

Ethical Approval

The authors did not use any human or animal participants in this study or preliminary studies.

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Nil

Conflicts of Interest

There are no conflicts of interest

REFERENCES

1. Diem K, Magaret A, Klock A, Jin L, Zhu J, Corey L. Image analysis for accurately counting CD4+ and CD8+ T cells in human tissue. *J Virol Methods* 2015;222:117-21.
2. Uhlmann V, Singh S, Carpenter AE. CP-CHARM: segmentation-free image classification made accessible. *BMC Bioinformatics* 2016;17:51.
3. Shamir L, Delaney JD, Orlov N, Eckley DM, Goldberg IG. Pattern recognition software and techniques for biological image analysis. *PLoS Comput Biol* 2010;6:e1000974.
4. Lamprecht MR, Sabatini DM, Carpenter AE. Cell Profiler: free, versatile software for automated biological image analysis. *Biotechniques* 2007;42:71-5.
5. Bray MA, Vokes MS, Carpenter AE. Using CellProfiler for Automatic Identification and Measurement of Biological Objects in Images. *Curr Protoc Mol Biol* 2015;109:171-13.
6. Rexhepaj E, Agnarsdóttir M, Bergman J, Edqvist PH, Bergqvist M, Uhlén M, *et al.* A texture based pattern recognition approach to distinguish melanoma from non-melanoma cells in histopathological tissue microarray sections. *PLoS One* 2013;8:e62070.
7. Krajewska M, Smith LH, Rong J, Huang X, Hyer ML, Zeps N, *et al.* Image analysis algorithms for immunohistochemical assessment of cell death events and fibrosis in tissue sections. *J Histochem Cytochem* 2009;57:649-63.
8. Carpenter AE, Jones TR, Lamprecht MR, Clarke C, Kang IH, Friman O, *et al.* CellProfiler: image analysis software for identifying and quantifying cell phenotypes. *Genome Biol* 2006;7:R100.
9. Boatright JH, Dalal N, Chrenek MA, Gardner C, Ziesel A, Jiang Y, *et al.* Methodologies for analysis of patterning in the mouse RPE sheet. *Mol Vis* 2015;21:40-60.
10. Kametsky L, Jones TR, Fraser A, Bray MA, Logan DJ, Madden KL, *et al.* Improved structure, function and compatibility for CellProfiler: modular high-throughput image analysis software. *Bioinformatics* 2011;27:1179-80.
11. Tozetti PB, Lima EM, Nascimento AM, Endringer DC, Pinto FE, Andrade TU, *et al.* Morphometry to identify subtypes of leukocytes. *Hematol Oncol Stem Cell Ther* 2014;7:69-75.
12. Jones TR, Kang IH, Wheeler DB, Lindquist RA, Papallo A, Sabatini DM, *et al.* CellProfiler Analyst: data exploration and analysis software for complex image-based screens. *BMC Bioinformatics* 2008;9:482.
13. Buzin AR, Pinto FE, Nieschke K, Mittag A, de Andrade TU, Endringer DC, *et al.* Replacement of specific markers for apoptosis and necrosis by nuclear morphology for affordable cytometry. *J Immunol Methods* 2015;420:24-30.
14. González JE, Romero I, Gregoire E, Martin C, Lamadrid AI, Voisin P, *et al.* Biodosimetry estimation using the ratio of the longest: shortest length in the p remature chromosome condensation (PCC) method applying auto capture and automatic image analysis. *J Radiat Res* 2014;55:862-5.
15. Beaufrère H, Ammersbach M, Tully TN. Complete blood cell count in psittaciformes by using high-throughput image cytometry: a pilot study. *J Avian Med Surg* 2013;27:211-7.
16. Osaka I, Hills JM, Kieweg SL, Shinogle HE, Moore DS, Hefty PS. An automated image-based method for rapid analysis of Chlamydia infection as a tool for screening antichlamydia agents. *Antimicrob Agents Chemother* 2012;56:4184-8.
17. Mahavorasirikul W, Viyanant V, Chaijaroenkul W, Itharat A, Na-Bangchang K. Cytotoxic activity of Thai medicinal plants against human cholangiocarcinoma, laryngeal and hepatocarcinoma cells *in vitro*. *BMC Complement Altern Med* 2010;10:55.
18. Ali MA, Abul Farah M, Al-Hemaid FM, Abou-Tarboush FM. *In vitro* cytotoxicity screening of wild plant extracts from Saudi Arabia on human breast adenocarcinoma cells. *Genet Mol Res* 2014;13:3981-90.
19. Mans DR, da Rocha AB, Schwartzmann G. Anti-cancer drug discovery and development in Brazil: targeted plant collection as a rational strategy to acquire candidate anti-cancer compounds. *Oncologist* 2000;5:185-98.
20. Samarghandian S, Azimi-Nezhad M, Borji A, Hasanzadeh M, Jabbari F, Farkhondeh T, Samini M. Inhibitory and cytotoxic activities of chrysin on human breast adenocarcinoma cells by induction of apoptosis. *Pharmacogn Mag* 2016;12: (Suppl 4) S436-S440.
21. Sibi G, Rabina S. Inhibition of Pro-inflammatory mediators and cytokines by *Chlorella Vulgaris* extracts. *Phcog Res* 2016;8:118-22.
22. Siddiqui M J, Hafizoh S N, Ismail Z, Sahib H B, Helal M, Abdul Majid A. Analysis of Total Proteins, Polysaccharides and Glycosaponins Contents of *Orthosiphon stamineus* Benth. In Spray and Freeze Dried Methanol: Water(1:1) extract and its Contribution to Cytotoxic and Antiangiogenic Activities *Phcog Res* 2009; 1:320-6.
23. Mathew S, Faheem M, Suhail M, Fatima K, Archunan G, Begum N, *et al.* Updates on Traditional Medicinal Plants for Hepatocellular Carcinoma. *Pharmacogn J* 2016;8:203-14.
24. Rathi S, Suthar M, Patel P, Bhaskar V, Rajgor N. *In-vitro* cytotoxic screening of *Glycyrrhiza glabra* L.(Fabaceae): A natural anticancer drug. *Journal of Young Pharmacists*. 2009;1:239.
25. Bessa CDPB. Estudo Qui mico e Biológico em alcaloides de *Hippeastrum alicum* (KER GAWL.) HERB: uma espécie da família Amaryllidaceae. Chemistry. M Dissertation, Exact Sciences Center, Federal University of Espírito Santo, Vitória, Brazil (2015).
26. Mosmann T. Rapid colorimetric assay for cellular growth and survival: application to proliferation and cytotoxicity assays. *J Immunol Methods* 1983;65:55-63.
27. Bland JM, Altman DG. Measuring agreement in method comparison studies. *Stat Methods Med Res* 1999;8:135-60.
28. Li X, Zhao T, Cheng D, Chu C, Tong S, Yan J, *et al.* Synthesis and biological activity of some bile acid-based camptothecin analogues. *Molecules* 2014;19:3761-76.
29. Li QY, Zu YG, Shi RZ, Yao LP. Review camptothecin: current perspectives. *Curr Med Chem* 2006;13:2021-39.
30. Zu YG, Li QY, Fu YJ, Wang W. Synthesis and cytotoxicity of water soluble quaternary salt derivatives of camptothecin. *Bioorg Med Chem Lett* 2004;14:4023-6.
31. Piao D, Kim T, Zhang HY, Choi HG, Lee CS, Choi HJ, *et al.* DNA Topoisomerase Inhibitory Activity of Constituents from the Flowers of *Inula japonica*. *Chem Pharm Bull (Tokyo)* 2016;64:276-81.
32. Fronza M, Murillo R, Iusarczyk S, Adams M, Hamburger M, Heinzmann B, *et al.* *In vitro* cytotoxic activity of abietane diterpenes from *Peltodon longipes* as well as *Salvia miltiorrhiza* and *Salvia sahendica*. *Bioorg Med Chem* 2011;19:4876-81.
33. Luo Z, Wang F, Zhang J, Li X, Zhang M, Hao X, *et al.* Cytotoxic alkaloids from the whole plants of *Zephyranthes candida*. *J NatProd* 2012;75:2113-20.
34. Jitsuno M, Yokosuka A, Sakagami H, Mimaki Y. Chemical constituents of the bulbs of *Habranthus brachyandrus* and their cytotoxic activities. *Chem Pharm Bull (Tokyo)* 2009;57:1153-7.
35. Baliano AP, Pimentel EF, Buzin AR, Vieira TZ, Romão W, Tose LV, *et al.* Brown seaweed *Padina gymnospora* is a prominent natural wound-care product. *Braz. Pharmacog* 2016;26:714-19.
36. Fujihara M, Iijima N, Yamamoto I, Nagumo T. Purification and chemical and physical characterisation of an antitumour polysaccharide from the brown seaweed *Sargassum fulvellum*. *Carb Research* 1984;125:97-106.
37. Giavarina D. Understanding Bland Altman analysis. *Biochimica Medica* 2015;25:141-151.
38. Altman DG, Bland JM. Measurement in medicine: The analysis of method comparison studies. *Journal of the Royal Statistical Society. Series D (The Statistician)* 1983;32:307-17.
39. Bland JM, Altman D. Statistical methods for assessing agreement between two methods of clinical measurement. *Lancet* 1986;327:307-10.
40. Hirakata VN, Camey SA. "Análise de concordância entre métodos de Bland-Altman." *Revista HCPA* 2009;29:261-68.