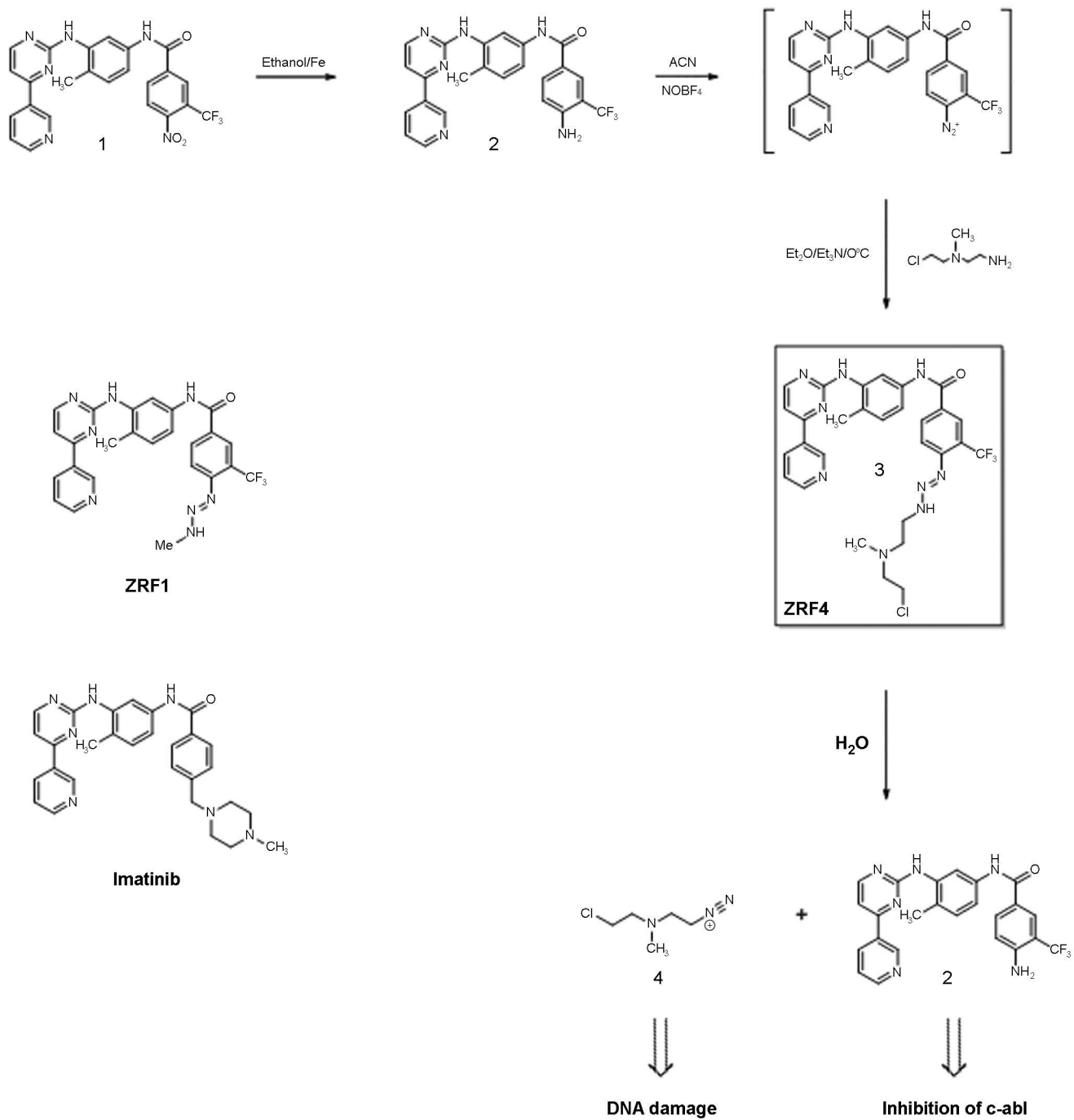


Supplemental Table: CLL patients characteristics and clinical treatment.

Patients	Sex (F:M ratio)	Age, yr (mean; range)	Rai stage (0:I-II:III-IV ratio)	Binet (A:B:C ratio)	Lymphocytes count x 10 ⁹ /l (mean; range)	WBC count x 10 ⁹ /l (mean; range)	IgVh mutation (%)	Clinical Treatment (CLB:Flu ratio)
1	M	62	0	A	37.2	43.2	6.7	No
2	F	82	II	B	147.6	162.2	6.9	No
3	M	76	IV	C	68.1	74.0	11.2	No
4	F	73	I	B	59.4	66.7	8.0	No
5	M	60	I	A	71.2	83.8	n.d	No
6	M	80	III	C	50.6	59.5	0.0	No
7	M	54	I	B	41.6	52.7	n.d	No
8	M	63	IV	C	56.5	63.1	n.d	No
9	M	72	0	A	80.6	91.6	8.3	No
10	F	44	IV	C	117.2	126.0	0.0	No
11	M	62	II	B	112.7	142.6	1.0	No
patients 1-11	(3:9)	(66.2; 44-82)	(2:5:4)	(3:4:4)	(76.6; 37.2- 147.6)	(87.8;43.2- 162.2)		
12	F	76	III	C	49.4	53.7	1.6	CLB
13	F	81	IV	C	123.5	141.9	0.0	CLB
14	M	76	IV	C	39.7	83.5	0.0	CLB
15	M	65	IV	C	152.6	164.1	7.2	CLB
16	M	88	IV	C	83.7	95.1	n.d	CLB
17	F	87	II	A	38.7	50.3	5.3	CLB
18	M	89	I	B	26.6	36.9	n.d	Flu/cytosan
19	F	60	IV	C	43.8	48.7	4.0	Flu
20	M	78	II	A	57.0	75.0	n.d	CLB/Flu
21	M	70	II	B	223.0	247.8	9.1	CLB
22	M	65	I	A	43.7	52.7	0.0	CLB
patients 12-22	(4:7)	(76; 60- 89)	(0:5:6)	(3:2:6)	(80.2;26.6- 223.0)	(95.4;36.9- 247.8)		(9:3)
patients 1-22	(7:16)	(71; 44- 89)	(2:10:10)	(6:6:10)	(78.4;26.6- 223.0)	(91.6;36.9- 247.8)		
23	F	68	II	B	128.0	115.5	0.0	No
24	F	70	IV	C	212.0	230.0	n.d	Flu

Summary of the clinical characteristics of 24 B-CLL patients that provided lymphocytes for this work. Rai classification separates CLL into low (stage 0), intermediate (stage I & II) and high (stage III& IV) risk categories. Binet staging classifies CLL according to the number of lymphoid tissues that are involved, as well as the presence of low red blood cell count or low number of blood platelets. IgVH: Percentage of somatic mutations in the immunoglobulin variable region genes. WBC: white blood count, CLB: chlorambucil, Flu: fludarabine, n.d.: not determined



Supplemental figure: The synthesis of ZRF4 proceeded according to an adaptation of strategy developed for ZRF1, which was shown to be readily hydrolyzed to amine **2** in cell culture medium at 37°C (6). Briefly, the nitro compound **1** was obtained as previously described (7) and reduced with Fe in hot ethanol, water and acetic acid to provide amine **2**. Diazotization of **2** with nitrosonium tetrafluoroborate in dry acetonitrile at 0°C followed by addition of *N*-(2-chloroethyl)-*N*-methylethylenediamine amine and neutralization with triethylamine gave the combi-molecule **ZRF4**.