaiyar, T**.; Nam, Y.J.; Abdullah, M.; Lee, S.J.; Kang, J.S.; Jung, S.H.* Design, synthesis and anticancer activity of 2-amidomethoxy-1,4-naphthoquinones and its conjugates with Biotin/polyamine. *Bioorg. Med. Chem. Lett.* **2021**, *31*, 127685.

(62) Chen, Y.; McNamara, N.; May, O.; **Pillaiyar**, **T**.; Blakemore D. C, Ley, S. V.* Photoredox generation of sulfonyl radicals and coupling with electron deficient olefins. *Org. Lett*. **2020**, *22*, 5746-5748.

(61) **Pillaiyar**, **T**.;* Sedaghati, M.; Schnakenburg, G.; Reaction of indoles with aromatic fluoromethyl ketones: An efficient synthesis of trifluoromethylindolyl-phenylethanols using K_2CO_3/nBu_4PBr in water. *Beilstein J. Org. Chem*. **2020**, *16*, 778-790.

(60) Baqi, Y.;¥ **Pillaiyar**, **T**.;¥ Abdelrahman, A.; Kaufmann, O.; Alshaibani, S.; Rafehi, M.; Ghasimi, S.; Akkari, R.; Ritter, K.; Simon, K.; Spinrath, A.; Kostenis, E.; Zhao, Q.; Köse, M.; Namasivayam, V.; Müller, C. E.* 3-(2-Carboxyethyl)indole-2-carboxylic acid derivatives: Structural requirements and properties of potent agonists of the orphan G protein-coupled receptor GPR17. *J. Med. Chem.* **2018**, *61*, 8136-8154.

(59) Köse, M.;¥ **Pillaiyar**, **T**.;¥ Namasivayam, V.;¥ De Filippo, E.; Sylvester, K.; Ulven, T.; von Kügelgen, I.; Müller, C. E.* An agonist radioligand for the proinflammatory lipid-activated G protein-coupled receptor GPR84 providing structural insights. *J. Med. Chem.* **2020**, *63*, 2391-2410.

(58) Sangeetha, M.; Manickam, M.; **Pillaiyar**, **T**.* Exploration of imidazole and imidazopyridine dimers as anticancer agents: Design, synthesis and structure-activity relationship study. *Arch. Pharm.* **2019**, *352*, e1900011.

(57) **Pillaiyar**, **T**.;* Uzair, M.; Ullah, S.; Schnakenburg, G.; Müller C. E. Decarboxylative coupling reaction of 2-(1*H*-indol-3-yl) acetic acids with indole, azaindole, benzimidazole and indazole derivatives. *Adv. Synth. Catal*. **2019**, *361*, 4286-4293.

(56) **Pillaiyar**, **T**.; Funke, M.; Weyler, S.; Ivanova, S.; Schlegel, J.; Abdelrahman, A.; Müller C. E.* Design, synthesis and biological evaluation of suramin-derived dual antagonists of the proinflammatory G protein-coupled receptors $P2Y_2$ and GPR17. *Eur. J. Med. Chem.* **2020** *15*, 111789.

(55) Manickam, M.; **Pillaiyar**, **T**.; Boggu, P. R.; Sharma, N.; Jalani H. B.; Venkateswararao, E.; Lee. Y.-J.; Jeon, E.-S.; Son, M.-J.; Woo, S.-H.; Jung, S.-H.* Design and synthesis of sulfonamidophenylethylamides as novel cardiac myosin activator. *Bioorg. Med. Chem.* **2019**, *27*, 4110-4123.

(54) **Pillaiyar**, **T**.;* Gorska, E.; Schnakenburg, G.; Müller C. E.* General synthesis of unsymmetrical 3,3'-(aza)diindolylmethane derivatives. *J. Org. Chem*. **2018**, *83*, 9902-9913.

(53) Manickam, M.; Boggu, P. R.; **Pillaiyar**, **T**.; Sharma, N.; Jalani H. B.; Venkateswararao, E.; Jung, S.-H.* Exploration of diphenylalkyloxadiazoles as novel cardiac myosin activator. *Bioorg. Med. Chem. Lett.* **2018**, *28*, 2369-2374.

(52) **Pillaiyar**, **T**.;* Dawood, M.; Irum, H.; Müller, C. E. A rapid, efficient and versatile green synthesis of 3,3'-diindolylmethanes. *Arkovic* **2018**, *part iii*, 1-19.

(51) **Pillaiyar**, **T**.; Köse, M.; Namasivayam, V.; Sylvester, K.; Borges, G.; Thimm, D.; von Kügelgen, I.; Müller, C. E.* 6-(Ar)alkylamino-substituted uracil derivatives: Lipid mimetics with potent activity at the orphan G protein-coupled receptor 84 (GPR84). *ACS Omega* **2018**, *3*, 3365-3383.

(50) Manickam, M.; Jalani, H. B.; **Pillaiyar**, **T**.; Boggu, P. R.; Sharma, N.; Venkateswararao, E.; Lee, Y. J.; Jeon, E. S.; Son, M. J.; Woo, S. H.; Jung, S.-H.* Design and synthesis of sulfonamidophenylethylureas as novel cardiac myosin activator. *Eur. J. Med. Chem.* **2018**, *143*, 1869-1887.

(49) Manickam, M.; Jalani, H. B.; **Pillaiyar**, **T**.; Sharma, N.; Boggu, P. R, Venkateswararao, E.; Lee, Y. J.; Jeon, E. S.; Jung, S.-H.* Exploration of flexible phenylpropylurea scaffold as novel cardiac myosin activators for the treatment of systolic heart failure. *Eur. J. Med. Chem.* **2017**, *134*, 379-391.

(48) **Pillaiyar**, **T**.;[¥] Köse, M.;[¥] Sylvester, K.; Weighardt, H.; Thimm, D.; Borges, G.; Förster,

I.; von Kügelgen, I.; Müller, C. E.* Diindolylmethane derivatives: Potent agonists of the immunostimulatory orphan G protein-coupled receptor GPR84. *J. Med. Chem*. **2017***, 60,* 3636-3655.

(47) Hess, C.;[¥] Schoeder, C. T.;[¥] **Pillaiyar**, **T**.; Madea B, Müller, C. E.* Pharmacological evaluation of synthetic cannabinoids identified as constituents of spice. *Forensic Toxicol.* **2016**, *34*, 329-343.

(46) Manickam, M.; **Pillaiyar**, **T**.; Boggu, P.; Venkateswararao, E.; Jalani, H. B.; Kim, N. D.; Lee, S. K.; Jeon, J. S.; Kim, S. K.; Jung, S.-H.* Discovery of enantioselectivity of urea inhibitors of soluble epoxide hydrolase. *Eur. J. Med. Chem.* **2016**, *117*, 113-124.

(45) Taguchi, A.; Hamada, K.; Kotake, M.; Shiozuka, M.; Nakaminami, H.; **Pillaiyar**, **T**.; Takayama, K.; Yakushiji, F.; Noguchi, N.; Usui, T.; Matsuda, R.; Hayashi, Y.* Discovery of natural products possessing selective eukaryotic readthrough activity: 3-Epi-deoxynegamycin and its leucine adduct. *ChemMedChem*. **2014**, *10*, 2233-2237.

(44) **Pillaiyar**, **T**.; Yamamoto, T.; Koiwai, Y.; Takayama, K.; Yakushiji, F.; Akaji, K.; Kawasaki, Y.; Chen, S.-E.; Tavakolian, A. N.; Schön, A.; Freire, E.; Hayashi, Y.* Development of novel dipeptide-type inhibitors with novel P3-scaffolds against SARS-CoV $3CL^{pro}$: Design, synthesis, biological evaluation and molecular docking study. *Eur. J. Med. Chem.* **2013**, *68*, 372-384.

(43) **Pillaiyar**, **T**.; Yamamoto, T.; Koiwai, Y.; Takayama, K.; Yakushiji, F.; Akaji, K.; Kawasaki, Y.; Chen, S.-E.; Tavakolian, A. N.; Schön, A.; Freire, E.; Hayashi, Y.* Design, synthesis, and biological evaluation of dipeptide-type SARS-CoV 3CL protease inhibitors: Structure-activity relationship study. *Eur. J. Med. Chem.* **2013**, *65,* 436-447.

(42) Konno, S.;[¥] **Pillaiyar**, **T**.;[¥] Nakada, K.; Yamamoto, T.; Yamazaki, Y.; Yakushiji, F.; Akaji, K.; Kiso, Y.; Kawasaki, Y.; Freire, E.; Hayashi, Y.* Design, synthesis of new tripeptide-type SARS-CoV $3CL^{pro}$ Inhibitors containing an electrophilic aryl ketone moiety. *Bioorg. Med. Chem.* **2013**, *21*, 412-424.

(41) Ki, D. H.; Jung, H. C.; Noh, Y. W.; **Pillaiyar**, **T**.; Kim, B. H.; Shin, S. C.; Jung, S.-H.; Cho. C. W.* Preformulation and formulation of newly synthesized QNT3-18 for development of a skin-whitening agent. *Drug Dev. Ind. Pharm.* **2013**, *39*, 526-533.

(40) **Pillaiyar**, **T**.; Rao, E. V.; Lee, K. C.; Sharma, V. K.; Roh, E.; Kim, Y.; Jung, S.-H.* Structure-activity relationship of naphthaldehydethiosemicarbazones in melanogenesis inhibition. *Bioorg. Med. Chem. Lett.* **2012**, *22*, 886-889.

(39) **Pillaiyar, T**.; Lee, K. C.; Sharma, V. K.; Joo, C.; Cho, W. J.; Roh, E.; Kim, Y.; Jung, S.-H.* Structural requirements of phenylthiourea analogs for their inhibitory activity of melanogenesis and tyrosinase. *Bioorg. Med. Chem. Lett*. **2011**, *21*, 6824-6828.

(38) **Pillaiyar**, **T**.; Lee, K. C.; Sharma, V. K.; Roh, E.; Kim, Y.; Jung, S.-H.* Identification of indoline-2-thione analogs as novel potent inhibitors of α-melanocyte stimulating hormone induced melanogenesis. *Chem. Pharm. Bull.* **2011**, *59*, 1285-1288.

(37) Sharma, V. K.; Hung, D. T.; Lee, K. C.; **Pillaiyar**, **T**.; Kang, J. S.; Kim, H. M.; Jung, S.-H.* Effect of the isosteric replacement of the phenyl motif with furyl (or thienyl) of 4-phenyl-*N*-arylsulfonylimidazolones as broad and potent anticancer agents. *MedChemCommun (or RSC MedChem.).* **2011**, *2*, 731-734.

(36) **Pillaiyar**, **T**.; Lee, K. C.; Sharma, V. K.; Roh, E.; Kim, Y.; Jung, S.-H.* Ketothiosemicarbazones: Structure-activity relationships for their melanogenesis inhibition. *Bioorg. Med. Chem. Lett.* **2011**, *21*, 3527-3530.

(35) Santhosh, S.; Kim, N. S.; **Pillaiyar**, **T**.; Sharma, V. K.; Lee, K. C.; Kang, J. S.; Kim, H. M.; Jung, S.-H.* Structure–activity relationship studies of novel arylsulfonylimidazolidinones for their anticancer activity. *Eur. J. Med. Chem.* **2011**, *46*, 3258-3264.

(34) **Pillaiyar**, **T**.; Lee, K. C.; Sharma, V. K.; Yun, J. H.; Roh, E.; Kim, Y.; Jung, S.-H.* Structural requirements of (*E*)-6-benzylidene-4a-methyl-4,4a,5,6,7,8-hexahydronaphthalen-2(*3H*)-one derivatives as novel melanogenesis inhibitors. *Bioorg. Med. Chem. Lett.* **2011**, *21*, 1922-1925.

(33) Lee, K. C.; **Pillaiyar**, **T**.; Sharma, V. K.; Roh, E.; Kim, Y.; Jung, S.-H.* Structural requirements of benzaldehydethiosemicarbazones as inhibitors of melanogenesis. *Bioorg. Med. Chem. Lett.* **2010**, *20*, 6794-6796.

(32) **Pillaiyar**, **T**.; Sharma, V. K.; Lee, K. C.; Yun, C. Y.; Kim, Y.; Jung, S.-H.* Refinement of the pharmacophore of 3,4-dihydroquinazoline-2(*1H*)-thiones for their anti-melanogenesis activity. *Bioorg. Med. Chem. Lett.* **2010**, *20*, 4771-4773.

(31) **Pillaiyar**, **T**.; Lee, K. C.; Sharma, V. K.; Yun, J. H.; Kim, Y.; Jung, S.-H.* Design and synthesis of novel hydroxyalkylaminomethylchromones for their IL-5 inhibitory activity. *Bioorg. Med. Chem.* **2010**, *18*, 4625-4629.

(30) **Pillaiyar**, **T**.; Yang, H. M.; Sharma, V. K.; Kim, Y.; Jung, S.-H.* The scope of thallium nitrate oxidative cyclization of chalcones; Synthesis and evaluation of isoflavone and aurone analogs for their inhibitory activity against interleukin-5. *Bioorg. Med. Chem.* **2010**, *18*, 4441-4445.

(29) Lee, J. H.; **Pillaiyar**, **T**.; Lee, K. C.; Sharma, V. K.; Bang, S. C.; Yun, J. H.; Roh, E.; Kim, Y.; Jung, S.-H.* Novel benzo[*d*]imidazole-2(*3H*)-thiones as potent inhibitors of the *α*-MSH induced melanogenesis in melanoma B16 cells. *Chem. Pharm. Bull.* **2010**, *58*, 918-921.

(28) [$]**Pillaiyar**, **T**.; Le Hoang, T. A.; Lee, K. C.; Bang, S. C.; Sharma, V. K.; Yun, C. Y.; Roh, E.; Hwang, B. Y.; Kim, Y.; Jung, S.-H.* Structural requirement(s) of *N*-phenylthioureas and benzaldehydethiosemicarbazones as inhibitors of melanogenesis in melanoma B16 cells. *Bioorg. Med. Chem. Lett.* **2010**, *20*, 2991-2993. ([$]Top 25 Cited Author in 2010-2011).

(27) **Pillaiyar**, **T**.; Lee, K. C.; Sharma, V. K.; Bang, S. C.; Yun, J. H.; Roh, E.; Kim, Y.; Jung, S.-H.* Synthesis and evaluation of novel chromone analogs for their inhibitory activity against interleukin-5. *Eur. J. Med. Chem.* **2010**, *45*, 2531-2536.

(26) **Pillaiyar**, **T**.; Lee, K. C.; Bang, S. C.; Lee, J. H.; Yun, C. Y.; Roh, E.; Hwang, B. Y.; Kim, Y.; Jung, S.-H.* Evaluation of 3,4-dihydroquinazoline-2(*1H*)-thiones as inhibitors of *α*-MSH induced melanin production in melanoma B16 cells. *Bioorg. Med. Chem.* **2010**, *18*, 1555-1562.

(25) **Pillaiyar**, **T**.; Lee, K. C.; Bang, S. C.; Lee, J. H.; Yun, C. Y.; Roh, E.; Hwang, B. Y.; Kim, Y.; Jung, S.-H.* Inhibitory effect of novel tetrahydropyrimidine-2(*1H*)-thiones on melanogenesis. *Bioorg. Med. Chem.* **2010**, *18*, 1135-1142.

[A2] Peer-reviewed review articles

(24) Pillaiyar, T.;* Laufer, S.;* A patent review of CXCR7 modulators (2019-present), Expert Opinion on Therapeutic Patents, **2025**, *35*, 543-569.

(23) Krüger, N.; Laufer, S.; Pillaiyar, T.* An Overview of Progress in Human Metapneumovirus (hMPV) Research: Structure, Function, and Therapeutic Opportunities. *Drug Discov. Today,* **2025,** *30*, 104364.

(22) Guo, M.; [#] Xiong, M.; [#] Peng, J.; [#] Guan, T.; Su, H.; Huang, Y.; Yang, C-G.; Li, Y.; Boraschi, D.; **Pillaiyar, T.;** Wang, G.; * Yi, C.;* Xu, Y.; * Chen, C.* Multi-omics in COVID-19: Driving development of therapeutics and vaccines. *Nat. Sci. Review*. **2023** (just accepted)

(21) Beygi, M.; Alijanianzadeh, M.; Zolghadri, S.; **Pillaiyar, T.**; Garcia-Molina, P.; Garcia-Canovas, F.; Munoz-Munoz, J.L.; Saboury, A.A.* Hyperpigmentation treatment: From traditional management of melanogenesis to novel nano-based strategies. *Biochem. Pharmacol,.* **2023** (just accepted).

(20) Kronenberger, T.; [¥] Laufer, S.A.; **Pillaiyar, T.** [¥,] * COVID-19 therapeutics: small molecule drugs development targeting SARS-CoV-2 main protease. *Drug Discov. Today* **2023**, *28*, 103579.

(19) Stäubert, C.;* Wozniak, M.; Dupuis, N.; Laschet, C.; **Pillaiyar, T.;** Hanson, J.* Superconserved receptors expressed in the brain: Expression, function, motifs, and evolution of an orphan receptor family. *Pharmacol. Ther.* **2022**, *240*, 108217.

(18) Bayrak, A.; Hanson, J.; Laufer, S.; **Pillaiyar T**.* Super-conserved receptors expressed in the brain: biology and medicinal chemistry efforts. *Future Med. Chem.* **2022**, *14*, 899-913.

(17) Manickam, M.; Meenakshisundaram, S.; **Pillaiyar**, **T**.* Activating endogenous resolution pathway by soluble epoxide hydrolase inhibitors for the management of COVID-19. *Arch. Pharm.* (Weinheim). **2022,** *355*, e2100367.

(16) **Pillaiyar, T**.;* Laufer, S.* Kinases as potential therapeutic targets for anti-coronaviral therapy. *J. Med. Chem.* **2022***, 65,* 955–982.

(15) Pallaval, V.B.; Kanithi, M.; Meenakshisundaram, S.; Jagadeesh, A.; Alavala, M.; **Pillaiyar, T.;** Manickam, M.; Chidipi, B.* Chloroquine analogs: An overview of natural and synthetic quinolines as broad spectrum antiviral agents. *Curr. Pharm. Des.* **2021**, *27*, 1185-1193.

(14) **Pillaiyar, T**.; * Wendt, L.; Manickam, M.; Easwaran, M. The recent outbreaks of human coronaviruses: A medicinal chemistry perspective. *Med. Res. Rev.* **2021,** *41*, 72-135.

(13) **Pillaiyar**, **T**.; * Sangeetha, M.; Manickam, M.; Murugesan, S. A medicinal chemistry perspective of drug repositioning: Recent advances and challenges in drug discovery. *Eur. J. Med. Chem.* **2020**, *195*, 112275.

(12) **Pillaiyar**, **T**.; * Sangeetha, M.; Manickam, M. Recent discovery and development of inhibitors targeting human coronaviruses. *Drug Discov. Today* **2020**, *25*, 668-698.

(11) **Pillaiyar**, **T**.;* Namasivayam, V.; Manickam, M.; Jung, S.-H. Inhibitors of melanogenesis: An updated review. *J. Med. Chem.* **2018**, *61*, 7395-7418.

(10) **Pillaiyar**, **T**.;* Manickam, M.; Jung, S.-H. Recent development of signaling pathways inhibitors of melanogenesis. *Cell. Signal*. **2017**, *40*, 99-115.

(9) **Pillaiyar**, **T**.;* Manickam, M.; Namasivayam, V. Skin whitening agents: Medicinal chemistry perspective of tyrosinase inhibitors. *J. Enzyme Inhib. Med. Chem.* **2017**, *32*, 403-425.

(8) **Pillaiyar**, **T**.;* Manickam, M.; Jung, S-H. Down regulation of melanogenesis: Drug discovery and therapeutic options. *Drug Discov. Today.* **2017***, 22*, 282-298.

(7) **Pillaiyar**, **T**.;* Manickam, M.; Namasivayam, V.; Hayashi, Y.; Jung, S.-H.* An overview of severe acute respiratory syndrome-coronavirus (SARS-CoV) 3CL protease inhibitors: Peptidomimetics and small molecule chemotherapy. *J. Med. Chem.* **2016**, *59*, 6595-6628.

(6) **Pillaiyar**, **T**.;* Manickam, M.; Namasivayam, V. Macrocyclic hepatitis C virus NS3/4A protease inhibitors: An overview of medicinal chemistry. *Curr. Med. Chem.* 2**016**, *23*, 3404-3447.

(5) **Pillaiyar**, **T**.;* Manickam, M.; Jung, S.-H. Inhibitors of melanogenesis: A patent review (2009-2014). *Expert Opin. Ther. Pat*. **2015**, *25*, 775-88.

(4) **Pillaiyar**, **T**.;* Manickam, M.; Jung, S.-H. Middle East respiratory syndrome-coronavirus (MERS-CoV): An updated overview and pharmacotherapeutics. *Med. Chem.* **2015**, *5*, 361-372.

[A3] Non peer-reviewed publications

(3) Krüger, N.; Kronenberger, T.; Xie, H.; Rocha, C.; Pöhlmann, S.; Su, H.; Xu, Y.;* Laufer, A.S. **Pillaiyar, T**.* Discovery of polyphenolic natural products as SARS-CoV-2 M^{pro} inhibitors for COVID-19. Preprints, November 2022.

(2) **Pillaiyar**, **T**.; * Sedaghati, M.; Schnakenburg, G.; Reaction of indoles with aromatic fluoromethyl ketones: An efficient synthesis of trifluoromethyl-indolyl-phenylethanols using K_2CO_3/nBu_4PBr in water. *Beilstein Archives **2020** (1), 17.*

(1) Lee, K. C.; Kim, M. S.; **Pillaiyar**, **T**.; Sharma, V. K.; Park, K. L.; Kim, Y.; Jung, S.-H.* Effective conformation of chalcones for their inhibitory activity against interleukin-5. *J. Pharm. Sci. (CNU)*. **2010**, *25*, 16-23.

[A4] Patents

(3) Laufer, S.; Gawaz, M.; **Pillaiyar, T**. Bayrak, A.; Rohlfing, A.-K.; Dicenta-Baunach, V.; Szpakowska, M.; Chevigné, A. Ackr3 modulators for cardiovascular or antiplatelet therapy. **WO2025196057A1**

(2) Müller, C.E.; Olmos, V.H.; Elgokha, A.; El-Tayeb, A.; Rashed, M.; Hockemeyer, J.; Malik, E.; Alshaibani, S.; Ivanov, A.; Rosi, F.; Werner, S.; **Pillaiyar, T**. Abdelrahman, A.; Namasivayam, V. Glycine derivatives with p2x4 receptor-blocking activity as diagnostics and for the treatment of pain, inflammation, cancer, and other p2x4 receptor-related diseases. **WO2024133499A1**

(1) Alnouri, W.; Hockemeyer, J.; Marx, D.; Müller, C.E.; Namasivayam, V.; Riedel, Y.; Thimm, D.; Clemen, S.; Gedschold, R.; **Pillaiyar, T**. 3-Substituted xanthine derivatives as mrgprx4 receptor modulators. **WO2022079245A1**

V.;

[B] Book Chapter (International)

(1) **Pillaiyar, T.;** Manickam, M.; Meenakshisundaram, S.; Benjamine, A.J. Candidate drugs for the potential treatment of coronavirus diseases. In Silico Modeling of Drugs Against Coronaviruses: Computational Tools and Protocols. Methods in Pharmacology and Toxicology. Springer Nature-Springer US. 2021.

[C] Conference Presentation, Proceedings, and Scientific talks

[Poster presentation]

(29) **Pillaiyar, T**.; Flurry, P.; Sylvester, K.; Gütschow, M.; Chu, H.; Yang, S.; Laufer, S.; and Müller, C.E. Development of a new class of Mpro inhibitors with potent activity against SARS-CoV-2 and variants. EFMC-ASMC 2023. IX EFMC International Symposium on Advances in Synthetic and Medicinal Chemistry. September 1-5, **2024**, Rome, Italy.

(28) **Pillaiyar, T**.; Flurry, P.; Sylvester, K.; Gütschow, M.; Chu, H.; Yang, S.; Laufer, S.; and Müller, C.E. EFMC-ACSMEDI Medicinal Chemistry Frontiers 2024. April 8- 11, **2024**, Utrecht, Netherlands.

(27) **Pillaiyar, T**.; Flury, P.; Krüger, N.; Sylvester. K.; Gütschow M.; Müller, C.E and Laufer, S.A. Approaches for developing antivirals against fatal human coronaviruses. EFMC-ASMC 2023. IX EFMC International Symposium on Advances in Synthetic and Medicinal Chemistry. September 3-7, **2023**, Zagreb, Croatia.

(26) **Pillaiyar, T**.; Flury, P.; Krüger, N.; Su,H.; Schäkel, L.; Barbosa Da Silva, E.; Eppler, O.; Kronenberger, T.; Nie, T.; Luedtke, S.; Rocha, C.; Sylvester. K.; Petry, M. R.I.; McKerrow, J.H.; Poso A.; Pöhlmann, S.; Gütschow M.; O'Donoghue, A. J.; Xu, Y.; Müller, C.E and Laufer, S.A. Thioesters as novel SARS-CoV-2 main protease inhibitors: Design, synthesis, enzyme inhibition, structure-activity relationship, antiviral activity, and X-ray structure determination. ACS Publications Symposium: Biological and Medicinal Chemistry, March 6-8, **2023**, Bonn, Germany.

(25) **Pillaiyar, T**.; Wozniak, M, Abboud, D.; Laufer, S.A. and Hanson, J. Discovery and development of Ligands for Super-Conserved Receptors Expressed in the Brain (SREB). 4GPCR international symposium, September 26-29, **2022**, Leipzig, Germany. (Poster and Flash poster-oral presentation)

(24) **Pillaiyar, T**.; Flury, P.; Krüger, N.; Su, H.; Schäkel, L.; Barbosa Da Silva, E.; Eppler, O.; Kronenberger, T.; Nie, T.; Luedtke, S.; Rocha, C.; Sylvester. K.; Petry, M. R.I.;

McKerrow, J.H.; Poso A.; Pöhlmann, S.; Gütschow M.; O'Donoghue, A. J.; Xu, Y.; * Müller, C.E and Laufer, S.A. Design, synthesis, and biological evaluation of small molecules as novel sars-cov-2 main protease inhibitors. EFMC-ISMC 2022. XXVII EFMC International Symposium on Medicinal Chemistry. September 4-8, 2022, Nice, France.

(23) **Pillaiyar, T.;** Flury, P.; Schäkel, L.; Petry, M. R.I.; Gütschow, M.; Müller, C.E.; Laufer, S. Design, synthesis and biological evaluation of SARS-CoV-2 main protease inhibitors. DPhG Annual Meeting **2021,** Trends and Perspectives in Pharmaceutical Sciences. September 28 - October 01, 2021 – Virtual Meeting. Germany.

(22) Schäkel, L.; Breidenbach, J.; Lemke, C.; **Pillaiyar, T.;** Al Hamwi, G.; Diett, M.; Gedschold, R.; Lopez, V.; Mirza, S.; Namasivayam, V.; Schiedel, A.C.; Sylvester, K.; Thimm, D.; Vielmuth, C.; Phuong Vu, L.; Zyulina, M.; Gütschow, M.; Müller, C.E. Targeting the Main Protease of SARS-CoV-2: Design and Development of Potent Inhibitors of the SARS-CoV-2 Main Protease. GDCh Frontiers in Medicinal Chemistry. March 8-10,2021. Annual meeting, Online, Germany.

(21) Lemke, C.; Breidenbach, J.; Schäkel, L.; **Pillaiyar, T.;** Al Hamwi, G.; Diett, M.; Gedschold, R.; Lopez, V.; Mirza, S.; Namasivayam, V.; Schiedel, A.C.; Sylvester, K.; Thimm, D.; Vielmuth, C.; Phuong Vu, L.; Zyulina, M.; Müller, C.E.; Gütschow, M.; Establishment and optimization of a SARS-CoV-2 main protease in vitro assay GDCh Frontiers in Medicinal Chemistry. March 8-10,2021. Annual meeting, Online, Germany.

(20) **Pillaiyar**, **T**.; Müller, C. E. Design, synthesis and structure-activity relationships of agonists for the proinflammatory lipid-activated G protein-coupled receptor GPR84. ACS Fall 2020 virtual meeting & expo: Moving chemistry from bench to market, August 17-20, **2020**.

(19) **Pillaiyar**, **T**.; Müller, C. E. General synthesis of unsymmetrical 3,3'-(aza)diindolylmethane derivatives. BOSS XVI 16th Belgian Organic Synthesis Symposium, Brussels, Belgium, July 8-13, **2018**.

(18) **Pillaiyar**, **T**.; Köse, M.; Sylvester, K.; Thimm, D.; Borges, G.; von Kügelgen, I.; Müller C. E. Diindolylmethane derivatives–potent agonists of the immunostimulatory orphan G protein-coupled receptor GPR84. Frontiers in Medicinal Chemistry 2017 in Bern, Switzerland, February 12-15, **2017**.

(17) **Pillaiyar**, **T**.; Köse, M.; Attah, I.; Müller, C. E. Diindolylmethanes (DIMs): From nutrients to multitarget anti-cancer drugs. MuTaLig COST ACTION CA15135, WG meeting 2016, Budapest, Hungary, November 19-20, **2016**.

(16) **Pillaiyar**, **T**.; Baqi, Y.; Alshaibani, S.; Tokar, Y.; Abdelrahman, A.; Namasivayam, V.; Kostenis, E.; Müller, C. E. Structure-activity relationship studies of 2-carboxy-1*H*-indole-3-propionic acid derivatives as potent GPR17 agonists. Frontiers in Medicinal Chemistry 2016 (International Conference), Bonn, Germany, July 14-16, **2016**.

(15) **Pillaiyar**, **T**.; Baqi, Y.; Alshaibani, S.; Abdelrahman, A.; Namasivayam, V.; Kostenis, E.; Müller, C. E. Design, synthesis and structure-activity relationship studies of 4/6-substituted 2-carboxy-1*H*-indole-3-propionic acid derivatives as GPR17 agonists. Purines 2014 in Bonn (International Conference), Bonn, Germany, July 23-27, **2014**.

(14) **Pillaiyar**, **T**.; Köse, M.; Sylvester, K.; Müller, C. E. Development of small molecule agonists for GPR84, an orphan G-protein coupled receptor with potential as a drug target. Network Meeting of the Alexander von Humboldt Foundation, Humboldt-Universität zu Berlin, Berlin, Germany, April 9-11, **2014**.

(13) Konno, S.; Nakada, K.; **Pillaiyar**, **T**.; Kakiuchi, R.; Yamamoto, T.; Yamazaki, Y.; Yakushiji, F.; Akaji, K.; Kiso, Y.; Kawasaki, Y.; Freire, E.; Hayashi. Y. Development of SARS coronavirus 3CL protease inhibitors with an electrophilic aryl ketone structure. 8th AFMC international medicinal chemistry symposium, Tokyo, Japan, November 29 to December 2, **2011**.

(12) Konno, S.; Nakada, K.; **Pillaiyar**, **T**.; Yamamoto, T.; Yamazaki, Y.; Yakushiji, F.; Akaji, K.; Kiso, Y.; Kawasaki, Y.; Freire, E.; Hayashi, Y. Peptidic cysteine protease inhibitors with an arylketone warhead for SARS Coronavirus: The sixth peptide engineering meeting (PEM6), Atlanta, USA, October 2-5, **2012**.

(11) Taguchi, A.; Nishiguchi, S.; Shiozuka, M.; **Pillaiyar**, **T**.; Yamazaki, Y.; Yakushiji, F.; Kiso, Y.; Nonomura, Y.; Matsuda, R.; Hayashi, Y. Identification of negamycin analogs with readthrough-promoting activity as potential drug candidates for Duchenne muscular dystrophy. 244th ACS national meeting & exposition, Philadelphia, USA, August 19-23**,** **2012**.

(10) Yamamoto, T.; Konno, S.; Nakada, K.; **Pillaiyar**, **T**.; Yamazaki, Y.; Yakushiji, F.; Akaji, K.; Kawasaki, Y.; Freire, E.; Hayashi, Y. Development of tripeptide-type SARS coronavirus 3CL protease inhibitors with an electrophilic 2-benzothiazole ketone structure. 244th ACS national meeting & exposition, Philadelphia, USA, August 19-23, **2012**.

(9) Yamamoto, T.; Konno, X.; Kiyoshi, N.; **Pillaiyar**, **T**.; Kakiuchi, R.; Yamazaki, R.; Wenhua, Y.; Kenichi, R.; Kiso, Y.; Yuko, K.; Freire, E.; Yoshio, H. Development of tripeptide type SARS coronavirus 3CL protease inhibitor-P4 and structure-activity

relationship studies at the site. Pharmaceutical Society of Japan 132nd annual meeting, Sapporo, Japan, March **2012**.

(8) **Pillaiyar**, **T**.; Jung, S.-H.; Lee, K. C.; Kim, M.; Sharma, V. K.; Yun, J. H.; Roh, E.; Kim, Y. Design and synthesis of novel hydroxyalkylamino derivatives of chromone for their IL-5 inhibitory activity. The 2010 International Chemical Congress of the Pacific Basin Societies. Honolulu, Hawaii, USA, December 15-20, **2010**.

(7) **Pillaiyar**, **T**.; Lee, K. C.; Kim, M. S.; Sharma, V. K.; Yun, J. H.; Roh, E.; Kim, Y.; Jung, S.-H. Phenylthioureas are inhibitors of melanogenesis in melanoma B16 cells. Convergence networking of pharmaceutical sciences for drug discovery by the Pharmaceutical Society of Korea. EXCO, Daegu, Korea, April **2010**.

(6) **Pillaiyar**, **T**.; Le Hoang, T. A.; Lee, K. C.; Kim, M. S.; Sharma, V. K.; Yun, J. H.; Roh, E.; Kim, Y.; Jung, S.-H. Structural requirements of novel chromone analogues for their inhibitory activity against interleukin-5. Convergence networking of pharmaceutical sciences for drug discovery by the pharmaceutical society of Korea. EXCO, Daegu, Korea, April **2010**.

(5) **Pillaiyar**, **T**.; Lee, K. C.; Kim, M. S.; Sharma, V. K.; Yun, J. H.; Roh, E.; Kim, Y.; Jung, S.-H. Novel amino alcohol derivatives of chromone for their IL-5 inhibitory activity. Convergence networking of pharmaceutical sciences for drug discovery by the pharmaceutical society of Korea. EXCO, Daegu, Korea, April **2010**.

(4) **Pillaiyar**, **T**.; Lee, K. C.; Babu Kumar, S.; Yun, C. Y.; Hwang, B. Y.; Kim, Y.; Jung, S.-H. Hypopigmenting effect of tetrahydropyrimidine-2(1*H*)-thione analogs. 7th AFMC (Asian federation for medicinal chemistry) international medicinal chemistry symposium, AIMECS 09, Queensland, Australia, August 23-27, 2**009**.

(3) **Pillaiyar, T**.; Lee, K. C.; Babu Kumar, S.; Jung, S.-H. Inhibitory effects of tetrahydropyrimidine-2(1*H*)-thiones on B16 melanoma cell. 103rd spring meeting of the Korean Chemical Society. Convention and Exhibition. Korea, April 16-17, **2009**.

(2) **Pillaiyar, T**.; Bang, S. C.; Le Hoang, T. A.; Lee, K. C.; Lee, J. H.; Chang, E. J.; Lee, W. H.; Kim, Y.; Jung, S.-H. Analogues of tetrahydropyrimidine-2(1*H*)-thione as inhibitors of IBMX-induced melanin production. Proceedings of the fall international convention of the Pharmaceutical Society of Korea, Seoul, Korea, October **2008**.

(1) **Pillaiyar, T**.; Bang, S. C.; Le Hoang, T. A.; Lee, K. C.; Lee, J. H.; Chang, E. J.; Lee, W. H.; Kim, Y.; Jung, S.-H. Novel benzimidazole-2-thione and their hypopigmenting effect. Proceedings of the spring international convention of the Pharmaceutical Society of Korea, Jeju, Korea, April **2008**.

List of Scientific Talks

(18) **Pillaiyar, T**.* Flurry, P.; Sylvester, K.; Gütschow, M.; Chu, H.; Yang, S.; Laufer, S.; and Müller, C.E. Covalent Dipeptide Inhibitors Targeting SARS-CoV-2 Mpro and Its Variants with Strong Antiviral Activity: Design, Synthesis, Enzyme Inhibition, Structural Determination, and Antiviral Activity. International Conference on Anti-infectives **2025** (ICA 2025). May 20 - 22, 2025. Saarland University, Saarbrücken, Germany. Oral presentation

(17) **Pillaiyar, T**.* Bayrak, A.; Szpakowska, M., Baunach, V-D.; Rohlfing, A. K.; Rasch, A.; Chevigné, A.; Gawaz, M. Laufer, S.A.; First-in-Class Novel Small-Molecule ACKR3 Agonists for Modulation of Platelet Degranulation: Design, Synthesis, Biological Studies and Structure-Activity Relationship. Frontiers in Medicinal Chemistry. April 1-4, 2025, Erlangen, Germany. Short oral presentation.

(16) **Pillaiyar, T**.; Flurry, P.; Sylvester, K.; Harris, R.S.; Laufer, S.; and Müller, C.E. SARS-COV-2 Main Protease Inhibitors with Potent Anti-Viral Activity: Design, Synthesis, and Optimization. DPhG-Jahrestagung 2024 / Annual meeting, Münster|, September 23-26. **2024**. Short oral presentation.

(15) **Pillaiyar, T.** Rational Approaches for the Design and Development of the Main Protease Inhibitors for Anticoronaviral Therapy. EFMC-YMCS 2024, 11th EFMC Young Medicinal Chemists' Symposium. September 1-5, **2024**, Rome, Italy.

(14) **Pillaiyar, T**.; Flurry, P.; Sylvester, K.; Gütschow, M.; Chu, H.; Yang, S.; Laufer, S.; and Müller, C.E. The development of a new generation of Mpro inhibitors with potent activity against SARS-CoV-2 and variants. Frontiers in Medicinal Chemistry, March 17 - 20, 2024 in Munich, Germany. **Innovation award**.

(13) **Pillaiyar, T.;** Flury, P.; Gütschow, M.; Laufer, S. Müller, C.E. Development of next-generation broad-spectrum antiviral drugs: design, synthesis, and biological evaluation. DPhG annual meeting. October 7–10, **2023**, Tübingen, Germany.

(12) **Pillaiyar, T.;** Flury, P.; Eppler,O.; Schäkel, L.; Da Silva, E.B.; Sud, H.; Nied,T.; Luedtke, S.; Rocha, C.; Petry, M.R.I.; Krüger, N.; O'Donoghue, A.J.; Xu,Y.; Gütschow, M.; Müller, C.E. & Laufer, S. Small molecule inhibitors of SARS-CoV-2 Mpro: Enzyme inhibition and mechanism, antiviral activity, structure-activity relationship, and X-ray structure determination. 3rd MMCS: Shaping Medicinal Chemistry for the New Decade. July 27–29, **2022**, Rome, Italy.

(11) **Pillaiyar, T.;** Flury, P.; Schäkel, L.; Petry, M.R.I.; Gütschow, M.; Müller, C.E. & Laufer, S. Design, synthesis and biological evaluation of SARS-CoV-2 Main Protease inhibitors. DPhG Annual Meeting 2021, Trends and Perspectives in Pharmaceutical Sciences, September 28 –

October 01, **2021-**Virtual Meeting, Germany.

(10) **Pillaiyar, T.;** Schäkel, L.; Petry, M.R.I.; Gütschow, M.;. Müller, C.E. & Laufer, S. Design and development of potent inhibitors targeting the main protease of SARS-CoV-2. HIPS Symposium 2021, May 20, **2021**, Online meeting, Germany.

(9) **Pillaiyar, T.;**. Small-molecule approaches for the development of anti–SARS–CoV–2 drugs. Innovative & Sustainable Developments in Material & Medicinal Chemistry. Nirmala College for Women, July 19-20, **2021**. Coimbatore – 641018, Tamil Nadu, India. Online meeting.

(8) **Pillaiyar, T**.; Strategies for the development of antivirals targeting SARS-CoV-1&2, webinar on frontiers in chemical sciences, organized by Department of Chemistry, National Institute of Technology, Rourkela, Odisha - 769 008, 6th to 10th July **2020**. India. Online meeting.

(7) **Pillaiyar, T.**; "Medicinal chemistry efforts toward the development of SARS-CoV and COVID-19 therapeutics, International Webinar Series on "Futuristic Medicinal and Materials Chemistry," organized by the Department of Chemistry, Crescent Institute of Science & Technology, Tamil Nadu, India, 9th-13th June **2020.** Online meeting.

(6) **Pillaiyar, T.**; Drug development and Medicinal Chemistry research toward SARS-CoV and COVID-19 therapeutics. International Webinar on COVID-19: Research Strategies & Therapeutics (IWCRST), Adikavi Nannaya University, Rajamahendravaram, Andhra Pradesh, India 533296. 6th June **2020**. Online meeting.

(5) **Pillaiyar, T**.; Köse, M.; Müller, C. E. Design, synthesis and structure-activity relationships of agonists for the immunostimulatory orphan G protein-coupled receptor GPR84. EFMC-ISMC 2018, XXV EFMC International Symposium on Medicinal Chemistry, Ljubljana, Slovenia, September 2-6, **2018**. (**DAAD travel grant awarded**).

(4) **Pillaiyar, T**.; Köse, M.; Sylvester, K.; Müller, C. E. Development of potent small molecule agonists for the immunostimulatory orphan G protein-coupled receptor GPR84. International PhD Students/Postdoc meeting of the German Pharmaceutical Society (DPhG), Bad Dürkheim, Germany, March 14-16, **2018**.

(3) **Pillaiyar, T**.; Köse, M.; Mahardhika, A. B.; Schoeder, C. T.; Müller, C. E. Diindolylmethanes (DIMs) as novel anti-cancer agents targeting GPR84 and cannabinoid receptors. EpiChemBio (CM1406) and MuTaLig COST (CA15135) actions joint meeting, Annual meeting 2017, Porto, Portugal, September 22-24, **2017**.

(2) **Pillaiyar, T**.; Lee, K. C.; Babu Kumar, S.; Jung, S.-H. Design, synthesis and evaluation of tetrahydropyrimidine-2(1*H*)-thiones on B16 melanoma cell. Pharmaceutical Society of Korea (PSK), Seoul, South Korea, June **2009** (**Award winner**).

(1) **Pillaiyar, T**.; Bang, S. C.; Le Hoang, T. A.; Lee, K. C.; Lee, J. H.; Chang, E. J.; Lee, W. H.; Kim, Y.; Jung, S.-H. Synthetic analogues of tetrahydropyrimidine-2-(1*H*)-thione as inhibitors of IBMX-induced melanin production. International conference on industrialization of institutional research on phytomedicines, PSGR Krishnamal College for women, Coimbatore, Tamilnadu, India, January 8-9, **2009**.