Backgrounder

Biomea The Company

biomea FUSION™

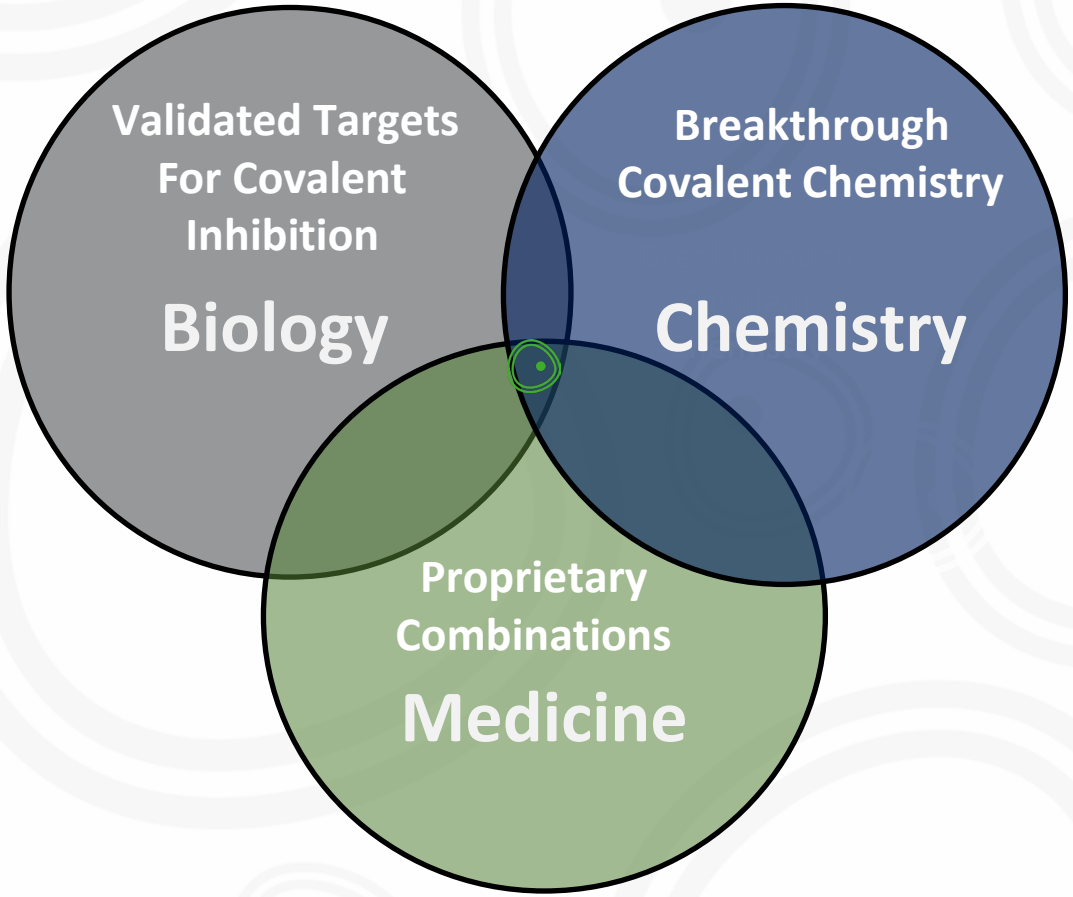
We Aim to Cure

- Experienced Management Team
- Novel FUSION™ System
- BMF-219 – Phase II - Lead Asset
- BMF-500 – Phase I
- Discovery Programs

biomea FUSION™ | We Aim to Cure™

Biomea Fusion is a clinical-stage biopharmaceutical company focused on the discovery and development of **oral covalent small-molecule drugs** to treat patients with metabolic diseases and genetically defined cancers. We believe that our approach may lead to significant improvement and extension of life for patients. Our team is engaged in all phases of drug discovery and development, including target selection, small molecule design, and preclinical and clinical studies to develop innovative medicines.

“We Aim to Cure” by Addressing Validated Targets with Breakthrough Covalent Chemistry in Proprietary Combinations



Validated Targets

Drugs pursuing **Validated Disease Targets** have a ~2x higher likelihood of approval than molecules pursuing a new mechanism of action

Sources: Nelson et al. (2015) Nat Genet.; Thomas et al. (2016) BIO; In a Landscape of 'Me Too' Drug Development, What Spurs Radical Innovation? HBS Weekly Review (Jun 2018)

Covalent Inhibitors

Covalent Small Molecule Inhibitors provide deep target inactivation and a wider therapeutic window, allowing for longer duration on therapy

Sources: Singh et al. (2011) Nature Reviews Drug Discovery; Cheng et al. (2020) Journal of Hematology & Oncology; Strelow (2017) SLAS Discovery; Kalgutkar & Dalvie (2012) Expert Opin. Drug Discov.;

Proprietary Combinations

Combination Therapy with non-overlapping resistance mechanisms results in more durable responses and better outcomes

Sources: Palmer et al. (2019) eLife; Mokhtari et al. (2017) Oncotarget

A Long History of Developing Successful Drugs - Together

Thomas Butler
Chairman & CEO

biomea FUSION
Co-Founder

The FUSION™ SYSTEM
BMF-219*
Co-Inventor

imbruvica® (ibrutinib)
560, 420, 280, 140 mg tablets | 140, 70 mg capsules

Veklury® remdesivir 100 MG FOR INJECTION
Co-Inventor

Ramses Erdtmann
President & COO

biomea FUSION
Co-Founder

imbruvica® (ibrutinib)
560, 420, 280, 140 mg tablets | 140, 70 mg capsules

Juan Frías, Ph.D.
Chief Medical Officer

once weekly mounjaro® (tirzepatide) injection 0.5 mL
2.5 mg | 5 mg | 7.5

farxiga® (dapagliflozin) 5mg & 10mg tablets
Jardiance® (empagliflozin) tablets 10 mg/25 mg
once weekly trulicity® (dulaglutide) injection 0.5 mL 0.75 mg | 1.5 mg | 3.0 mg | 4.5 mg
ONCE-WEEKLY wegovy® semaglutide injection 2.4 mg
Byetta® (exenatide) injection
Invokana® (canagliflozin) tablets
OZEMPIC® semaglutide injection 0.5mg, 1mg, 2mg
anuvia® sitagliptin

Naomi Cretcher
Chief of People

imbruvica® (ibrutinib)
560. 420. 280, 140 mg tablets | 140, 70 mg capsules

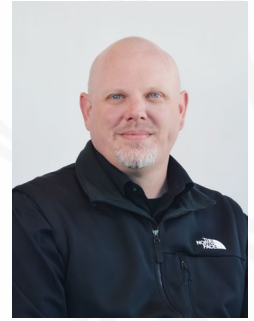
Heow Tan
Chief Technical & Quality Officer

imbruvica® (ibrutinib)
560, 420, 280, 140 mg tablets | 140, 70 mg capsules

Xtampza® ER (oxycodone) EXTENDED-RELEASE CAPSULES II
ZADAXIN
PLENAXIS
HylatopicPlus® Cream

Steve Morris, M.D.
Chief Development Officer

XALKORI® 250 MG CAPSULES CRIZOTINIB
ZYKADIA® ceritinib 150 mg
LORBRENA® LORLATINIB 100 mg tablets
ALECENSA® alectinib 150 mg capsules
ALUNBRIG™ BRIGATINIB 30mg TABLETS



Franco Valle
Chief Financial Officer

imbruvica® (ibrutinib)
560, 420, 280, 140 mg tablets | 140, 70 mg capsules

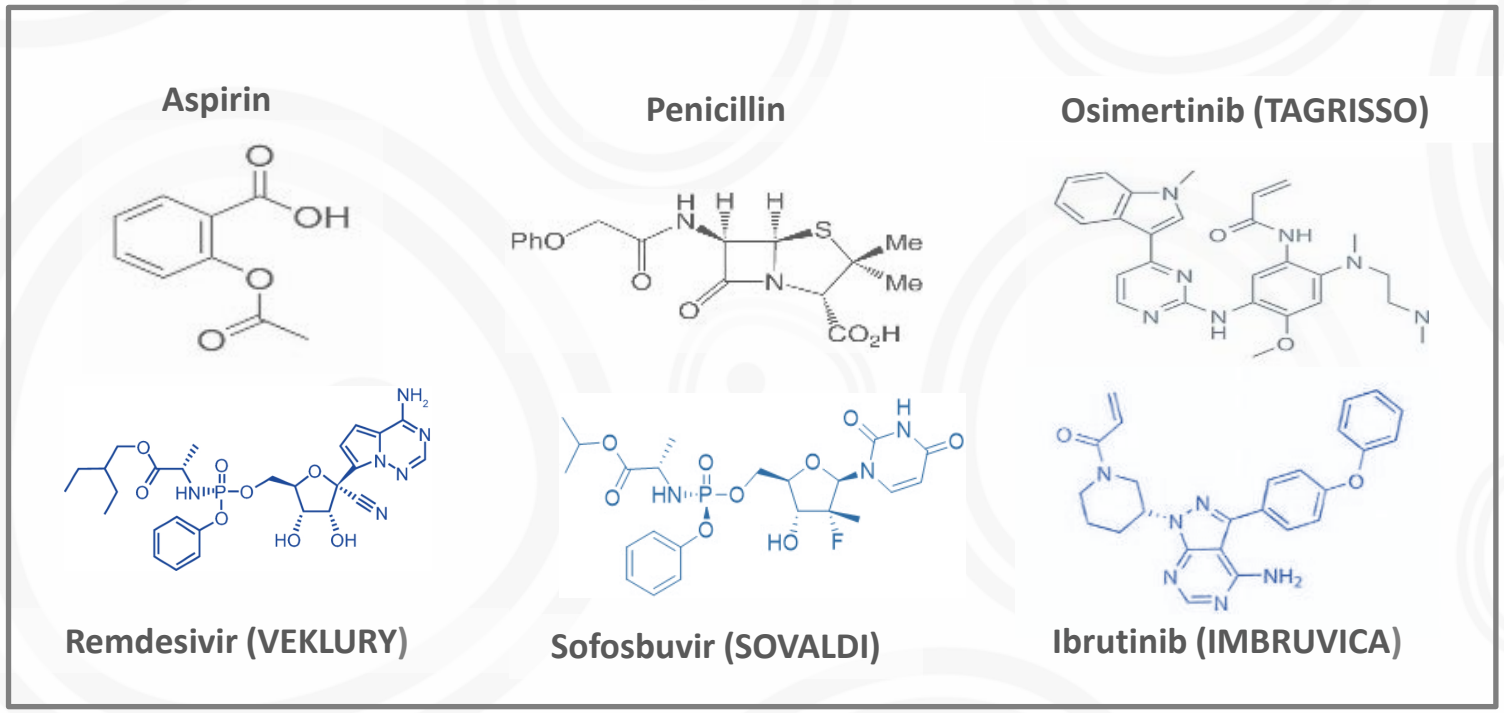
**Note: BMF-219 is an investigational new drug*

Multiple Upcoming Milestones in 2024

	Study	Indications	Milestones
BMF-219 Menin Program (Potential Best-In-Class)	COVALENT-111	Type 2 Diabetes (Clinical Hold)	Phase II – Topline Data of the First 3 Arms of Expansion Phase on Track for Q4 2024 Readout Phase II – Topline Data of Open Label Cohort on Track for 4Q24 Readout
	COVALENT-112	Type 1 Diabetes (Clinical Hold)	
	COVALENT-101	Liquid Tumors	Phase I - Dose Escalation Completion by YE 2024
	COVALENT-102	Solid Tumors	Phase I - Dose Escalation Completion by YE 2024
BMF-500 FLT3 Program (Potential Best-In-Class)	COVALENT-103	AML/ALL (Acute Leukemia)	Phase I - Dose Escalation Completion by YE 2024
Additional Program	Target # 3	Metabolic Diseases	Progress Update

Covalent Inhibitors - a History of Medical & Commercial Success

Notable Covalent Inhibitors



- **Aspirin** was the first commercialized covalent drug
- Notable precision oncology and infectious disease programs leverage covalent mechanisms
  - Precision Oncology**:**
    Osimertinib and **Ibrutinib** both target kinases and are used in subpopulations with specific genetic biomarkers
  - Antivirals**:**
    Remdesivir and **Tenofovir** both target reverse transcriptases and are leveraged to treat HCV and other viruses including HIV and COVID-19

Compounds in Blue Were Co-Invented or Co-Developed by Biomea Fusion Senior Leadership

Target identification to IND candidate in 18 months

Target to Hit

Covalent target/ligand validation
Visual integration of crystal structures of target and reactive cysteines

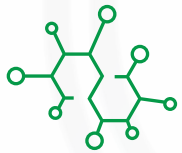
Utility:
Differentiated insights from X-ray crystal structures, identifying target cysteines

Custom Lead

Custom engagers
Proprietary AI platform with VR validation matches novel custom engagers to cysteines. No physical library screening.

Utility:
Covalent starting leads provided for AI/VR scoring

Lead Optimization



Custom scaffold creation
Custom built synthesis to create candidates with desired properties

Utility:
AI/VR program platform yields 20-30 scaffolds, which are synthesized for in vitro testing

IND

Refinement
Building in drug-like properties, optimizing PK/PD profile, and maintaining specificity

Utility:
Scaffolds are further refined with Mass spec, animal, and cell-based assays

Biomea Fusion - A Biopharma Company Focused on Covalent Medicine since 2017

2017

Biomea Fusion is established to focus on the discovery and development of covalent binding small molecules

2018

- Biomea becomes a JLABS, South San Francisco resident.
- Biomea builds out its proprietary covalent binding technology the FUSION System

2019

Biomea selects lead candidate (BMF-219) for menin MLL-Fusion and menin dependent cancers

2020

Biomea receives Series A Syndicate financing of $56M to support the development of Biomea's portfolio of covalent inhibitors

2021

- Initial Public Offering (NASDAQ: BMEA)
- Raises $158M at $17/share

2022

- Biomea doses first patient in First-in-Human clinical trial for BMF-219 in AML
- Second IND candidate BMF-500 is selected as oral covalent inhibitor of FLT3

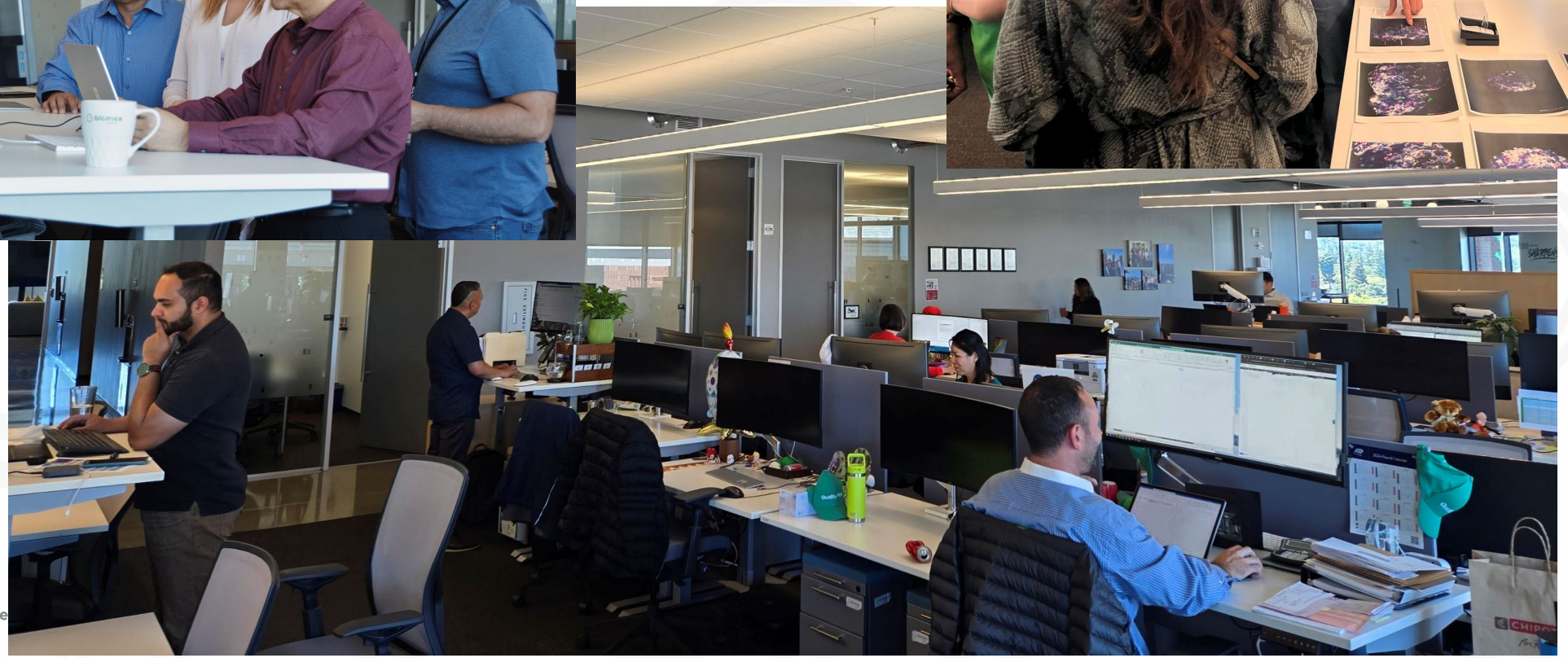
2023

- Biomea announces initial and follow-on clinical data of BMF-219 in patients with Type 2 Diabetes
- Raises $172.5M at $30/share
- Biomea presents topline clinical data of BMF-219 in AML patients
- Biomea clears IND/CTA for BMF-219 in Type 1 Diabetes and doses first patient

2024

- Biomea highlights initial data from the first two Type 1 Diabetes patients dosed with BMF-219
- Follow on Type 2 diabetes data is provided at multiple conferences

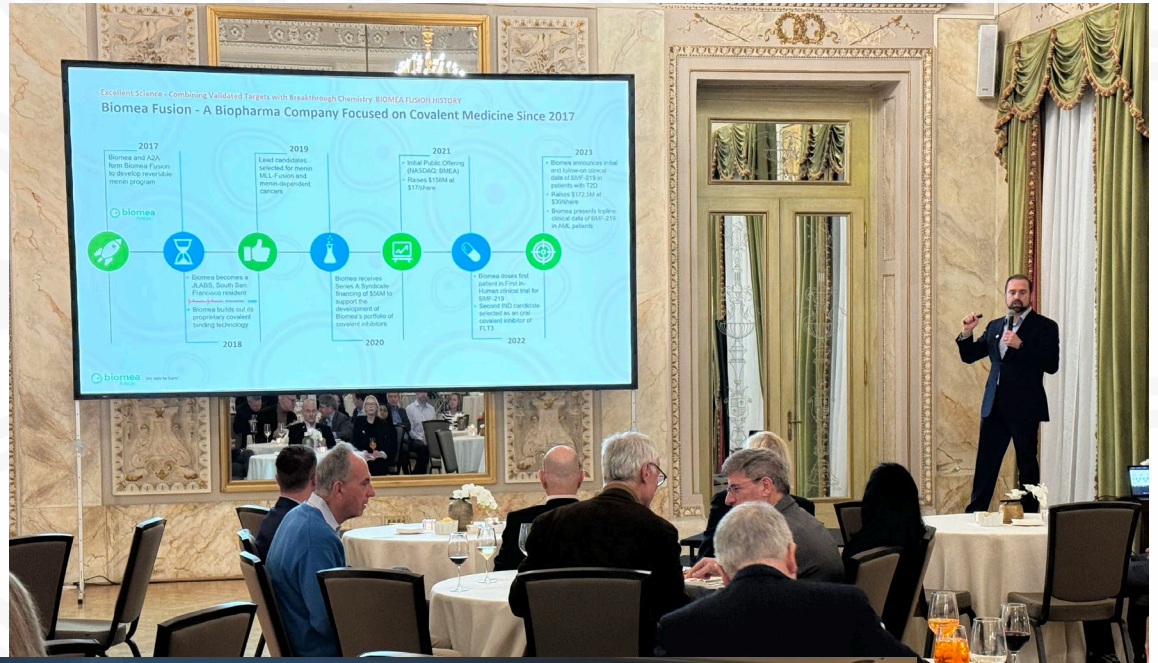
Biomea's Offices in Redwood City



Biomea's Laboratories

Biomea Company Events

Biomea at Conferences



Biomea's Conference Publications & Presentations (1/2)

Presentation Title	Conference	Date	Link
Durable Glycemic Control with BMF-219 During Off-Treatment Period at Week 26: A Phase 1/2 Trial of BMF-219 in Patients with Type 2 Diabetes (COVALENT-111)	17th International Conference on Advanced Technologies & Treatments for Diabetes (ATTD)	March 6, 2024	Poster Discussion
Key Observations from the Dose Escalation Portion of COVALENT-111, a Phase 1/2 Trial of the Covalent Menin Inhibitor BMF-219 in Patients with Type 2 Diabetes	17th International Conference on Advanced Technologies & Treatments for Diabetes (ATTD)	March 6, 2024	Poster Viewing
Case Studies from COVALENT-111, A Phase 1/2 Trial of BMF-219, a Covalent Menin Inhibitor, in Patients with Type 2 Diabetes	17th International Conference on Advanced Technologies & Treatments for Diabetes (ATTD)	March 6, 2024	Poster Viewing
Covalent Menin Inhibitor BMF-219 in participants with Relapsed or Refractory (R/R) Acute Leukemia (AL): Preliminary Phase 1 Data from the COVALENT-101 Study	American Society of Hematology (ASH) Annual Meeting	Dec 10, 2023	Poster
Covalent-103: A Phase 1, Open-Label, Dose Escalation, and Dose-Expansion Study of BMF-500, an Oral Covalent FLT3 Inhibitor, in Adults with Acute Leukemia (AL)	American Society of Hematology (ASH) Annual Meeting	Dec 9, 2023	TIP Poster
BMF-219: A Novel Therapeutic Agent to Reestablish Functional Beta Cells and Provide Long-term Glycemic Control	World Congress Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRDC)	Dec 8, 2023	Oral Presentation; Poster
BMF-219: An oral menin inhibitor in clinical development as a short-term treatment to address the root cause of diabetes, beta-cell dysfunction	World Congress Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRDC)	Dec 7, 2023	Breakfast Symposium Presentation
COVALENT-111, A Phase 1/2 Trial of BMF-219, an Oral Covalent Menin Inhibitor, in Patients with Type 2 Diabetes Mellitus – Preliminary Results	American Diabetes Association (ADA)	June 24, 2023	Poster (Late Breaking)
Combinatorial approach using covalent menin inhibitor, BMF-219, and/or covalent FLT3 inhibitor, BMF-500, with MEK or BCL2 blockade potentiates therapeutic use in AML	American Association for Cancer Research (AACR)	April 18, 2023	Poster

Biomea Fusion's Conference Publications & Presentations (2/2)

Presentation Title	Conference	Date	Link
Covalent menin inhibitor, BMF-219, impacts key gene signatures and molecular pathways in Chronic Lymphocytic Leukemia patient-derived models	American Association for Cancer Research (AACR)	April 16, 2023	Poster
COVALENT-102: A phase 1/1b dose finding study of BMF-219, an oral covalent menin inhibitor, in patients with metastatic non-small cell lung cancer (NSCLC), pancreatic cancer (PDAC), colorectal cancer (CRC) with activating KRAS mutations	AACR Special Conference: Targeting RAS	March 6, 2023	TIP Poster
BMF-500: An Orally Bioavailable Covalent Inhibitor of FLT3 with High Selectivity and Potent Antileukemic Activity in FLT3-Mutated AML	American Society of Hematology (ASH)	Dec 11, 2022	Poster
Oral long-acting menin inhibitor normalizes type 2 diabetes in two rat models	European Association for the Study of Diabetes (EASD)	Sept 22, 2022	Oral Presentation
Oral Menin Inhibitor, BMF-219, displays a significant and durable reduction in HbA1c in a Type 2 Diabetes Rat Model	European Association for the Study of Diabetes (EASD)	Sept 20, 2022	Oral Presentation
Anti-tumor Activity of Covalent Menin Inhibitor, BMF-219, in High Grade B-Cell Lymphoma and Multiple Myeloma Preclinical Models	International Myeloma Society Annual Meeting (IMS)	Aug 26, 2022	Poster
Phase 1 first-in-human dose-escalation and dose-expansion study of BMF-219, an oral, covalent, menin inhibitor, in adult patients with acute leukemia (AL), diffuse large B-cell lymphoma (DLBCL), and multiple myeloma (MM)	International Myeloma Society Annual Meeting (IMS)	Aug 26, 2022	Poster
Oral Long-Acting Menin Inhibitor, BMF-219, Normalizes Type 2 Diabetes Mellitus in Two Rat Models	American Diabetes Association (ADA)	June 6, 2022	Poster
Oral Menin Inhibitor, BMF-219, displays a significant and durable reduction in HbA1c in a Type 2 Diabetes Mellitus Rat Model	American Diabetes Association (ADA)	June 6, 2022	Poster (Late Breaking)
Preclinical Activity of irreversible menin inhibitor, BMF-219, in Chronic Lymphocytic Leukemia	American Society of Clinical Oncology (ASCO)	June 4, 2022	Poster
Irreversible menin inhibitor, BMF-219, inhibits the growth of KRAS-mutated solid tumors	American Association for Cancer Research (AACR)	April 12, 2022	Poster

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THANK YOU

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