

## “Code Biology Database – A List of Biological Codes”

Compiled and updated by

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Number	Code Name	Descriptive Name(s)	Full Citation(s), Hyperlinked to Source
1	Acoustic code	The Acoustic Codes	<a href="#">Farina, A. and N. Pieretti (2014). "Acoustic Codes in Action in a Soundscape Context." <i>Biosemiotics</i> 7(2): 321-328.</a> <a href="#">Malavasi, R., K. Kull and A. Farina (2014). "The Acoustic Codes: How Animal Sign Processes Create Sound-Topes and Consortia via Conflict Avoidance." <i>Biosemiotics</i> 7(1): 89-95.</a> <a href="#">Farina, A. (2019). "Acoustic codes from a rural sanctuary: How ecoacoustic events operate across a landscape scale." <i>Biosystems</i> 183: 103986.</a>
2	Actin code	The Actin Code <b>SEE also <a href="#">Cytoskeleton Code</a></b>	<a href="#">Vedula, P. and A. Kashina (2018). "The makings of the 'actin code': regulation of actin's biological function at the amino acid and nucleotide level." <i>J Cell Sci</i> 131(9).</a>
3	Adenylation code	The Adenylation Code	<a href="#">Stachelhaus, T., H. D. Mootz and M. A. Marahiel (1999). "The specificity-conferring code of adenylation domains in nonribosomal peptide synthetases." <i>Chem Biol</i> 6(8): 493-505.</a> <a href="#">Davis, R. and Y. Shi (2014). "The polyadenylation code: a unified model for the regulation of mRNA alternative polyadenylation." <i>J Zhejiang UnivSci B</i> 15(5): 429-437.</a> <a href="#">Zhang, F., Y. Wang, Q. Jiang, Q. Chen, L. Karthik, Y.-L. Zhao and Z. Li (2018). "Substrate selection of adenylation domains for nonribosomal peptide synthetase (NRPS) in bacillamide C biosynthesis by marine <i>Bacillus atrophaeus</i> C89." <i>Journal of Industrial Microbiology &amp; Biotechnology</i> 45(5): 335-344.</a>

4	Adhesion code	The Adhesion Code <b>SEE also <a href="#">Synaptic code(s)</a></b> <b>SEE also <a href="#">Cadherin code(s)</a></b>	<p><a href="#">Redies, C. and M. Takeichi (1996). "Cadherins in the developing central nervous system: an adhesive code for segmental and functional subdivisions." Dev Biol 180(2): 413-423.</a></p> <p><a href="#">Shapiro, L. and D. R. Colman (1999). "The diversity of cadherins and implications for a synaptic adhesive code in the CNS." Neuron 23(3): 427-430.</a></p> <p><a href="#">Faria, M. (2018). "Aggregating, polarizing, networking – The evolution of cell adhesion codes." Biosystems 164: 60-67.</a></p> <p><a href="#">Tsai, T. Y., M. Sikora, P. Xia, T. Colak-Champollion, H. Knaut, C. P. Heisenberg and S. G. Megason (2020). "An adhesion code ensures robust pattern formation during tissue morphogenesis." Science 370(6512): 113-116.</a></p>
5	Allosteric code	The Allosteric Code	<p><a href="#">Daugherty, M. A., M. A. Shea, J. A. Johnson, V. J. LiCata, G. J. Turner and G. K. Ackers (1991). "Identification of the intermediate allosteric species in human hemoglobin reveals a molecular code for cooperative switching." Proc Natl Acad Sci U S A 88(4): 1110-1114.</a></p> <p><a href="#">Goldbeck, R. A., R. M. Esquerra, D. S. Kliger, J. M. Holt and G. K. Ackers (2004). "The molecular code for hemoglobin allostery revealed by linking the thermodynamics and kinetics of quaternary structural change. 2. Cooperative free energies of (alphaFeCObetaFe)2 and (alphaFebetaFeCO)2 T-state tetramers." Biochemistry 43(38): 12065-12080.</a></p> <p><a href="#">Armour-Garb, I., I. S. M. Han, B. S. Cowan and K. M. Thayer (2022). "Variable Regions of p53 Isoforms Allosterically Hard Code DNA Interaction." J Phys Chem B.</a></p>
6	Angiotensin code	The Angiotensin Receptor Code	<p><a href="#">Sadybekov, A. and V. Katritch (2020). "Breaking the Enigma Code of Angiotensin II Type 2 Receptor Signaling." Structure 28(4): 390-392.</a></p>
7	Antibiotic resistance code	The Antibiotic Resistance Codes	<p><a href="#">Lo, S. W., N. Kumar and N. E. Wheeler (2018). "Breaking the code of antibiotic resistance." Nat Rev Microbiol 16(5): 262.</a></p>
8	Apoptosis code	The Apoptosis Code	<p><a href="#">Basañez, G. and J. M. Hardwick (2008). "Unravelling the bcl-2 apoptosis code with a simple model system." PLoSBiol 6(6): e154.</a></p> <p><a href="#">Füllgrabe, J., N. Hajji and B. Joseph (2010). "Cracking the death code: apoptosis-related histone modifications." Cell Death Differ 17(8): 1238-1243.</a></p>

			<p><a href="#">Wook Choi, D. and C. Yong Choi (2014). "HIPK2 modification code for cell death and survival." Mol Cell Oncol 1(2): e955999.</a></p> <p><a href="#">Rothlin, C. V. and S. Ghosh (2020). "Cracking the Cell Death Code." Cold Spring Harb Perspect Biol 12(5).</a></p>
9	Archetype codes	The Archetype Codes	<a href="#">Major, J. C. (2021). "Archetypes and code biology." Biosystems 208: 104501.</a>
10	Area code	The Area / Cell Recognition Code	<p><a href="#">Hood, L., H. V. Huang and W. J. Dreyer (1977). "The area-code hypothesis: The immune system provides clues to understanding the genetic and molecular basis of cell recognition during development." Journal of Supramolecular Structure 7(3-4): 531-559.</a></p> <p><a href="#">Springer, T. A. (1993). "Signals on endothelium for lymphocyte recirculation and leukocyte emigration: the area code paradigm." Harvey Lect 89: 53-103.</a></p> <p><a href="#">Liu, C. Y. (2020). "β7 Gives Tregs a Gut Area Code." Cell Mol Gastroenterol Hepatol 9(3): 543-544.</a></p>
11	Arginine code	The (Postranslational) Arginine Code <b>SEE also <a href="#">Posttranslational Codes</a></b>	<a href="#">Holdermann, I., N. H. Meyer, A. Round, K. Wild, M. Sattler and I. Sinning (2012). "Chromodomains read the arginine code of post-translational targeting." Nat Struct Mol Biol 19(2): 260-263.</a>
12	Arrestin code	The Arrestin Receptor Code	<a href="#">Draper-Joyce, C. J. and A. Christopoulos (2018). "Strength in numbers-an arrestin interaction code." Nat Struct Mol Biol 25(6): 437-439.</a>
13	Auxin code	The Auxin Metabolism Code	<a href="#">Campos, M. L. (2021). "Breaking the code of auxin metabolism: an additional role for DIOXYGENASE FOR AUXIN OXIDATION 1." Plant Physiol 187(1): 7-8.</a>
14	Axon guidance code	The Axon Guidance Codes	<p><a href="#">Goodhill, G. J. (2003). "A theoretical model of axon guidance by the Robo code." Neural Comput 15(3): 549-564.</a></p> <p><a href="#">Shirasaki, R., J. W. Lewcock, K. Lettieri and S. L. Pfaff (2006). "FGF as a target-derived chemoattractant for developing motor axons genetically programmed by the LIM code." Neuron 50(6): 841-853.</a></p> <p><a href="#">Zarin, A. A., A. C. Daly, J. Hülsmeier, J. Asadzadeh and J. P. Labrador (2012). "A GATA/homeodomain transcriptional code regulates axon guidance through the Unc-5 receptor." Development 139(10): 1798-1805.</a></p>

			<a href="#">Kohl, A., T. Marquardt, A. Klar and D. Sela-Donenfeld (2015). "Control of axon guidance and neurotransmitter phenotype of dB1 hindbrain interneurons by Lim-HD code." J Neurosci 35(6): 2596-2611.</a>
15	BAFF code	The BAFF Immune Code	<a href="#">Mackay, F. and P. Schneider (2009). "Cracking the BAFF code." Nat Rev Immunol 9(7): 491-502.</a>
16	Bile code	The Bile Acid Code	<a href="#">Gadaleta, R. M., M. Cariello, L. Crudele and A. Moschetta (2022). "Bile Salt Hydrolase-Competent Probiotics in the Management of IBD: Unlocking the "Bile Acid Code"." Nutrients 14(15).</a>
17	Binaural code	The Binaural Code	<a href="#">Encke, J. and M. Dietz (2022). "A hemispheric two-channel code accounts for binaural unmasking in humans." CommunBiol 5(1): 1122.</a>
18	Bioelectric code	The Bioelectric Code	<a href="#">Tseng, A. and M. Levin (2013). "Cracking the bioelectric code: Probing endogenous ionic controls of pattern formation." Commun Integr Biol 6(1): e22595.</a> <a href="#">Levin, M. and C. J. Martyniuk (2018). "The bioelectric code: An ancient computational medium for dynamic control of growth and form." Biosystems 164: 76-93.</a> <a href="#">Silver, B. B. and C. M. Nelson (2018). "The Bioelectric Code: Reprogramming Cancer and Aging From the Interface of Mechanical and Chemical Microenvironments." Front Cell Dev Biol 6: 21.</a>
19	Biosynthetic code	The Biosynthetic Code	<a href="#">Xu, Z., M. Baunach, L. Ding, H. Peng, J. Franke and C. Hertweck (2014). "Biosynthetic code for divergolide assembly in a bacterial mangrove endophyte." Chembiochem 15(9): 1274-1279.</a>
20	Body plan code	The (Epigenetic) Body Plan Code	<a href="#">Elder D (1979) An epigenetic code. Differentiation, 14, 119-122.</a>
21	Brain code	The Universal Brain Code	<a href="#">Rosenberg, R. N. (2021). "The universal brain code a genetic mechanism for memory." J Neurol Sci 429: 118073.</a>
22	Cadherin code	The Cadherin Neuronal Code	<a href="#">Pearson, Caroline A., Samantha J. Butler and Bennett G. Novitch (2014). "Neuronal Organization: Unsticking the Cadherin Code." Current Biology 24(23): R1127-R1129.</a> <a href="#">Bao, M., J. Cornwall-Scoones, E. Sanchez-Vasquez, D. Y. Chen, J. De Jonghe, S. Shadkhoo, F. Hollfelder, M. Thomson, D. M. Glover and M. Zernicka-Goetz (2022). "Stem cell-derived synthetic embryos self-assemble by exploiting cadherin codes and cortical tension." Nat Cell Biol 24(9): 1341-1349.</a>

23	Calcium code	The Calcium Code	<p><a href="#">Thomine, S. (2001). "Cracking the calcium code." Trends Plant Sci 6(11): 501.</a></p> <p><a href="#">Allen, G. J. and J. I. Schroeder (2001). "Combining genetics and cell biology to crack the code of plant cell calcium signaling." Sci STKE 2001(102): re13.</a></p> <p><a href="#">DeFalco, T. A., K. W. Bender and W. A. Snedden (2009). "Breaking the code: Ca<sup>2+</sup> sensors in plant signalling." Biochem J 425(1): 27-40.</a></p> <p><a href="#">Haiech, J. and M. Moreau (2011). "The calcium signal: a universal carrier to code, decode and transduce information." Biochimie 93(12): v.</a></p>
24	Cancer code	The Epigenetic Cancer Code	<p><a href="#">Altarc, S. (1993). "Numerical quadruplet code of human cervical carcinoma tissue proteins." Acta Med Croatica 47(2): 85-87.</a></p> <p><a href="#">Smith, L. T., G. A. Otterson and C. Plass (2007). "Unraveling the epigenetic code of cancer for therapy." Trends Genet 23(9): 449-456.</a></p> <p><a href="#">New, M., H. Olzscha and N. B. La Thangue (2012). "HDAC inhibitor-based therapies: can we interpret the code?" Mol Oncol 6(6): 637-656.</a></p> <p><a href="#">Sato, K., T. Hara and M. Ohya (2013). "The code structure of the p53 DNA-binding domain and the prognosis of breast cancer patients." Bioinformatics 29(22): 2822-2825.</a></p> <p><a href="#">Roschewski, M. and W. H. Wilson (2015). "Cracking the diverse biologic code of diffuse large B-cell lymphoma." Semin Hematol 52(2): 55-56</a></p> <p><a href="#">Qiao, H. and C. M. Lovly (2016). "Cracking the Code of Resistance across Multiple Lines of ALK Inhibitor Therapy in Lung Cancer." Cancer Discov 6(10): 1084-1086.</a></p> <p><a href="#">Lucas, C. (2017). "Cracking the cancer code: a personalised genomic approach." Lancet Oncol 18(6): 717.</a></p> <p><a href="#">Rodríguez, E., S. T. T. Schettters and Y. van Kooyk (2018). "The tumour glyco-code as a novel immune checkpoint for immunotherapy." Nat Rev Immunol 18(3): 204-211.</a></p> <p><a href="#">Lopes, N., V. G. Correia, A. S. Palma and C. Brito (2021). "Cracking the Breast Cancer Glyco-Code through Glycan-Lectin Interactions: Targeting Immunosuppressive Macrophages." Int J Mol Sci 22(4).</a></p>

			<a href="#">Xia, Z., N. Kon, A. P. Gu, O. Tavana and W. Gu (2022). "Deciphering the acetylation code of p53 in transcription regulation and tumor suppression." <i>Oncogene</i> 41(22): 3039-3050.</a>
25	Cell access code	The Cell Access Code	<a href="#">Zengel, J. and J. E. Carette (2020). "Cracking the cell access code for the deadly virus VEEV." <i>Nature</i> 588(7837): 223-224.</a>
26	Cell surface code	The Cell Surface Recognition Code	<a href="#">Mountoufaris, G., D. Canzio, C. L. Nwakeze, W. V. Chen and T. Maniatis (2018). "Writing, Reading, and Translating the Clustered Protocadherin Cell Surface Recognition Code for Neural Circuit Assembly." <i>Annu Rev Cell Dev Biol</i> 34: 471-493.</a>
27	Cell wall code	The Plant Cell Wall Code	<a href="#">Tavares, E. Q. and M. S. Buckeridge (2015). "Do plant cell walls have a code?" <i>Plant Sci</i> 241: 286-294.</a>
28	Chaperone code	The Chaperone Code	<a href="#">Nitika and A. W. Truman (2017). "Cracking the Chaperone Code: Cellular Roles for Hsp70 Phosphorylation." <i>Trends Biochem Sci</i> 42(12): 932-935.</a> <a href="#">Woodford, M. R., S. J. Backe, L. A. Wengert, D. M. Dunn, D. Bourboulia and M. Mollapour (2021). "Hsp90 chaperone code and the tumor suppressor VHL cooperatively regulate the mitotic checkpoint." <i>Cell Stress Chaperones</i> 26(6): 965-971.</a>
29	Checkpoint code	The Checkpoint Codes <b>SEE also <a href="#">Immune Code</a></b>	<a href="#">Zeng, P., J. Ma, R. Yang and Y. C. Liu (2017). "Immune Regulation by Ubiquitin Tagging as Checkpoint Code." <i>Curr Top Microbiol Immunol</i> 410: 215-248.</a>
30	Chitin code	The Chitin (Defense) Code	<a href="#">Khokhani, D., C. Carrera Carriel, S. Vayla, T. B. Irving, C. Stonoha-Arther, N. P. Keller and J. M. Ané (2021). "Deciphering the Chitin Code in Plant Symbiosis, Defense, and Microbial Networks." <i>Annu Rev Microbiol</i> 75: 583-607.</a>
31	Chromosome code	The Chromosome Codes	<a href="#">Artandi, S. E. and J. P. Cooper (2009). "Reverse transcribing the code for chromosome stability." <i>Mol Cell</i> 36(5): 715-719.</a> <a href="#">Kiyomitsu, T. and I. M. Cheeseman (2012). "Chromosome- and spindle-pole-derived signals generate an intrinsic code for spindle position and orientation." <i>Nat Cell Biol</i> 14(3): 311-317.</a> <a href="#">Podgornaya, O., E. Gavrilova, V. Stephanova, S. Demin and A. Komissarov (2013). "Large tandem repeats make up the chromosome bar code: a hypothesis." <i>Adv Protein Chem Struct Biol</i> 90: 1-30.</a>

32	Circadian codes	The Circadian Rhythm Codes	<p><a href="#">Arjona, A. and D. K. Sarkar (2008). "Are Circadian Rhythms the Code of Hypothalamic-Immune Communication? Insights from Natural Killer Cells." <i>Neurochemical Research</i> 33(4): 708-718.</a></p> <p><a href="#">He, W., K. Kraus, D. Druzd, A. de Juan, L. Ince, C.-S. Chen and C. Scheiermann (2017). "A circadian zip code determines rhythmic leukocyte trafficking to tissues." <i>The FASEB Journal</i> 31(S1): 55.54-55.54.</a></p> <p><a href="#">Wang, B., A. N. Kettenbach, X. Zhou, J. J. Loros and J. C. Dunlap (2019). "The Phospho-Code Determining Circadian Feedback Loop Closure and Output in Neurospora." <i>Molecular Cell</i> 74(4): 771-784.e773.</a></p>
33	Circular code	The Circular Genetic Code	<p><a href="#">Castro-Chavez, F. (2010). "The rules of variation: amino acid exchange according to the rotating circular genetic code." <i>J Theor Biol</i> 264(3): 711-721.</a></p>
34	Circular ribosome code	The Circular Motif (Ribosome) Code	<p><a href="#">Pirillo, G. and M. A. Pirillo (2005). "Growth function of self-complementary circular codes." <i>Rivista di biologia</i> 98(1): 97-110.</a></p> <p><a href="#">El Soufi, K. and C. J. Michel (2014). "Circular code motifs in the ribosome decoding center." <i>ComputBiol Chem</i> 52: 9-17.</a></p> <p><a href="#">Dila, G., R. Ripp, C. Mayer, O. Poch, C. J. Michel and J. D. Thompson (2019). "Circular code motifs in the ribosome: a missing link in the evolution of translation?" <i>Rna</i> 25(12): 1714-1730.</a></p>
35	Cis-regulatory transcription code	The Transcriptional Cis-Regulatory Code	<p><a href="#">Istrail, S. and E. H. Davidson (2005). "Logic functions of the genomic cis-regulatory code." <i>Proceedings of the National Academy of Sciences</i> 102(14): 4954-4959.</a></p> <p><a href="#">Ochoa-Espinosa, A. and S. Small (2006). "Developmental mechanisms and cis-regulatory codes." <i>Current Opinion in Genetics &amp; Development</i> 16(2): 165-170.</a></p> <p><a href="#">Zou, C., K. Sun, J. D. Mackaluso, A. E. Seddon, R. Jin, M. F. Thomashow and S. H. Shiu (2011). "Cis-regulatory code of stress-responsive transcription in <i>Arabidopsis thaliana</i>." <i>Proc Natl Acad Sci U S A</i> 108(36): 14992-14997.</a></p> <p><a href="#">Yáñez-Cuna, J. O., E. Z. Kvon and A. Stark (2013). "Deciphering the transcriptional cis-regulatory code." <i>Trends Genet</i> 29(1): 11-22.</a></p> <p><a href="#">Uygun, S., C. B. Azodi and S. H. Shiu (2019). "Cis-Regulatory Code for Predicting Plant Cell-Type Transcriptional Response to High Salinity." <i>Plant Physiol</i> 181(4): 1739-1751.</a></p>

			<p><a href="#">Chatterjee, S., K. M. Karasaki, L. E. Fries, A. Kapoor and A. Chakravarti (2021). "A multi-enhancer RET regulatory code is disrupted in Hirschsprung disease." <i>Genome Res</i> 31(12): 2199-2208.</a></p> <p><a href="#">Benoit, M. (2022). "Hot 'n cold: Applying the cis-regulatory code to predict heat and cold stress response in maize." <i>Plant Cell</i> 34(1): 497-498.</a></p>
36	Coactivator code	The Coactivator/Corepressor/Epigenetic Code	<p><a href="#">Rosenfeld, M. G., V. V. Lunyak and C. K. Glass (2006). "Sensors and signals: a coactivator/corepressor/epigenetic code for integrating signal-dependent programs of transcriptional response." <i>Genes Dev</i> 20(11): 1405-1428.</a></p>
37	Cohesin code	The Cohesin-Dockerin Code	<p><a href="#">Vera, A. M., A. Galera-Prat, M. Wojciechowski, B. Różycki, D. V. Laurents, M. Carrión-Vázquez, M. Cieplak and P. Tinnefeld (2021). "Cohesin-dockerin code in cellulosomal dual binding modes and its allosteric regulation by proline isomerization." <i>Structure</i> 29(6): 587-597.e588.</a></p>
38	Communication code	The Communication Code(s)	<p><a href="#">Salmond, G. P., B. W. Bycroft, G. S. Stewart and P. Williams (1995). "The bacterial 'enigma': cracking the code of cell-cell communication." <i>Mol Microbiol</i> 16(4): 615-624.</a></p> <p><a href="#">Fontanari, J. F. and L. I. Perlovsky (2008). "A game theoretical approach to the evolution of structured communication codes." <i>Theory in Biosciences</i> 127(3): 205-214.</a></p> <p><a href="#">Li, P. and M. B. Elowitz (2019). "Communication codes in developmental signaling pathways." <i>Development</i> 146(12).</a></p> <p><a href="#">Bonato, B., F. Peressotti, S. Guerra, Q. Wang and U. Castiello (2021). "Cracking the code: a comparative approach to plant communication." <i>Communicative &amp; Integrative Biology</i> 14(1): 176-185.</a></p>
39	Compartment code	The Compartment Code	<p><a href="#">Barbieri, M. (2003). <i>The organic codes. An introduction to semantic biology.</i>, Cambridge University Press.</a></p> <p><a href="#">Artmann, S. (2009). "Basic Semiosis as Code-Based Control." <i>Biosemiotics</i> 2(1): 31-38.</a></p> <p><a href="#">Maza, N. A., W. E. Schiesser and P. D. Calvert (2019). "An intrinsic compartmentalization code for peripheral membrane proteins in photoreceptor neurons." <i>Journal of Cell Biology</i> 218(11): 3753-3772.</a></p>
40	Connexin code	The Connexin Code	<p><a href="#">Kelsell, D. P., J. Dunlop and M. B. Hodgins (2001). "Human diseases: clues to cracking the connexin code?" <i>Trends Cell Biol</i> 11(1): 2-6.</a></p>



41	Cooperation codes	The Moral Cooperation Code	<p><a href="#">Proverbio, A. M., F. Riva, L. Paganelli, S. F. Cappa, N. Canessa, D. Perani and A. Zani (2011). "Neural coding of cooperative vs. affective human interactions: 150 ms to code the action's purpose." PLoS One 6(7): e22026.</a></p> <p><a href="#">Efferson, C. and E. Fehr (2018). "Simple moral code supports cooperation." Nature 555(7695): 169-170.</a></p>
42	Cryptic code	The Cryptic Amyotrophic Sclerosis Code	<p><a href="#">Akiyama, T., Y. Koike, L. Petrucelli and A. D. Gitler (2022). "Cracking the cryptic code in amyotrophic lateral sclerosis and frontotemporal dementia: Towards therapeutic targets and biomarkers." Clin Transl Med 12(5): e818.</a></p>
43	CTD code	The C-Terminal Domain Code <b>SEE also <a href="#">Phosphorylation Code</a></b>	<p><a href="#">Buratowski, S. (2003). "The CTD code." Nat Struct Biol 10(9): 679-680.</a></p> <p><a href="#">Heidemann, M. and D. Eick (2012). "Tyrosine-1 and threonine-4 phosphorylation marks complete the RNA polymerase II CTD phospho-code." RNA Biol 9(9): 1144-1146.</a></p> <p><a href="#">Eick, D. and M. Geyer (2013). "The RNA polymerase II carboxy-terminal domain (CTD) code." Chem Rev 113(11): 8456-8490.</a></p> <p><a href="#">Corden, J. L. (2016). "Pol II CTD Code Light." Mol Cell 61(2): 183-184.</a></p> <p><a href="#">Dieci, G. (2021). "Removing quote marks from the RNA polymerase II CTD 'code'." Biosystems 207: 104468.</a></p>
44	Cybernetic code	The Cybernetic (Cognition) Code	<p><a href="#">Wells, A. (2019). "Breaking the Cybernetic Code: Understanding and Treating the Human Metacognitive Control System to Enhance Mental Health." Front Psychol 10: 2621.</a></p>
45	Cytokine code	The Cytokine Codes	<p><a href="#">Ulloa, L. and K. J. Tracey (2005). "The "cytokine profile": a code for sepsis." Trends Mol Med 11(2): 56-63.</a></p> <p><a href="#">Nickoloff, B. J. (2007). "Cracking the cytokine code in psoriasis." Nat Med 13(3): 242-244.</a></p> <p><a href="#">Hartmann, B. M., N. Marjanovic, G. Nudelman, T. M. Moran and S. C. Sealfon (2014). "Combinatorial cytokine code generates anti-viral state in dendritic cells." Front Immunol 5: 73.</a></p> <p><a href="#">Mustafa, M. I., A. H. Abdelmoneim, E. M. Mahmoud and A. M. Makhawi (2020). "Cytokine Storm in COVID-19 Patients, Its Impact on Organs and Potential Treatment</a></p>

			<p><a href="#">by QTY Code-Designed Detergent-Free Chemokine Receptors.” Mediators Inflamm 2020: 8198963.</a></p> <p><a href="#">Hao, S., D. Jin, S. Zhang and R. Qing (2020). “QTY Code-designed Water-soluble Fc-fusion Cytokine Receptors Bind to their Respective Ligands.” QRB Discov 1: e4.</a></p>
46	Cytoskeleton code	The Cytoskeleton Code	<p><a href="#">Barbieri, M. (2003). The organic codes. An introduction to semantic biology., Cambridge University Press.</a></p> <p><a href="#">Gimona, M. (2008). Protein Linguistics and the Modular Code of the Cytoskeleton. The Codes of Life: The Rules of Macroevolution. M. Barbieri and J. Hoffmeyer. Dordrecht, Springer Netherlands: 189-206.</a></p>
47	Cytotoxicity code	The Cytotoxicity Codes	<p><a href="#">Shih, H. C., M. El-Shazly, Y. S. Juan, C. Y. Chang, J. H. Su, Y. C. Chen, S. P. Shih, H. M. Chen, Y. C. Wu and M. C. Lu (2014). “Cracking the cytotoxicity code: apoptotic induction of 10-acetylirciformonin B is mediated through ROS generation and mitochondrial dysfunction.” Mar Drugs 12(5): 3072-3090.</a></p>
48	Dance code	The Honey Bee Dance Code	<p><a href="#">Rohrseitz, K. and J. Tautz (1999). “Honey bee dance communication: waggle run direction coded in antennal contacts?” Journal of Comparative Physiology A 184(4): 463-470.</a></p>
49	Defense Code	The Host Defense Code	<p><a href="#">Medzhitov, R. (2001). “CpG DNA: security code for host defense.” Nat Immunol 2(1): 15-16.</a></p>
50	Differentiation code	The Differentiation Code	<p><a href="#">Gu, X. and N. C. Spitzer (1997). “Breaking the code: regulation of neuronal differentiation by spontaneous calcium transients.” Dev Neurosci 19(1): 33-41.</a></p> <p><a href="#">Beaujean, D., C. Rosenbaum, H. W. Müller, J. J. Willemsen, J. Lenders and S. R. Bornstein (2003). “Combinatorial code of growth factors and neuropeptides define neuroendocrine differentiation in PC12 cells.” Exp Neurol 184(1): 348-358.</a></p> <p><a href="#">Kondoh, H. and Y. Kamachi (2010). "SOX-partner code for cell specification: Regulatory target selection and underlying molecular mechanisms." Int J Biochem Cell Biol 42(3): 391-399.</a></p> <p><a href="#">Gordon, R. and N. K. Gordon (2019). “The differentiation code.” Biosystems 184: 104013.</a></p>

51	Discriminator code	The Discriminator Codes	<a href="#">Kuncha, S. K., K. Suma, K. I. Pawar, J. Gogoi, S. B. Routh, S. Pottabathini, S. P. Kruparani and R. Sankaranarayanan (2018). "A discriminator code-based DTD surveillance ensures faithful glycine delivery for protein biosynthesis in bacteria." Elife 7.</a>
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