

# Nathan Fishkin, Ph.D.

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Experienced leader and innovator in biotech/pharmaceutical industry with 18+ years of experience in R&D management with proven track record of bringing oncology drug candidates from research into development.

## Experience

- **Senior Vice President, Drug Discovery and Early Development, Modifi Bio, New Haven, CT July 2023-present**
  - Lead a technical staff of 7 (including Director of Biology, Director of Chemistry, and VP Pharmacology) to develop platform of DNA modifying small molecules that exploit cancer-associated DNA repair defects; oversaw 1<sup>st</sup> preclinical development candidate nomination
  - Pitching the company and lead asset with CEO to potential investors and strategic pharma partners to close series A funding
  - Built team of consultants and virtual program management to generate development plan and GMP manufacturing strategy for lead asset
  - Led scientific due diligence requests from large pharma leading to successful acquisition by Merck  
[Merck buys cancer therapy developer Modifi Biosciences for up to \\$1.3 bln | Reuters](#)
- **Vice President, Head of Chemistry and Platform Technology, Orum Therapeutics, Cambridge MA July 2019 – July 2023**
  - Built and oversaw medicinal chemistry, bioconjugation, analytical sciences, antibody engineering, structural biology, computational chemistry, and cheminformatics functions leading to delivery of first-in-class antibody drug conjugates (ADCs)
  - Responsible for 3 director and 10 scientist level members of international discovery team (US and Daejeon, KR) and 10 FTEs at CRO partners
  - Invent novel platforms for company including dual precision protein degraders TPD<sup>2</sup>™ and dual checkpoint inhibitors in immuno-oncology; develop patent application filing strategy to support BD and potential partnering needs and execute with outside counsel; 9 patent families established
  - Led hit to lead and lead optimization campaign for two preclinical candidates ORM-5029 and ORM-6151 in 18 months; provide expertise to the development team on CMC, process development, bioanalytical/PK method development, and drug metabolism toward IND filings (Q2 2022 and Q1 2023)
  - Prepare scientific presentations and due diligence documents for potential partners and investors; work closely with BD to establish and execute MTA collaborations with large pharma
  - Work led to two BD transactions with pharma (lead inventor on underlying intellectual property)
    - BMS acquired clinically ready asset ORM-6151 for treatment of AML and MDS [BMS acquires CD33 blood cancer ADC from Orum in \\$180m deal - Pharmaceutical Technology \(pharmaceutical-technology.com\)](#) Nov 6, 2023
    - Vertex licensed Orum's protein degrader technology for use in targeted conditioning agents for stem cell transplant therapy- [Replacing Chemo: Vertex, Orum Launch Up to \\$945M+ DAC Collaboration \(genengnews.com\)](#) July 16, 2024
- **Director – Chemistry, H3 Biomedicine (Eisai Co. Ltd), Cambridge MA September 2016- July 2019**

- co-led medicinal chemistry department (12 internal and 47 external FTEs), providing strategic direction to project teams driving forward both small molecule and biologics therapeutic candidates in oncology; key member of due diligence team driving business discussions to a successful immune-oncology collaboration with BMS - [Bristol-Myers Squibb and H3 Biomedicine Announce Research Collaboration to Advance Novel Therapeutics Leveraging H3's RNA Splicing Platform | News Release : 2018 | Eisai Co., Ltd.](#) December 17, 2018
  - Led and motivated a team of RA and PhD level chemists to design and synthesize complex natural product and RNA-based molecules for bioconjugation and targeted antibody delivery
  - Work with external legal counsel to formulate IP strategy and coordinate the filings covering 2 unique therapeutic platforms and lead composition of matter
  - Coordinate CRO resources in bioconjugation/analytics, bioassay development, and small molecule synthesis in 2 time-zones
  - Vetted, selected, and managed CROs to carry out denovo antibody discovery (human phage display library panning) and CDR engineering campaign leading to several novel lead IgGs to support a high priority program
  - Built bioconjugation platform within chemistry department to extend reach of pre-mRNA splice modulators for cancer therapy
  - As member of the scientific leadership team: motivated an interdisciplinary team of medicinal chemists, cell biologists, pharmacologists, structural biologists and DMPK support to identify lead chemical matter for a potential first-in-class therapy in multiple myeloma and shaped and prioritized several small molecule projects in the I/O and oncometabolite portfolio
- **Sr/Principle Research Scientist, ImmunoGen, Inc. Waltham, MA** **June 2012-August 2016**
    - Mentor and lead a group of research associates in the design, preparation, and biochemical characterization of Antibody-Drug Conjugates (ADCs) for targeted treatment of cancer
    - Development of clinical candidates IMGN779 and IMGN632 (Pivekimab Sunirine) –in Phase II clinical trials for patients with AML and BPDCN
    - Inventor on unique class of cancer-cell killing payload used in current clinical candidates IMGN779, IMGN632 and TAK164; invented novel formulations used for several ADC clinical candidates
    - Manage collaborations with several external pharma partners and initiated academic collaboration (Prof. Kevin Burgess (Texas A&M) to co-develop novel cell-binding agents and chemotherapeutic payloads for treatment of cancer
    - Successfully led a Chemistry Manufacturing and Control (CMC) team to produce quality material for monkey toxicology studies with a lead ADC candidate
    - Lead a cross-disciplinary team to carry out mode of action studies on a novel ADC in preclinical development
    - Contributed research to and drafted several sections of IND document for novel agent IMGN779 and IMGN632
    - Contribute intellectual property to the company regarding development of novel ADC linkers, payloads, and methods for site-specific conjugation
  - **Scientist III, ImmunoGen, Inc. Waltham, MA** **January 2009-June 2012**
    - Developed robust platform to bioconjugate and formulate a new class of cytotoxic agent with limited water solubility; allowed for screening of over 100 compounds for use in ADCs
    - Developed a high throughput HPLC assay to screen and rank cytotoxic agents for ability to bind and adduct to cellular target
    - Led the team which developed research ELISA assay methods for detection of free drug and conjugate used for PK assays
  - **Scientist II, ImmunoGen, Inc. Waltham, MA** **June 2007-January 2009**
    - Carried out metabolism studies to understand the cellular localization and processing of ADCs with different linkers in target tumor cells
  - **Scientist I, ImmunoGen, Inc. Waltham, MA** **January 2006-June 2007**
    - Prepared ADCs in gram scale quantities for various industry collaborators interested in evaluating our tumor activated prodrug (TAP) technology with their program antibodies

- **NIH Postdoctoral Fellow, Rando Lab, Harvard Medical School, Boston, MA** **October 2004-January 2006**
  - Designed and synthesized various retinoids to probe the mechanism of vitamin A isomerization and visual pigment regeneration in the vertebrate visual cycle
  - Conducted radiotracer experiments to measure vitamin A processing in retinal pigmented epithelial (RPE) cells. Visual cycle inhibitors were designed and tested for their ability to reduce the accumulation of fluorescent debris in the retina, an underlying cause of the dry form of age-related macular degeneration (AMD)
  - Based on mechanistic understanding of aberrant vitamin A cycling in the human retina, invented ALK-001 (Gildeuretinol acetate) which is currently being developed by Alkeus, Inc in Phase III clinical trials to treat Stargardt's disease and AMD [Alkeus Pharmaceuticals Announces Positive Interim Results Demonstrating No Signs of Disease Progression in Early-Stage Stargardt Disease Patients Treated with Gildeuretinol | Alkeus Pharmaceuticals Inc](#)

## Education

- **Ph.D., Organic Chemistry, Columbia University, New York, NY** **August 2004**  
Thesis title: Bioorganic Studies of the Visual System, Advisor: Prof. Koji Nakanishi  
*Graduation with Distinction – granted to top 10% of dissertations university-wide*  
*Hammett Award- top chemistry department award for research by a graduating Ph.D. student*
- **M.Phil. Organic Chemistry, Columbia University, New York, NY** **August 2002**
- **B.A., Chemistry, Columbia University, New York, NY** **May 1999**
- Undergraduate research in physical chemistry with Prof. Richard Bersohn

## Skills

multi-step organic synthesis; surface antigen target identification and validation, bioconjugation, IR, NMR, LC-MS, and UV-VIS characterization of small molecules; cheminformatics software (D360, Stardrop, Spotfire, Ecabia, etc), protein and antibody isolation, purification, and characterization; LAL (endotoxin) testing, ELISA assay (protein and small molecule format), bioassay development, antibody discovery and humanization, HPLC, UPLC, routine tissue culture, drug metabolism, in vitro antiproliferative assays (96 well plate), gel chip analysis, cell staining and confocal fluorescent microscopy, mentorship and management of RA and PhD level chemists and biochemists, cross team leadership, external collaboration and CRO management.

## Publications

- 1) Effect of Linker Stereochemistry on the Activity of Indolinobenzodiazepine Containing Antibody-Drug Conjugates (ADCs). Emily E Reid, Katie Archer, Manami Shizuka, Alan Wilhelm, Nicholas C Yoder, Chen Bai, Nathan E Fishkin, Luke Harris, Erin K Maloney, Paulin Salomon, Erica Hong, Rui Wu, Olga Ab, Shan Jin, Katharine C Lai, Surina Sikka, Ravi V J Chari, Michael L Miller. *ACS Med Chem Lett.* 2019 Jul 10;10(8):1193-1197.
- 2) Targeted Maytansinoid Conjugate Improves Therapeutic Index for Metastatic Breast Cancer Cells. Jiang Z, Yang Z, Li F, Li Z, [Fishkin N](#), Burgess K. *Bioconjug Chem.* 2018 Sep 19;29(9):2920-2926.
- 3) Understanding How the Stability of the Thiol-Maleimide Linkage Impacts the Pharmacokinetics of Lysine Linked Antibody Maytansinoid Conjugates. Ponte JF, Sun X, Yoder NC, [Fishkin N](#), Laleau R, Coccia J, Lanieri L, Bogalhas M, Wang L, Wilhelm S, Widdison W, Pinkas J, Keating TA, Chari R, Erickson HK, Lambert JM. *Bioconjug Chem.* 2016 Jul 20;27(7):1588-98.
- 4) A New Triglycyl Peptide Linker for Antibody-Drug Conjugates (ADCs) with Improved Targeted Killing of Cancer Cells. Singh R, Setiady YY, Ponte J, Kovtun YV, Lai KC, Hong EE, [Fishkin N](#), Dong L, Jones GE, Coccia JA, Lanieri L, Veale K, Costoplus JA, Skaletskaya A, Gabriel R, Salomon P, Wu R, Qiu Q, Erickson HK, Lambert JM, Chari RV, Widdison WC. *Mol Cancer Ther.* 2016 Jun;15(6):1311-20.

- 5) A New Class of Antibody-Drug Conjugates with Potent DNA Alkylating Activity. Miller ML, [Fishkin NE](#), Li W, Whiteman KR, Kovtun Y, Reid EE, Archer KE, Maloney EK, Audette CA, Mayo MF, Wilhelm A, Modafferi HA, Singh R, Pinkas J, Goldmacher V, Lambert JM, Chari RV. *Mol Cancer Ther.* 2016 Aug;15(8):1870-8.
- 6) **Development of Anilino-Maytansinoid ADCs that Efficiently Release Cytotoxic Metabolites in Cancer Cells and Induce High Levels of Bystander Killing.** Widdison WC, Ponte JF, Coccia JA, Lanieri L, Setiady Y, Dong L, Skaletskaya A, Hong EE, Wu R, Qiu Q, Singh R, Salomon P, [Fishkin N](#), Harris L, Maloney EK, Kovtun Y, Veale K, Wilhelm SD, Audette CA, Costoplus JA, Chari RV. *Bioconjug Chem.* 2015 Nov 18;26(11):2261-78
- 7) Maytansinoid–BODIPY Conjugates: Application to Microscale Determination of Drug Extinction Coefficients and for Quantification of Maytansinoid Analytes. [Fishkin N](#). *Molecular Pharmaceutics*, **2015**, 12(6):1745-1751.
- 8) A novel pathway for maytansinoid release from thioether linked antibody-drug conjugates (ADCs) under oxidative conditions. [Fishkin N](#), Maloney EK, Chari RV, Singh R. *Chem Commun.* **2011** 47(38):10752-4.
- 9) Enzymatic degradation of A2E, a retinal pigment epithelial lipofuscin bisretinoid. Wu Y, Zhou J, [Fishkin N](#), Rittmann BE, Sparrow JR. *J Am Chem Soc.* **2011** 133(4):849-57.
- 10) Novel lipofuscin bisretinoids prominent in human retina and in a model of recessive Stargardt disease. Wu Y, [Fishkin NE](#), Pande A, Pande J, Sparrow JR. *J Biol Chem.* **2009** 284(30):20155-66.
- 11) Synthesis and spectroscopic characterization of photo-affinity peptide ligands to study rhodopsin-G protein interaction. Chen Y, Herrmann R, [Fishkin N](#), Henklein P, Nakanishi K, Ernst OP. *Photochem Photobiol.* **2008** 84(4):831-8.
- 12) The all-trans-retinal dimer series of lipofuscin pigments in retinal pigment epithelial cells in a recessive Stargardt disease model. Kim SR, Jang YP, Jockusch S, [Fishkin NE](#), Turro NJ, Sparrow JR. *Proc Natl Acad Sci U S A.* **2007** 104(49):19273-8.
- 13) Retinoylserine and retinoylalanine, natural products of the moth *Trichoplusia ni*. Rogge B, Itagaki Y, [Fishkin N](#), Levi E, Rühl R, Yi SS, Nakanishi K, Hammerling U. *J Nat Prod.* **2005** 68(10):1536-40.
- 14) Design and synthesis of artificial phospholipid for selective cleavage of integral membrane protein. Furuta T, Sakai M, Hayashi H, Asakawa T, Kataoka F, Fujii S, Suzuki T, Suzuki Y, Tanaka K, [Fishkin N](#), Nakanishi K. *Chem Commun.* **2005** (36):4575-7.
- 15) On the mechanism of isomerization of all-trans-retinol esters to 11-cis-retinol in retinal pigment epithelial cells: 11-fluoroall-trans-retinol as substrate/inhibitor in the visual cycle. [Fishkin N](#), Yefidoff R, Gollipalli DR, Rando RR. *Bioorg Med Chem.* **2005** 13(17):5189-94.
- 16) Isolation and characterization of a retinal pigment epithelial cell fluorophore: an all-trans-retinal dimer conjugate. [Fishkin NE](#), Sparrow JR, Allikmets R, Nakanishi K. *Proc Natl Acad Sci U S A.* **2005** 102(20):7091-6. Epub 2005 May 3.
- 17) Absolute configurational determination of an all-trans-retinal dimer isolated from photoreceptor outer segments. [Fishkin N](#), Pescitelli G, Sparrow JR, Nakanishi K, Berova N. *Chirality.* **2004** 16(9):637-41.
- 18) Rpe65 Leu450Met variant is associated with reduced levels of the retinal pigment epithelium lipofuscin fluorophores A2E and iso-A2E. Kim SR, [Fishkin N](#), Kong J, Nakanishi K, Allikmets R, Sparrow JR. *Proc Natl Acad Sci U S A.* **2004** 101(32):11668-72.
- 19) Primary events in dim light vision: a chemical and spectroscopic approach toward understanding protein/chromophore interactions in rhodopsin. [Fishkin N](#), Berova N, Nakanishi K. *Chem Rec.* **2004** 4(2):120-35.
- 20) A2E, a byproduct of the visual cycle. Sparrow JR, [Fishkin N](#), Zhou J, Cai B, Jang YP, Krane S, Itagaki Y, Nakanishi K. *Vision Res.* **2003** 43(28):2983-90.
- 21) Terpene trilactones from *Ginkgo biloba* are antagonists of cortical glycine and GABA(A) receptors. Ivic L, Sands TT, [Fishkin N](#), Nakanishi K, Kriegstein AR, Strømgaard K. *J Biol Chem.* **2003** 278(49):49279-85.
- 22) A2-rhodopsin: a new fluorophore isolated from photoreceptor outer segments. [Fishkin N](#), Jang YP, Itagaki Y, Sparrow JR, Nakanishi K. *Org Biomol Chem.* **2003** 1(7):1101-5.
- 23) Solution and biologically relevant conformations of enantiomeric 11-cis-locked cyclopropyl retinals. Fujimoto Y, [Fishkin N](#), Pescitelli G, Decatur J, Berova N, Nakanishi K. *J Am Chem Soc.* **2002** 124(25):7294-302.
- 24) Biosynthetic studies of A2E, a major fluorophore of retinal pigment epithelial lipofuscin. Ben-Shabat S, Parish CA, Vollmer HR, Itagaki Y, [Fishkin N](#), Nakanishi K, Sparrow JR. *J Biol Chem.* **2002** 277(9):7183-90.

## Conference Posters/Presentations

- 1) Nathan Fishkin, Khuloud Takroui, Youngchang Ju, Suk Namgoong, Sujoy Dutta, Zina Ribkovskaia, Chen Bai, Yong Yi, Anna Skaletskaya, Wesley Wong, Min-soo Kim, Dong-Ki Choi, Da-Young Kim, Yeonhee Yang, Jiae Kook, Pedro Lee, Hangyeol Jeong, Sang-Mi Jee, Jiyun Park, Ki-Hwan Chang, James Palacino, Peter Park. **ORM-5029: Discovery of an antibody drug conjugate with first-in-class molecular glue degrader warhead for treatment of HER2-positive breast cancer** FALL ACS Meeting 2023 <https://doi.org/10.1021/scimeetings.3c10210>
- 2) James Palacino, Chen Bai, Yong Yi, Anna Skaletskaya, Khuloud Takroui, Wesley Wong, Min-Soo Kim, Dong-Ki Choi, Da-Young Kim, Yeonhee Yang, Jiae Kook, Pedro Lee, Hangyeol Jeong, Sang-Mi Jee, Jiyun Park, Ki-Hwan Chang, Nathan Fishkin, Peter U. Park. **ORM-5029: A first-in-class targeted protein degradation therapy using antibody neodegrader conjugate (AnDC) for HER2-expressing breast cancer.** AACR Meeting, April 2022:3933.
- 3) Luke Harris, Daniel Tavares, Lingyun Rui, Erin Maloney, Alan Wilhelm, Juliet Costoplus, Katie Archer, Megan Bogalhas, Lauren Harvey, Rui Wu, Xuan Chen, Xiangyang Xu, Sonia Connaughton, Lintao Wang, Kathleen Whiteman, Olga Ab, Erica Hong, Wayne Widdison, Manami Shizuka, Michael Miller, Jan Pinkas, Thomas Keating, Ravi Chari, Nathan Fishkin. **SeriMabs: Nterminal serine modification enables modular, site-specific payload incorporation into antibody-drug conjugates (ADCs).** AACR Meeting, April 2015:647.
- 4) Michael L. Miller, Manami Shizuka, Nathan Fishkin, Emily Reid, Katie Archer, Erin Maloney, Chen Bai, Olga Ab, Nick C. Yoder, Rui Wu, Erica Hong, Megan Bogalhas, Alan Wilhelm, Kathleen Whiteman, Ravi Chari. **Antibody-drug conjugates (ADCs) of indolino-benzodiazepine DNA-alkylating agents.** AACR Meeting, April 2015:652.
- 5) Wayne C. Widdison, Joe Ponte, Jennifer Coccia, Yulius Setiady, Ling Dong, Anja Skaletskaya, Nathan Fishkin, Yelena Kovtun, Rui Wu, Rajeeva Singh, Luke Harris, Greg Jones, Leanne Lanieri, Erin Maloney, Charlene Audette, Andre Dandeneau, Ravi Chari, Juliet Costoplus, Karen Veale, Sharon Wilhelm. **New peptide-linked anilino-maytansinoid antibody-drug conjugates (ADCs) for the treatment of cancer.** AACR Meeting, April 2014:1618.
- 6) Kathleen Whiteman, Charlene Audette, Andre Dandeneau, Megan Ellis, Nathan Fishkin, Lauren Harvey, Holly Johnson, Yelena Kovtun, Erin Maloney, Michael Miller, Alan Wilhelm, Ravi Chari. **Antibody-drug conjugates (ADCs) with a novel DNAalkylating agent, DGN462, are highly potent in vitro and in vivo against human cancer models.** AACR Meeting, April 2014:2644.
- 7) Wei Li, Emily Reid, Katie Archer, Nathan Fishkin, Andre Dandeneau, Yelena Kovtun, Lauren Harvey, Kathy Whiteman, Michael L Miller, Ravi Chari. **Design, synthesis, and evaluation of a novel class of potent DNA- alkylating agents for use in antibodydrug conjugates (ADCs).** ACS Annual Meeting, March 2014: MEDI 121.
- 8) Rajeeva Singh, Nathan Fishkin, Yelena Kovtun, Gregory Jones, Jose Ponte, Hans Erickson, Erica Hong, Yulius Setiady, Andre Dandeneau, Katharine Lai, Jennifer Coccia, Leanne Lanieri, Juliet Bouchard, Karen Veale, Ravi Chari, Wayne Widdison. **New tri-glycyl peptide linker offers advantages for maytansinoid antibody- drug conjugates (ADCs).** AACRNCI-EORTC International Conference, Oct 2013: C164.
- 9) Kathleen Whiteman, Holly Johnson, Alan Wilhelm, Michael Miller, Wei Li, Emily Reid, Katie Archer, Nathan Fishkin, Andre Dandeneau, Erin Maloney, Jan Pinkas, Ravi Chari. **Antibody-Drug Conjugates (ADCs) with novel IGN DNAalkylating agents display potent antigen-specific activity against hematologic and solid tumor xenograft models.** AACR-NCI-EORTC International Conference, Oct 2013: C162.
- 10) Michael Miller, Nathan Fishkin, Wei Li, Emily Reid, Katie Archer, Erin Maloney, Yelena Kovtun, Gregory Jones, Megan Ellis, Rajeeva Singh, Kathleen Whiteman, Jan Pinkas, Ravi Chari. **New class of DNA-alkylating agents with a suitable tolerability profile created for use in antibody-drug conjugates (ADCs).** AACR-NCI- EORTC International Conference, Oct 2013:C160.
- 11) Nathan Fishkin, Erin Maloney, Ravi Chari, Rajeeva Singh **Maytansinoid release from thioether linked antibody maytansine conjugates (AMCs) under oxidative conditions: Implication for formulation and for ex vivo sample analysis in pharmacokinetic studies** AACR Meeting, Apr 2010: 4398.
- 12) Nathan Fishkin, Erin Maloney, Ravi Chari and Rajeeva Singh **Designing potent antibody-drug conjugates: The impact of lysosomal processing efficiency and conjugate linker selection on anticancer activity** AACR- NCI-EORTC International Conference, Nov 2009: B120.

- 13) Michael Miller, [Nathan Fishkin](#), Wei Li, Barbara Leece, Michele Mayo, Gregory Jones, Emily Reid, Katie Archer, Erin Maloney, Yelena Kovtun, Jan Pinkas, Rajeeva Singh and Ravi Chari **Potent antigen-specific anti- tumor activity observed with antibodydrug conjugates (ADCs) made using a new class of DNA- crosslinking agents** AACR-NCIEORTC International Conference, Nov 2009: B126.
- 14) Brenda Kellogg, Erin Maloney, Michael Okamoto, [Nathan Fishkin](#), Hans Erickson, Xiuxia Sun, Sharon Wilhelm, Robert Zhao, Jan Pinkas, Michele Mayo, Yelena Kovtun, Ravi Chari, and Rajeeva Singh **Antibody- maytansinoid conjugates with hydrophilic linkers: cytotoxic therapeutics with enhanced potency against cancer cells with low antigen number and multidrug resistance** AACR Meeting, Apr 2009: 5480.

## Selected Granted Patents/ Patent Applications

### 1) Anti-BCMA antibody-drug conjugates and methods of use

Henry, Ryan; Samarakoon, Thiwanika; [Fishkin, Nathan](#); Zhu, Ping; Pazolli, Ermira; Palacino, James; Almagro, Juan WO2021248005 A1 2021-12-09

### 2) Conjugates

[Fishkin, Nathan](#); Park, Peter U. WO2021198966 A1 2021-10-07

### 3) Neodegrader conjugates

[Fishkin, Nathan](#); Park, Peter U. WO2021198965 A1 2021-10-07

### 4) Herboxidiene splicing modulator antibody-drug conjugates that bind to human oncol. targets and methods of use

[Fishkin, Nathan](#); Samarakoon, Thiwanika; Palacino, James; Arai, Kenzo; Kotake, Yoshihiko; Okubo, Shinya; Murai, Norio; Miyano, Masayuki WO2020123836 A2 2020-06-18

### 5) Preparation of pladienolide splicing modulator antibody-drug conjugates for the treatment of cancer

Pazolli, Ermira; Buonamici, Silvia; Samarakoon, Thiwanika; Prajapati, Sudeep; [Fishkin, Nathan](#); Palacino, James; Seiler, Michael; Zhu, Ping; Cook, Andrew; Smith, Peter; et al WO2019232449 A1 2019-12-05

### 6) Conjugates comprising cell-binding agents and cytotoxic agents

Harris, Luke B.; Tavares, Daniel; Rui, Lingyun; [Fishkin, Nathan Elliott](#); Shizuka, Manami; Miller, Michael Louis; Chari, Ravi V. J. WO2016036794 A1 2016-03-10

### 7) Compositions and methods for minimizing antibody disulfide bond redn during recombinant antibody production

Singh, Rajeeva; [Fishkin, Nathan](#); Kitchener, Seth; Meshulam, Deborah WO2015085003 A1 2015-06-11

### 8) Novel maytansinoid derivatives with sulfoxide linker for treating proliferative disorders [Fishkin, Nathan](#) WO2012145112 A2 2012-10-26

### 9) Preparation of cytotoxic benzodiazepine derivatives Li, Wei; Miller, Michael; [Fishkin, Nathan](#); Chari, Ravi V. J.

WO2012128868 A1 2012-09-27

**10) Benzodiazepine derivatives and conjugates thereof and their preparation and use as therapeutic agents**

Fishkin, Nathan; Miller, Michael; Li, Wei; Singh, Rajeeva

WO2012112687 A1 2012-08-23

**11) Novel benzodiazepine derivatives as cytotoxic agents and their preparation**

Li, Wei; Fishkin, Nathan Elliott; Zhao, Robert Yongxin; Miller, Michael Louis; Chari, Ravi V. J.

WO2010091150 A1 2010-08-12

