Dr. ALESSANDRO DATTI

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Professional snapshot:

- Expertise in Biochemistry and Molecular Biology applied to Biomedical Research and Drug Discovery;
- 20 years of experience as a Group Leader in academic and industrial organizations;
- Key contributor to clinical testing and repositioning of 4 known drugs;
- Co-author of 90 research articles - Scopus H-index = 36 (October 2020);
- Co-Inventor on two US patents.

Employment:

2005- Assistant Professor - University of Perugia (Italy)
- Lecturer in Molecular Biology (undergraduate program in Agriculture and Food Sciences).

2004-2019 Group Leader, Laboratory for High-Throughput Screening Programs,
(Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital, Toronto, Canada)
- Development of biochemical and biological assay methods in high-throughput formats, including the design, miniaturization, optimization, and validation of cell-free and cell-based assays;
- Elucidation of molecular mechanisms of cancer and other pathological conditions and disorders;
- Selection of novel chemical entities with biological and pharmacological properties;
- Reposition of known, marketed drugs.

2001-2003 Project & Group Leader - GlycoDesign Inc., Toronto, Canada
- Leader of a multidisciplinary group involved in the development of innovative anti-cancer and anti-inflammatory drugs.

1998-2001 Screening Manager (Senior Scientist) - GlycoDesign Inc., Toronto, Canada
- Development of high-throughput screening programs to identify enzyme inhibitors for pharmacological applications.

1996-1998 Scientist I - GlycoDesign Inc., Toronto, Canada
- Development of biochemical assays in high-throughput formats.

1991-1996 Senior research technician, University of Perugia
- Biochemistry and biological roles of glycosyltransferases.

Academic and training background

1989-1992 Post-doctorate training (University of Toronto, Canada).
1988 Research Doctorate Program (Biochemistry), University of Perugia (Italy).
1984 Bachelor of Science (Biochemistry), University of Perugia (Italy).

Patents

2009 Cancer stem cells and uses thereof - US patent #**7,632,678**
(Hansford LM, Smith KM, Datti A, Miller FM, Kaplan DR).
1996 Method for measuring glycosyltransferase activity - US patent # **5,501,957**
(Dennis JW, Siminovitch KA, Datti A).

Editorial activity

Member of Editorial Boards
- PloS ONE (since 2014)
- International Journal of Molecular Sciences (appointed in 2020)

Articles published in the last 5 years (2016-2020)

Flavopiridol causes cell cycle inhibition and demonstrates anti-cancer activity in anaplastic thyroid cancer models.
Pinto N, Prokopec SD, Ghasemi F, Meens J, Ruicci KM, Khan IM, Mundi N, Patel K, Han MW, Yoo J, Fung K, MacNeil D, Mymryk JS, **Datti A**, Barrett JW, Boutros PC, Ailles L, Nichols AC.
(2020) *PLoS One* 15(9):e0239315.

Sorafenib as an Inhibitor of RUVBL2.
Nano N, Ugwu F, Seraphim TV, Li T, Azer G, Isaac M, Prakesch M, Barbosa LRS, Ramos CHI, **Datti A**, Houry WA.
(2020) *Biomolecules* 10(4):605.

A drug discovery platform to identify compounds that inhibit EGFR triple mutants.
Saraon P, Snider J, Kalaidzidis Y, Wybenga-Groot LE, Weiss K, Rai A, Radulovich N, Drecun L, Vučković N, Vučetić A, Wong V, Thériault B, Pham NA, Park JH, **Datti A**, Wang J, Pathmanathan S, Aboualizadeh F, Lyakisheva A, Yao Z, Wang Y, Joseph B, Aman A, Moran MF, Prakesch M, Poda G, Marcellus R, Uehling D, Samaržija M, Jakopović M, Tsao MS, Shepherd FA, Sacher A, Leighl N, Akhmanova A, Al-Awar R, Zerial M, Stagljar I.
(2020) *Nat Chem Biol* 16(5):577-586.

Amplification of a calcium channel subunit CACNG4 increases breast cancer metastasis.
Kanwar N, Carmine-Simmen K, Nair R, Wang C, Moghadas-Jafari S, Blaser H, Tran-Thanh D, Wang D, Wang P, Wang J, Pasculescu A, **Datti A**, Mak T, Lewis JD, Done SJ.
(2020) *EbioMedicine* 52:102646

ROCK inhibitors upregulate the neuroprotective Parkin-mediated mitophagy pathway.
Moskal N, Riccio V, Bashkurov M, Taddese R, **Datti A**, Lewis PN, Angus McQuibban G.
(2020) *Nat Commun* 11(1):88.

Spleen tyrosine kinase expression is correlated with human papillomavirus in head and neck cancer.
Black M, Ghasemi F, Sun RX, Stecho W, **Datti A**, Meens J, Pinto N, Ruicci KM, Khan MI, Han MW, Shaikh M, Yoo J, Fung K, MacNeil D, Palma DA, Winquist E, Howlett CJ, Mymryk JS, Ailles L, Boutros PC, Barrett JW, Nichols AC.
(2020) *Oral Oncol* 101:104529.

Selenium maintains cytosolic Ca^{2+} homeostasis and preserves germination rates of maize pollen under H_2O_2-induced oxidative stress.
Del Pino AM, Guiducci M, D'Amato R, Di Michele A, Tosti G, **Datti A**, Palmerini CA.
(2019) *Sci Rep* 9(1):13502.

Cell-based high-throughput screen for small molecule inhibitors of Bax translocation.
Hui KK, Dojo Soeandy C, Chang S, Vizeacoumar FS, Sun T, **Datti A**, Henderson JT.
(2019) *J Cell Mol Med* 23(3):1784-1797.

Lestaurtinib is a potent inhibitor of anaplastic thyroid cancer cell line models.
Pinto N, Prokopec SD, Vizeacoumar F, Searle K, Lowerison M, Ruicci KM, Yoo J, Fung K, MacNeil D, Lacefield JC, Leong HS, Mymryk JS, Barrett JW, **Datti A**, Boutros PC, Nichols AC.
(2018) *PLoS One* 13(11):e0207152.

COX inhibitors and bone: A safer impact on osteoblasts by NO-releasing NSAIDs.
Aisa MC, **Datti A**, Orlacchio A, Di Renzo GC.
(2018) *Life Sci* 208:10-19.

High-throughput testing in head and neck squamous cell carcinoma identifies agents with preferential activity in human papillomavirus-positive or negative cell lines.
Ghasemi F, Black M, Sun RX, Vizeacoumar F, Pinto N, Ruicci KM, Yoo J, Fung K, MacNeil D, Palma DA, Winquist E, Mymryk JS, Ailles LA, **Datti A**, Barrett JW, Boutros PC, Nichols AC.
(2018) *Oncotarget* 9(40):26064-26071.

Identification of CDC25 as a Common Therapeutic Target for Triple-Negative Breast Cancer.
Liu JC, Granieri L, Shrestha M, Wang DY, Vorobieva I, Rubie EA, Jones R, Ju Y, Pellecchia G, Jiang Z, Palmerini CA, Ben-David Y, Egan SE, Woodgett JR, Bader GD, **Datti A**, Zacksenhaus E.
(2018) *Cell Rep* 23(1):112-126.

Repurposing Albendazole: new potential as a chemotherapeutic agent with preferential activity against HPV-negative head and neck squamous cell cancer.
Ghasemi F, Black M, Vizeacoumar F, Pinto N, Ruicci KM, Le CCSH, Lowerison MR, Leong HS, Yoo J, Fung K, MacNeil D, Palma DA, Winquist E, Mymryk JS, Boutros PC, **Datti A**, Barrett JW, Nichols AC.
(2017) *Oncotarget* 8(42):71512-71519.

Multilayered Control of Alternative Splicing Regulatory Networks by Transcription Factors.
Han H, Braunschweig U, Gonatopoulos-Pournatzis T, Weatheritt RJ, Hirsch CL, Ha KCH, Radovani E, Nabeel-Shah S, Sterne-Weiler T, Wang J, O'Hanlon D, Pan Q, Ray D, Zheng H, Vizeacoumar F, **Datti A**, Magomedova L, Cummins CL, Hughes TR, Greenblatt JF, Wrana JL, Moffat J, Blencowe BJ.
(2017) *Mol Cell* 65(3):539-553.

Erlotinib synergizes with the poly(ADP-ribose) glycohydrolase inhibitor ethacridine in acute myeloid leukemia cells.
Rotin LE, MacLean N, Aman A, Gronda M, Lin FH, Hurren R, Wang X, Wrana JL, **Datti A**, Al-Awar R, Minden MD, Schimmer AD.
(2016) *Haematologica* 101(11):e449-e453.

Excess Polθ functions in response to replicative stress in homologous recombination-proficient cancer cells.
Goullet de Rugy T, Bashkurov M, **Datti A**, Betous R, Guitton-Sert L, Cazaux C, Durocher D, Hoffmann JS.
(2016) *Biol Open* 5(10):1485-1492.

RB1 deficiency in triple-negative breast cancer induces mitochondrial protein translation.
Jones RA, Robinson TJ, Liu JC, Shrestha M, Voisin V, Ju Y, Chung PE, Pellecchia G, Fell VL, Bae S, Muthuswamy L, **Datti A**, Egan SE, Jiang Z, Leone G, Bader GD, Schimmer A, Zacksenhaus E.
(2016) *J Clin Invest* 126(10):3739-3757.

The RNF146 and tankyrase pathway maintains the junctional Crumbs complex through regulation of angiomotin.
Campbell CI, Samavarchi-Tehrani P, Barrios-Rodiles M, **Datti A**, Gingras AC, Wrana JL.
(2016) *J Cell Sci* 129(18):3396-3411.

Disulfiram when Combined with Copper Enhances the Therapeutic Effects of Temozolomide for the Treatment of Glioblastoma.
Lun X, Wells JC, Grinshtein N, King JC, Hao X, Dang NH, Wang X, Aman A, Uehling D, **Datti A**, Wrana JL, Easaw JC, Luchman A, Weiss S, Cairncross JG, Kaplan DR, Robbins SM, Senger DL.
(2016) *Clin Cancer Res* 22(15):3860-3875.

PI3K/AKT/mTOR inhibition in combination with doxorubicin is an effective therapy for leiomyosarcoma.
Babichev Y, Kabaroff L, **Datti A**, Uehling D, Isaac M, Al-Awar R, Prakesch M, Sun RX, Boutros PC, Venier R, Dickson BC, Gladdy RA.
(2016) *J Transl Med*. 14:67.

High-throughput drug library screening identifies colchicine as a thyroid cancer inhibitor.
Zhang L, Yang Z, Granieri L, Pasculescu A, **Datti A**, Asa SL, Xu Z, Ezzat S.
(2016) *Oncotarget* 7(15):19948-19959.

Targeted Pten deletion plus p53-R270H mutation in mouse mammary epithelium induces aggressive claudin-low and basal-like breast cancer.
Wang S, Liu JC, Kim D, **Datti A**, Zacksenhaus E.
(2016) *Breast Cancer Res* 18(1):9.

Identification of Drugs that Regulate Dermal Stem Cells and Enhance Skin Repair.
Naska S, Yuzwa SA, Johnston AP, Paul S, Smith KM, Paris M, Sefton MV, **Datti A**, Miller FD, Kaplan DR.
(2016) *Stem Cell Reports* 6(1):74-84.

Ibrutinib synergizes with poly(ADP-ribose) glycohydrolase inhibitors to induce cell death in AML cells via a BTK-independent mechanism.
Rotin LE, Gronda M, MacLean N, Hurren R, Wang X, Lin FH, Wrana J, **Datti A**, Barber DL, Minden MD, Slassi M, Schimmer AD.
(2016) *Oncotarget* 7(3):2765-2779.

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